bulletin

entnet.org

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

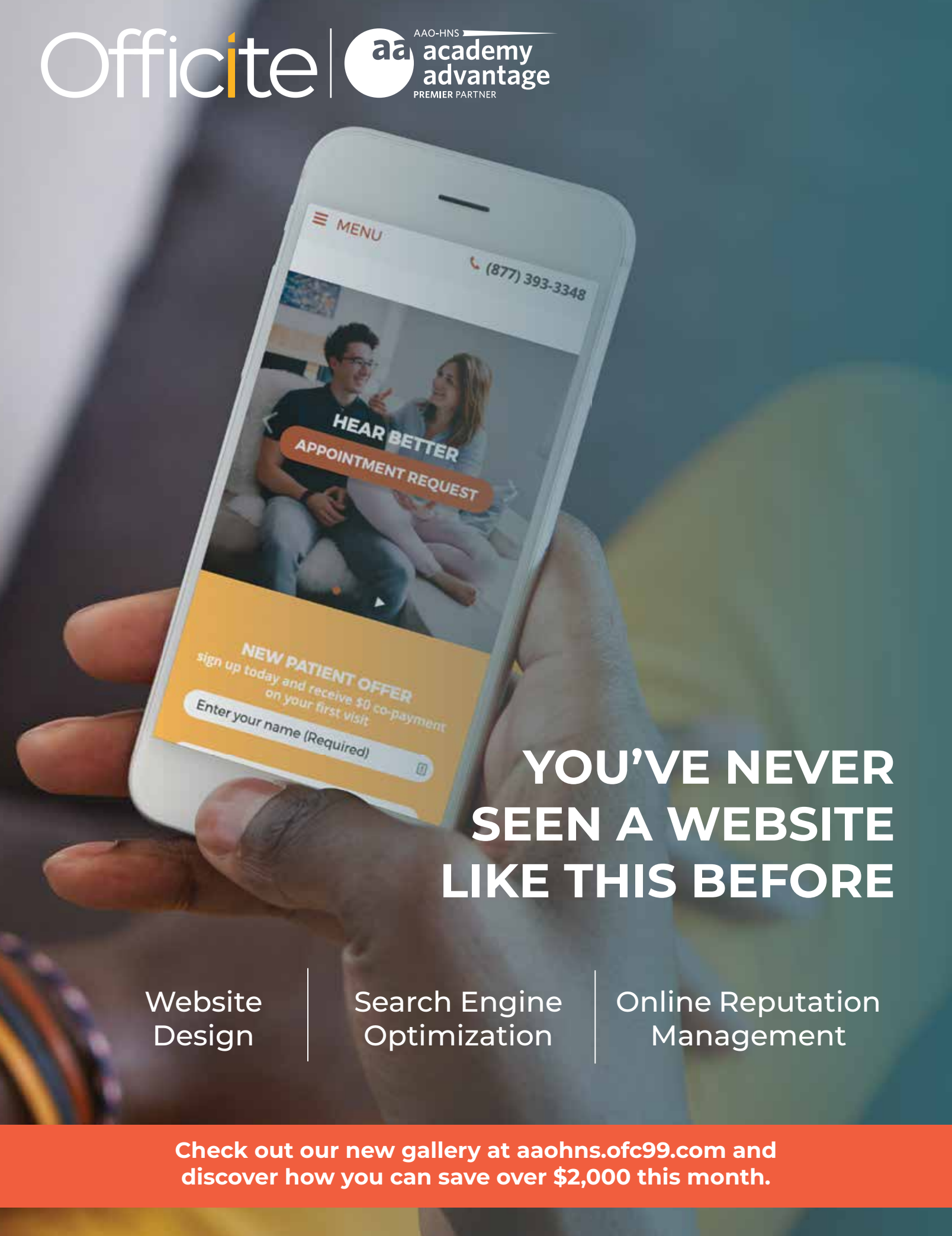
SEPTEMBER 2020

22

Foundation Education: The Future is Now

Leading Otolaryngology in New Directions

Officite | AAO-HNS academy advantage PREMIER PARTNER



YOU'VE NEVER SEEN A WEBSITE LIKE THIS BEFORE

Website Design | Search Engine Optimization | Online Reputation Management

Check out our new gallery at aaohns.ofc99.com and discover how you can save over $2,000 this month.

bulletin

September 2020
Volume 39, No. 8

The Bulletin (ISSN 0731-8359) is published 11 times per year (with a combined December/January issue) by the **American Academy of Otolaryngology–Head and Neck Surgery**
1650 Diagonal Road
Alexandria, VA 22314-2857
Telephone: 1-703-836-4444
Member toll-free telephone: 1-877-722-6467

The Bulletin publishes news and opinion articles from contributing authors as a service to our readers. The views expressed in these articles are solely those of the individual and may or may not be shared by the AAO-HNS. Acceptance of advertising in the *Bulletin* in no way constitutes approval or endorsement by AAO-HNS of products or services advertised unless indicated as such.

President
Duane J. Taylor, MD
Executive Vice President, CEO, and Editor of the Bulletin
James C. Denneny III, MD
Managing Editor
Tina Maggio
bulletin@entnet.org

INQUIRIES AND SUBMISSIONS
bulletin@entnet.org

MAILING INFORMATION
Postmaster: Send address changes to the American Academy of Otolaryngology–Head and Neck Surgery, 1650 Diagonal Road, Alexandria, VA 22314-2857
Return undeliverable Canadian addresses to PO Box 503, RPO West Beaver Creek, Richmond Hill, Ontario, Canada L4B 4R6
Publications Mail Agreement NO. 40721518

BULLETIN ADVERTISING
Ascend Media, LLC
Suzee Dittberner
7171 W. 95th St., Suite 300
Overland Park, KS 66212
Phone: 1-913-344-1420
Fax: 1-913-344-1492
sdittberner@ascendmedia.com

ADVERTISER INDEX

This advertiser index is for reader convenience only and is not part of the advertising agreement. While every attempt is made to ensure accuracy, publisher cannot be held responsible for errors or omissions.

inside this issue

features

departments

Getting to the Other Side of That Bridge over Troubled Water

As I reflect on this year, I am reminded of one of my favorite songs by Simon & Garfunkel, "Bridge Over Troubled Water." A timeless song that crosses the spectrum of musical genres and has been covered by a multitude of diverse artists, including Aretha Franklin, Elvis Presley, Jon Bon Jovi/Richie Sambora, Bella River, and John Legend. And isn't it fitting that this year marks the 50th anniversary of the song, which seems to have so much meaning for a year where we have all encountered our share of "troubled water." A song that brings solace and reassurance during a time of uncertainty and despair.

Bridges have a number of symbolic meanings that resonate with my experience. Simplistically they can be a means by which we reach our desired destination, an opportunity to connect with people you have never met or places you have never been. More importantly, they are a way to get over the obstacles that may be below us in that "troubled water" to reach a "better place." A glance over the bridge when looking straight down may engender fear, but when looking out into the horizon, it may reveal a perfect sunrise or sunset reflecting off the water. The even more exciting prospect about a bridge is the potential for hope that lies on the other side.

In my first column in the *Bulletin* as President, I alluded to the importance of "finding your center" before embarking on each endeavor and realizing your potential to overcome what may appear impossible. Each of us have been challenged this year in a variety of ways to find our center as we navigate the shockwaves created by this COVID-19 pandemic and unsettling reality of the work that lies ahead in the area of social injustice, kicked off by the death of George Floyd. Through it all, as most of you know, your **Academy** has not stopped trying to help you by serving as that "bridge."

My intention when I started the year was to try to connect with and listen to as many of our members as possible and to work in tandem with the amazing staff led by **Dr. Jim Denneny** to give our members the very best of our education, advocacy, practice management information, and resources, as well as to enhance our efforts in the area of diversity, inclusion, and wellness. Who could have imagined what would lie ahead in 2020? My hope is that over the last year under my leadership our Academy has served as a bridge in some way for you with your practice, your patients, your family, and your community to reassure you that we will see our way over this obstacle to the other side. It was an honor and a pleasure to serve as President, to work for our members and our patients, and to contribute to the great legacy of this organization during this challenging time. I valued all your input and participation when called upon.

The "bridges" in our Academy network were ever present starting with our EVP/CEO, the Boards of Directors, committed staff, committee and section chairs, and our Board of Governors, creating a collaborative team this year. As I move into my Past President position, I am excited and very confident that our incoming President **Dr. Carol Bradford** is up for the task and ready to go along with our existing and new board members. Finally, there were many bridges in my personal life, and I owe a great deal of thanks to my wife, my daughter, my staff, and friends who were supportive as I balanced my home life, practice, and responsibilities as your President.

Let us all continue to build our own bridges, accept the ones built for us, and look forward to the hope that is on the other side. **We Are One.** ■

Duane J. Taylor, MD
AAO-HNS/F President

"My hope is that over the last year under my leadership our Academy has served as a bridge in some way for you with your practice, your patients, your family, and your community to reassure you that we will see our way over this obstacle to the other side."

No Payments No Interest or Get a Rebate

Purchase MTI products now and receive either 6-month no payments and no interest or receive up to a $400 rebate for each qualifying chair.

Join your colleagues, upgrade to the newest technology today. Making patients, staff and yourself smile.

There's never been a better time to smile than now.

Ask about our NEW ULPA suction system filter!

Rebate

$400 rebate per Chair

Qualifying Chairs:
830, 829, 721, 550, 527, 527W, 464, 463, 450W, and 440

$200 rebate per Chair

Qualifying Chairs:
710, 705, 526, 421, 421M, 421E, 401, and 400

MTI

800-924-4655
sales@mti.net
mti.net

Finance

6 Months No Payment No Interest

Minimum Purchase:
$5,000 of new MTI equipment.

Also available 6 months deferred payment lease for 24 to 60 months with $1 buyout

For full promotion details, visit www.mti.net/promotion

The Value of Community and CY21 MPFS Proposals

When the COVID-19 pandemic first hit the United States late last winter, I was optimistic that our planned 124th Annual Meeting & OTO Experience in Boston, MA, would serve as a gathering place for otolaryngologists from around the world to share their experiences in a collaborative, communal way that would facilitate a healing process for those encountering the devastation of the crisis. My recent participation in the "AAO-HNSF International Regional Roundtable" discussions, which were held in preparation for the International Advisory Board meeting at the Annual Meeting, demonstrated that the virtual platform allows many of the same information sharing opportunities and emotional connection as if we were all in Boston together. The mutual concern exhibited by participants around the globe and willingness to share experiences to benefit their colleagues and patients has been truly invigorating.

Likewise, I have been on a number of calls that crossed surgical specialty lines addressing surgical education and training during and after the pandemic, including this year's virtual interview process for prospective residents and fellows. The genuine concern for the safety and welfare for the students, residents, and fellows, as well as how to provide the best education and training possible given the circumstances, permeated the discussions and has already resulted in significant change. This tangible representation of the resilience of otolaryngologists, the recognition that the care needs across the breadth of the specialty around the world continue, and the assurance we will be there to answer the call kindles hope while bringing great comfort to the patient community.

On August 3, the Centers for Medicare & Medicaid Services (CMS) released the CY 2021 Proposed Rule for the Medicare Physician Fee Schedule (MPFS), which also includes proposals related to the Quality Payment Program (QPP). Perhaps the most heavily discussed component of the MPFS is the proposed CY 2021 conversion factor—$32.2605—**a significant decrease of $3.83 (11%)** below the CY 2020 PFS conversion factor of $36.09 and 12.1% less than CY 1998 ($36.60). When all the financial recommendations are taken into account, CMS estimates that **otolaryngology** will see a +7% change in payments. The most impactful of these changes for otolaryngology are the significant upward revaluation of E/M codes and the addition of the new add-on code GPC1X, which is applicable for use with the upper level otolaryngology E/M codes. These positive updates are greater than the negative impact associated with the failure to update the E/M visits included in the -10 and -90 day post-op global packages.

It is concerning that CMS opted to apply the updates to the maternity postpartum global visits and not to the surgical codes with global visits based on "their feeling" that the maternity patients were using their global visits and surgical patients were not. CMS has not produced any plans for accurately determining the true utilization of the services. Despite the recognition that surgical procedures have experienced a progressive devaluation over the last 10 to 15 years due to the failure to update the conversion factor to keep up with inflation, significant change in valuation at the RUC, and now dramatic increase in the valuation of E/M services, the house of surgery has been unable to reverse the existing decline. As we move forward through the healthcare reform debates, it will be critical that we present innovative models that appropriately value surgical services.

CMS continues to push its developing MIPS Value Pathway (MVP) as the future of quality measurement and reporting for the Medicare program. The MVP will serve as the entry into the Medicare Alternative Payment Method (APM) for many physicians unable to access that program so far. We have been working on a "clinical pathways" project that we hope will satisfy the requirements for the MVP program without disrupting normal patient flow or adding administrative requirements. A model such as this also has potential to help maintain the value of surgical procedures. Oddly enough, while CMS is trying to promote their new MVP program, they are placing significantly more requirements on QCDRs and Clinical Data Registries that might result in many third-party intermediaries, such as medical associations, to drop those designations because of the excessive cost and effort to comply. We will continue to work with the registry coalition to advocate for continued participation in the program with acceptable costs and administrative responsibilities.

I hope you will enjoy our 124th Virtual Annual Meeting & OTO Experience that will run from September 13 - October 25, with access to the 300+ hours of education after the meeting ends on our education platform—OTO Logic. It is not too late to take advantage of our offer of free registration to the meeting with your subscription to FLEX that we have extended through October 25. ■

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

"This tangible representation of the resilience of otolaryngologists, the recognition that the care needs across the breadth of the specialty around the world continue, and the assurance we will be there to answer the call kindles hope while bringing great comfort to the patient community."

Authenticity and Wellness

"When succeeding at work requires inauthenticity, or suppression of one's own personality, spirit, or character, we are warned that wellness is at risk and burnout is likely."

Susan D. McCammon, MFA, MD, Member of the AAO-HNS Physician Wellness Task Force

"Talk less. Smile more."

These are Aaron Burr's first words of advice to Alexander Hamilton in Lin-Manuel Miranda's hit musical *Hamilton*. Debuted in 2015, a filmed version was recently released online at a time when national awareness of identity has been honed laser sharp. Burr's implication is that success, advantage, or survival may rest upon concealment of one's real interests, or motives, or identity. Later in the libretto, Hamilton chides Burr for being fickle, or chameleon-like, changing his position to suit his immediate needs and ambitions. The experience of speaking and acting in accordance with your true self is known as authenticity and it is highly valued in many cultures. But what is the relationship between personal authenticity and wellness in the practice of medicine? Is authenticity a worthwhile goal and if it is, what can we do to cultivate it?

Authenticity is defined as the ability to be true to one's own sense of self, emotions, and values. It has been considered a driving force of human nature by social scientists and a fundamental aspect of individual well-being by philosophers and poets. The inability to be authentic has been shown to be psychologically costly, driving emotional dissonance and exhaustion. In the world of medicine, we work with people who may not share cultural norms or may have different expectations for physician behavior. It can often seem as if we must choose between what is expected—and therefore effective—and what feels authentic. When succeeding at work requires inauthenticity, or suppression of one's own personality, spirit, or character, we are warned that wellness is at risk and burnout is likely.

On the other hand, the ability to modulate emotional expressions can be useful in building relationships and achieving goals. The more successful a person is at portraying inauthentic states, the more interpersonally competent they are judged to be. Indeed, the ability to express thoughts and feelings that contradict one's inner mental state is an important developmental milestone. In her landmark *Harvard Business Review* article, "The Authenticity Paradox," Herminia Ibarra argues that true authenticity relies on a willingness to stretch and grow with new opportunities. She further argues that self-knowledge need not translate into unfiltered self-expression or total transparency. These values of adaptability inform emotional intelligence and are central to medical education's goal of "professional identity formation," a process through which students expand their personal identity to include the attributes and skills of a physician; they learn to "fit" into a professional identity.

Professionalism is a perennial issue in medical education, and this has been attributed to crises of faith about physician integrity and the commitment to self-regulation among medical professionals. The scope and milestones of professionalism, however, range widely—from our most aspirational ideals of honesty and altruism, to more ordinary expectations of grooming and compliance. More than one trainee has observed that a charge of "unprofessional" can cover a multitude of biases, conscious or unconscious.

What is "professionalism?" And what does it cost a person, in authenticity, to achieve it? When I was 12, an adult I respected explained to me that she wasn't prejudice against Black people, she just didn't like the music they listened to, or the clothes they wore, or the way they spoke. She pointed out a character in a film who was Black, wearing a button-down shirt, sporting neatly cropped hair, and headed out to a night at the symphony. It was a quiet epiphany, and I thought—she doesn't dislike Black people as long as they seem White, or as she said, "like a nice young professional."

I struggle still with the assumptions in

that story. Is there something essentially "White" about button-down oxford shirts or the symphony? Why are these items not available to all who like them? On the other hand, it was so very clear to me in her story that she saw jazz music, an Afro, and a dashiki (this was many years ago, remember) as an elected disadvantage, a cultural gauntlet. Was it worse to impose Brooks Brothers on a Black man to barter for social and professional success? Or to imply that race had essential fashion and aesthetic tastes that might predetermine professional options? Does the perception of professionalism hinge on traits not really related to the profession at all?

This was years before I contemplated a career in medicine and years more before I found myself selecting, interviewing, training, remediating, and graduating young otolaryngologists. Yet I find myself on familiar ground here. We train now in unconscious bias. We are alert to the strangulated pipeline for underrepresented minorities in medicine. Graduate medical education actively pursues diversity. Our institutions, practices, and employers seek, to varying degrees, to mirror the cultural makeup of the populations they serve.

From the day of the "White Coat Ceremony," expectations of medical professionalism and guidance in "professional identity formation" abound. I recently reviewed a list of desired attributes of a medical graduate seeking advanced training. They included "collegial, diligent, flexible, honest, humble, motivated, and responsive," among others. These seem unassailable and free of essential racial nuance. But I wonder what other values these words code for, and to what extent these desirable values require our applicants to "talk less; smile more."

In a few short weeks, otolaryngology residency training programs will be initiating an unprecedented pandemic-level interview season necessitated by the risks of COVID-19. We will use Zoom, up our website game, have virtual town halls and online social events, and, as ever, we will seek the holy grail of "fit."

Pause with me for a moment and reflect on what we mean by "fit." Fit has been identified as one of the most important factors in the residency recruitment process, but it is rarely defined explicitly. Like some other apparently self-evident things, we "know it when we see it." Most often, fit translates essentially to similarity. This may be a conscious and reasonable effort for programs to build on a strength or chosen focus. On the other hand, "fit" may be an intuitive impression, or a gut feeling, that results in (unconsciously) recruiting applicants who are like those in the program already, for ease of style or lack of friction. Shappell and Schnapp identify two real risks of using intuitive fit as a criterion for selection: enabling unconscious bias and missing out on diversity or productive disruption. Their recommendations emphasize the importance of being explicit about the expectations and perceptions that result in a good "fit." What traits contribute to the mission? And how do we determine, really, if applicants have those traits? This is as true for filling a practice position as it is for filling a training program.

Yes, there is a certain health in authenticity, in being at one with yourself and your work, and yourself at work. Parameters of job satisfaction, fulfillment, and meaning are related to feeling authentic at work; feeling inauthentic correlates with boredom, depression, and burnout. Medical professionalism, for everyone, introduces a caesura, or a pause, between who we are "at home" and who we are when we "put on the white coat." There are expectations of neutral trustworthiness, of an accessible presentation, and a guarded personality.

So, when you meet your new applicants and they smile broadly at you, think for a minute, what are they not saying? What are they against and what are they for? Our challenge is to learn how we as educators and mentors help them learn and grow into new identities without feeling false to old ones. ■

References

1. Gino F, Kouchaki M, Galinsky AD. The Moral Virtue of Authenticity: How Inauthenticity Produces Feelings of Immorality and Impurity. *Psychol Sci.* 2015;26(7):983-996.
2. Ibarra, H. (2015). The Authenticity Paradox, *Harvard Business Review,* (January-February 2015). 93.52-59 Available online at: https://hbr.org/2015/01/the-authenticity-paradox.
3. McCammon, S. D. & Brody, H. (2012). How virtue ethics informs medical professionalism. HEC Forum, 24(4), 257-272. doi:10.1007/s10730-012-9202-0. CI: 12
4. Miranda, Lin-Manuel. "Hamilton: An American Musical." In *Hamilton: The Revolution.* Edited by Jeremy McCarter. New York: Grand Central Publishing, 2016. https://genius.com/albums/Lin-manuel-miranda/Hamilton-an-american-musical-original-broadway-cast-recording
5. Schmader T, Sedikides C. State Authenticity as Fit to Environment: The Implications of Social Identity for Fit, Authenticity, and Self-Segregation. *Pers Soc Psychol Rev.* 2018;22(3):228-259.
6. Shappell E. SB. The F Word: How "Fit" Threatens the Validity of Resident Recruitment. *Journal of Graduate Medical Education.* 2009:635-636.

at the forefront

Information, resources, and updates in this section

READ MORE ONLINE

Humanitarian Travel Grant: Medical Mission to the Philippines

YPS YOUNG PHYSICIANS SECTION

SECTION SPOTLIGHT: YOUNG PHYSICIANS SECTION

Reconnection

Nikhila P. Raol, MD, MPH

American Medical Association YPS Delegate

I once heard someone compare otolaryngology surgical training to fighting in a war—the sleep deprivation, the tragedies, the necessary mental toughness, and the camaraderie. Getting through that experience would have been nearly impossible without your second family, your tribe, your people—your co-residents and fellows. Something about being in the trenches together with your fellow trainees forges a bond that is hard to duplicate.

When training ends there is some semblance of isolation, whether you are in academia, a group or solo practice, the military, or any other type of practice. As we leave training and we get into the routine of life, we become busy in our own worlds—new jobs and the accompanying productivity pressures, new cities, growing families, and new responsibilities. The rat race that is life takes over and before you know it, the small things that make life memorable begin to disappear. For my family and our life, we entered into an endless cycle of work, extracurricular activities, business trips, and daily responsibilities from the moment we moved to a new city for my first post-training job. Nearly four years into the new job, we were still getting settled into our community. We were still missing that feeling of being in the trenches with our new people.

Now, as we all reckon with simultaneous wars against two enemies, one like we have never seen before in COVID-19 and one that continues to rear its ugly head in racial injustice, that need for human connection has never been more palpable. The tragedies and forced slowdown left us craving reconnection with our past, more connection with our present, and the desire to create connections that would last into the future.

Nikhila P. Raol, MD, MPH

Many of us found commonality and connection in safely gathering to stand with our friends and colleagues to protest. Between graduation parties held on Zoom, daily FaceTime with our parents, game nights on HouseParty, Netflix premiere parties, journal clubs on WebEx, and even just time for meaningful phone calls, we have been able to rekindle personal and professional relationships that remind us of the experiences that we have shared together. More family meals together and more bedtime books instead of rushing home from dance or karate have helped our family members reconnect with one another. Time to read a few books, decode music arrangements on the piano, and take meditative walks have allowed me to reconnect with myself. And as young physicians, all these connections have allowed us to reconnect on a deeper level with patients.

We all went into this journey to help make people's lives better. While the pandemic rages, the future is unknown, and our anxiety levels remain high. These connections help us cope with our own disquiet as we courageously fulfill our duties as healers. We will continue to fight battles at all stages of our careers. We are just reminded in this trying time that we are all in this fight together. ■

AAO-HNSF Clinical Practice Guidelines: Resources and Timely Education

The AAO-HNSF Clinical Practice Guidelines (CPG) are one way of increasing implementation of evidence into practice. They can serve as a guide to best practices, a framework for clinical decision-making, and a benchmark for evaluating performance.

The most recently published guidelines include:

- Clinical Practice Guideline: Ménière's Disease
- Clinical Practice Guideline: Nosebleed (Epistaxis)
- Clinical Practice Guideline: Sudden Hearing Loss (Update)
- Clinical Practice Guideline: Tonsillectomy in Children (Update)

Be sure to check out the following valuable online CPG resources that the Academy offers!

OTOLOGIC
OTOLARYNGOLOGY LEARNING NETWORK
www.OTOLogic.com

There are three ways to learn more about the published CPGs by searching under the following "Activity Series" and typing in the title/keyword:

1. Annual Meeting Expert Series (AmX)
2. Annual Meeting Webcasts (AMW)
3. Clinical Practice Guidelines (CPG)

CPG
CLINICAL PRACTICE GUIDELINE
www.entnet.org/CPG

Visit the CPG homepage for the published guidelines, executive summaries, and other supplemental resources available for physicians, patients, media, and the public. ■

OTOSOURCE
COMPREHENSIVE OTOLARYNGOLOGY CURRICULUM

Education Opportunities

What is the utility of various repositioning maneuvers in the treatment of BPPV? Can you differentiate between vestibular migraine and Ménière's disease? What are the steps in the management of acute vertigo? Answers to these questions and a wealth of additional information may be found at: **www.otosource.org.** ■

OTO Journal

Don't Miss the Latest Podcast from OTO Journal

Visit *Otolaryngology–Head and Neck Surgery* **http://sageotolaryngology.sage-publications.libsynpro.com/** ■

HUMANITARIAN TRAVEL GRANT

Medical Mission to the Philippines

Marc Polacco, MD, received an AAO-HNSF Humanitarian Travel Grant to participate in the 29th year of the Philippine American Group of Educators and Surgeons (PAGES), an organization that annually provides *pro bono* cleft lip and palate repair at various sites throughout the thousands of islands that comprise the Philippines.

After he arrived at Ospital ng Imus in Imus, Philippines, he met the entire team of roughly 45 volunteers. "Although many of the volunteers did not know each other prior, and we were operating in a completely new hospital, soon enough we became a well-oiled machine, each component moving smoothly and with purpose," said Dr. Polacco. The team was comprised of volunteers from the Philippines, the United States, the United Kingdom, South Korea, Hong Kong, and Italy.

Over the course of nine days, they performed a total of 121 procedures for 108 patients, including 60 palatoplasties, 41 cheiloplasties, and 20 procedures such as cyst excisions and otoplasties. "Although the week was incredibly busy and at times physically exhausting, it was also filled to the brim with smiling faces, cultivation of life-long friendships, and the opportunity to make a permanent, positive impact on the lives of patients and their families." ■

➔ **READ MORE ONLINE**
Longer article available

Navigating Uncharted Waters:

American Neurotology Society

www.americanneurotologysociety.com

Bradley W. Kesser, MD, ANS President
Nikolas H. Blevins, MD, ANS Immediate Past President

Bradley W. Kesser, MD

Nikolas H. Blevins, MD

COVID-19, a virally-induced economic coma, race relations—"these," as Thomas Paine wrote in 1776, "are the times that try our souls." We face unprecedented challenges—how do we practice in a safe, secure environment that protects both patient and provider from the novel SARS-CoV-2 while continuing to provide the best care we can? How can we support those who have lost jobs, been furloughed, or are suffering in this economy? How can we as individuals and physicians stand up to those who hate and those who claim supremacy based on skin color?

Members of the American Neurotology Society (ANS) have played many active roles in shaping our specialty's response to the pandemic as well as direct frontline patient care. To date, our members have helped draft Parts One and Two of the AAO-HNS **"Guidance for Return to Practice for Otolaryngology-Head and Neck Surgery."**

Led by **Elliott D. Kozin, MD,** and **Aaron K. Remenschneider, MD, MPH,** (who also helped draft the AAO-HNS guidance document), a separate "Guide to Enhance Otologic and Neurotologic Care During the COVID-19 Pandemic" will soon be published in *Otology & Neurotology.* This manuscript will serve otologists/neurotologists well as they increase patient care volumes during variable and uncertain phases of viral spread.

Maura K. Cosetti, MD, penned a moving personal account of her re-deployment to serve on the front lines—running the inpatient COVID-19 ward at Mount Sinai Hospital—in the maelstrom of New York at the height of the surge of coronavirus infections in the **June 2020 ANS newsletter.**

Maura K. Cosetti, MD

J. Thomas Roland, MD, and **Anil K. Lalwani, MD,** also weighed in on their experiences in the **June 2020 ANS newsletter** as they led their departments during the New York surge in coronavirus patients.

The discussion of COVID-19 continues on the ANS online discussion forum, DocMatter, in a **post** by member **Eric W. Sargent, MD,** asking about the occurrence of sudden sensorineural hearing loss and/or vestibular hypofunction in COVID-19 patients.

Introduced by Past ANS President **Barry Hirsch, MD,** the online **DocMatter ANS Community** forum boasts 284 members and has been a useful, entertaining, and information-laden addition to our specialty. Managed by **Robert S. Hong, MD, PhD,** the discussion forum currently hosts over 50 online discussions ranging in scope and depth from ototopical antibiotic preparations to evening hearing loss and many others.

The ANS is excited to present its Fall Super Saturday meeting completely virtually! The ANS has contracted with Digimentors to produce an epic meeting over three days, September 11-13. Highlights of the meeting include "This Old Ear" panel; the three ANS Saturday morning study groups—Facial Nerve (moderated by **John P. Leonetti, MD**), Stereotactic Radiosurgery (moderated by **P. Ashley Wackym, MD**), and the William House Cochlear Implant Group (moderated by Craig A. Buchmann, MD); PLUS a fourth study group—Evaluation and Management of the Third Window (moderated by **John P. Carey, MD,** and **Gerard J. Gianoli, MD**). Sunday features a Wellness panel (moderated by **Jo A. Shapiro, MD**); the Rizer Lecture on Genetic Hearing Loss by award-winning Harvard researcher Jeffrey R. Holt, PhD; and a Scary Cases panel, "Patients That Keep Us Awake at Night," a must see (and hear)!

Finally, in partnership with the American Otological Society (AOS), the ANS has sent its members **an action statement** against systemic racism. The statement can be found on the ANS website.

The statement calls for the engagement of members to enact initiatives to increase our visibility to underrepresented minority (URM) medical students, to empower future leaders by offering travel grants to URM students to AOS and ANS meetings as well as funding for public health research, to address healthcare disparities including access to cochlear implantation, and to support our communities and the greater medical community in improving access to medical care for all.

Undertaking such initiatives with our fellow neurotologists make us proud to be members of the ANS and excited for the coming academic year as we all navigate uncharted waters and face unprecedented challenges. We look forward to meeting those challenges and hope that you will reach out to us with suggestions, comments, or ideas to enhance the science, education, and clinical practice of our shared specialty. ■

International Guest of Honor: Taiwan Head and Neck Society

Combatting Head and Neck Cancer in Taiwan

Li-Jen Liao, MD, Secretary General, and **Pei-Jen Lou, MD,** President

Taiwan, with a population of 23.5 million, is in Far Eastern Asia. Despite the similar spoken language and proximity to China, Taiwan has been a separate and independent political entity for more than 50 years. The Taiwanese are liberal-minded, hospitable, and have their own distinct disease pattern.

Alcohol drinking, betel nut chewing, cigarette smoking, and human papillomavirus (HPV) all contribute to head and neck cancer. Due to the consumption of betel nuts, cigarettes, and alcohol, Taiwan has a high incidence of head and neck cancer. Habits and exposures unique to Taiwan include the local specialty Kaoliang (sorghum liquor) with 58% alcohol by volume, millet wine with 15% alcohol by volume, and chewing betel nuts. These are effectively euphoric but may be carcinogenic for head and neck cancer (Picture 1). According to our observation, the incidence of HPV-related oropharyngeal cancer is increasing.

Picture 1: Local specialty Kaoliang (sorghum liquor) with 58% alcohol by volume, betel nuts, and cigarettes

With the aim of improving public health, the Taiwan Head and Neck Society (THNS) was established in 2006. It was founded by **Professor Sheng-Po Hao, MD,** the first chair of the board, and joined by physicians committed to the research, education, and treatment of head and neck cancer in Taiwan. Since then, the number of members has increased from 94 to more than 500. The society strives to enhance the understanding of head and neck tumors in the domestic medical community, to encourage the clinical and basic research of head and neck tumors, and to promote the nation's health through academic exchanges. The society's mission is to promote the research and development of prevention, screening, treatment, follow-up, and support systems in basic clinical research for head and neck tumors. Most importantly, the society aims to encourage and consolidate friendship among colleagues.

Picture 2: Live swine head and neck surgery training course for residents

The society holds an annual society meeting (although this year's meeting is postponed due to the COVID-19 pandemic) and has held seminars and workshops with several international societies in the field of head and neck, including the American Academy of Otolaryngology–Head and Neck Surgery Foundation, Japan Head and Neck Society, and Korea Head and Neck Society. We also held a joint society meeting with Hong Kong and Singapore in 2019. We have hosted education courses, including the head and neck dissection and hands-on cadaver workshops in Hualien, Taiwan; live swine head and neck surgery training course for residents in Shanghai, China (Picture 2); and head and neck ultrasound training courses. In addition we invite and match international fellow surgeons for training in the field of head and neck surgery in Taiwan.

In the past decades, THNS and the people of Taiwan have succeeded to establish multidisciplinary management teams of head and neck. Microscopic reconstruction surgeries are routinely operated in all medical centers. Due to the promotion of healthy habits, the prevalence of cigarette smoking and betel nut chewing in the general population is gradually decreasing. We launched the oral mucosa screening program in 2004, which continues today. Through these advancements and efforts, the incidence of head and neck cancer has plateaued and appears to be decreasing in recent years (Figure 3).

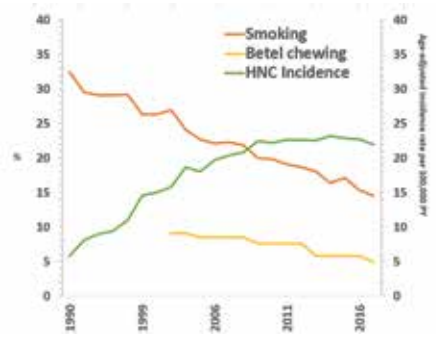


Figure 3: Trend of cigarette smoking, betel nut chewing, and incidence of head and neck cancer in Taiwan

Despite these accomplishments, we need to continue to work hard in basic research, patient survivorship, and life quality improvement. The society is ready to join the international community in the field of head and neck and welcome clinicians and researchers in this field to visit Taiwan. ■

Planning your #OTOMTG20

The AAO-HNSF Annual Meeting Program Committee, led by **Mark K. Wax, MD,** Coordinator, and **Daniel C. Chelius, Jr., MD,** Coordinator-Elect, has taken the reins of the AAO-HNSF 2020 Annual Meeting & OTO Experience to transition it to one of a virtual experience for attendees from around the globe.

Minka Schofield, MD, member of the Annual Meeting Program Committee, moderates a podcast discussion with Dr. Wax and Dr. Chelius to discuss the plans for the Virtual Annual Meeting and how this meeting is a can't-miss experience! The following are excerpts from that discussion.

AAO-HNS frequENTcy

Listen to the full interview on the Academy's podcast channel, frequENTcy. **www.entnet.org/frequentcy**

What are you most excited about for this year's Virtual Annual Meeting?

Dr. Wax: I'm very excited that the Academy has rallied at this time to explore what is really a new dimension in an academic enterprise. It's going to make us stronger, and it's moving us forward into the next dimension of education. I think that it is all terribly exciting.

Dr. Chelius: I am really looking forward to setting aside some time to visit with my peers and colleagues in this virtual environment. I am also excited just to see this come to life. It represents so much hard work by our staff, Programming Committee, and expert speakers in a very short time frame.

What will the Virtual Annual Meeting offer that is equally as exciting as an in-person meeting?

Dr. Chelius: The number one thing that is equivalent is the same amazing minds in our field bringing their expertise to the ongoing conversation of otolaryngology. That's what the Annual Meeting is at its core—a conversation about who we are and where we're going as a field. And those minds and those discussions are still going to be there.

Dr. Wax: This new format is going to be extremely beneficial to those in our specialty because it provides the flexibility to allow attendees to get all available CME hours for all education content at their convenience.

This year's conference will span over six weeks. Can you describe the flow of the meeting?

Dr. Chelius: The general flow includes the first three days of live content followed by six weeks of mixed live and prerecorded content. All content will be available in a recorded format during the six weeks of the meeting and then going forward on the Academy's education platform, if the presenters have agreed to share their content.

What other hot topics and groundbreaking science will be presented during the Virtual Annual Meeting?

Dr. Chelius: There's going to be groundbreaking science everywhere you turn in this virtual environment. For example, the scientific orals are going to be available on an individual basis as a pre-recorded presentation, so it will be very easy to go through and look for the scientific oral presentations that most appeal to you.

Can you share more information about the poster hall viewing experience?

Dr. Wax: Posters will be searchable, with each poster author offering a three-minute talk about the content of their research. So, you will be able to find a poster and review at your leisure. The added dimension of a three-minute verbal presentation allows the presenter to discuss the nuances that are hard to convey in a limited poster format.

Will the Virtual Annual Meeting include any networking opportunities?

Dr. Chelius: I think it's really cool in the platform that wherever you are in the virtual environment you'll be able to see what other attendees are also on the platform at that time. You can message them, request a video chat, or set up a time later to meet with them. In some ways, it replicates the experience of walking around the convention center and seeing a colleague in the distance that you wave to and catch up with off to the side.

There will also be some formal opportunities

Experience: Ask the Experts

for networking during the specialty weeks, offering "office hours" with some of the experts in the field via a chat room function where you can pose questions and have discussions.

There will also be networking lounges for featuring some wellness sessions, such as rooms for yoga and Peloton group rides.

Will there still be an Exhibit Hall (OTO Experience) or the ability to view and purchase products and services virtually?

Dr. Wax: The companies that deal with otolaryngology are on the cutting edge of the meeting format and have adapted to be able to interact with attendees in this virtual world. There is going to be a great opportunity to interact with our exhibitors through the platform. Virtual consultations will be available, and the opportunities for one-on-one discussions will be a unique setting.

Why should someone register for the Virtual Annual Meeting?

Dr. Chelius: This meeting is the yearly culmination of our conversation about who we are as otolaryngologists. It's important for us to all show up together and continue the conversation and to draw consolation, solace, and renewal in each other as these are extremely difficult times we're facing. It is important to be there for each other to really emphasize that **We Are One** in otolaryngology no matter where you are in the world.

Dr. Schofield: I'd like to thank Dr. Wax and Dr. Chelius for updating us on the Annual Meeting that has a theme this year of "Bringing Together the World of Otolaryngology." Even though the theme was chosen prior to the COVID-19 pandemic, there is no other theme that would ring more true at this time. As we bring together the world of otolaryngology, now more than ever, **We Are One.** ■

With Vision and Commitment: Through the Eyes of the Annual Meeting Program Coordinator

Mark K. Wax, MD, has served as Annual Meeting Program Coordinator since 2016. The AAO-HNSF 2020 Virtual Annual Meeting & OTO Experience is his last meeting serving in this position.

"The Academy would like to extend our sincere appreciation for the innovative work that Dr. Wax has contributed to the Annual Meeting program. He has left an indelible mark on the vast array of opportunities that the program presents both in education and networking. Through his ongoing and unwavering commitment to providing value and relevance to attendees, he has helped shape and shift the program to remain at the forefront of offerings and on the cutting edge of education," said **James C. Denneny III, MD,** AAO-HNS/F Executive Vice President and CEO.

Why do you think the decision to hold the Virtual Annual Meeting this year is essential to the specialty?

Dr. Wax: I think that it demonstrates the resiliency of the Academy and the ability that we must be able to continue to move forward. No matter what obstacles are going on around us, we are still otolaryngologists and we still take care of patients. We all want to continue with our excellence of patient care and continue to learn, educate, and provide the best for our patients. Holding the Annual Meeting allows us to do that.

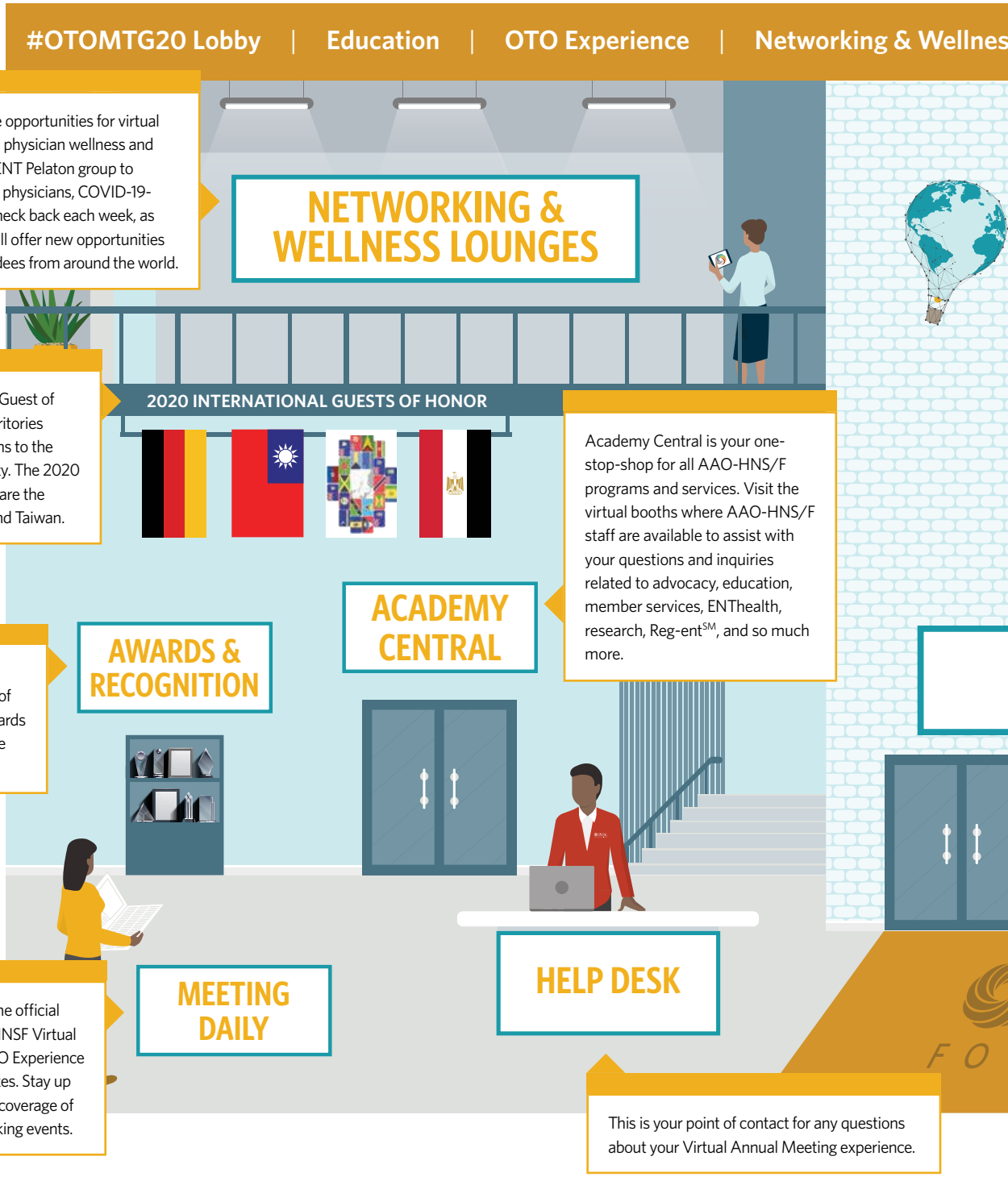
What do you value about participation in the Academy and in particular attending the Annual Meeting?

Dr. Wax: I've always gone to the Annual Meeting because it provides a great opportunity to learn. I recently had an opportunity to reflect on taking innovation and turning it into an active idea and then into active practice. It made me think of all the things that I've changed from when I first graduated. A lot of the changes that I've implemented in my practice are because of things that I learned at the Academy's Annual Meeting. The ability to ask the experts and get diverse opinions is something that you just don't get anywhere, no matter who you know or where you operate.

Do you remember the first time you went to an Annual Meeting?

Dr. Wax: I've been going to the Annual Meeting for 30+ years or more. Originally I went to take courses and learn really interesting things that were exciting that I hadn't learned in residency. The basic otolaryngology, the esoteric—it was fascinating. Being able to walk up to the "big names" was unbelievable! The Annual Meeting is a great feature of the Academy—it lets you do what you are most interested in and in a way that consists of multidisciplinary collaborative efforts. ■

Your Entrance to the AAO-HNSF 2020



Explore a plethora of unique opportunities for virtual and social networking, from physician wellness and offerings like yoga and the ENT Pelaton group to discussion rooms for young physicians, COVID-19-related topics, and more. Check back each week, as each new specialty week will offer new opportunities to interact with other attendees from around the world.

The AAO-HNSF International Guest of Honor program recognizes territories or regions for their contributions to the specialty and global community. The 2020 International Guests of Honor are the Caribbean, Egypt, Germany, and Taiwan.

Academy Central is your one-stop-shop for all AAO-HNS/F programs and services. Visit the virtual booths where AAO-HNS/F staff are available to assist with your questions and inquiries related to advocacy, education, member services, ENThealth, research, Reg-ent[SM], and so much more.

Read more about the distinguished recipients of Presidential Citation Awards and AAO-HNS/F Service and Leadership Awards.

The Meeting Daily is the official news from the AAO-HNSF Virtual Annual Meeting & OTO Experience delivered to your inboxes. Stay up to date with the latest coverage of education and networking events.

This is your point of contact for any questions about your Virtual Annual Meeting experience.

Virtual Annual Meeting & OTO Experience

s Lounges | CME Evaluations | Help Desk | Awards & Recognition

AAO-HNSF 2020 VIRTUAL
ANNUAL MEETING & OTO EXPERIENCE

This is your entryway to all the education offerings and the latest research in the specialty. Awaiting attendees are live and new on-demand education sessions, guest lectures, ePosters, scientific orals, the International Symposium, General Assemblies, Industry Expert Series, and more. This dynamic education program allows immediate access to 300+ scheduled hours of CME at your convenience.

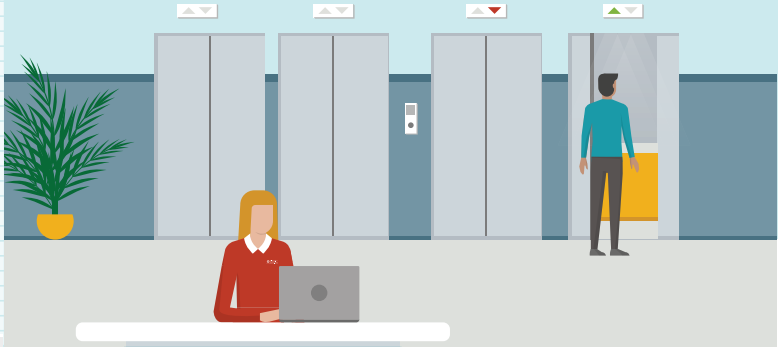
EDUCATION & LIVE EVENTS

NEW PRODUCT SHOWCASE

Engage with the OTO Experience exhibitors who will be demonstrating the latest innovative and state-of-the-art technologies and devices for otolaryngology-head and neck surgery practice and patient care.

OTO EXPERIENCE VIRTUAL EXHIBITS

Don't miss this opportunity to engage with the exhibitors of the OTO Experience to learn more about the cutting-edge products and services they offer.



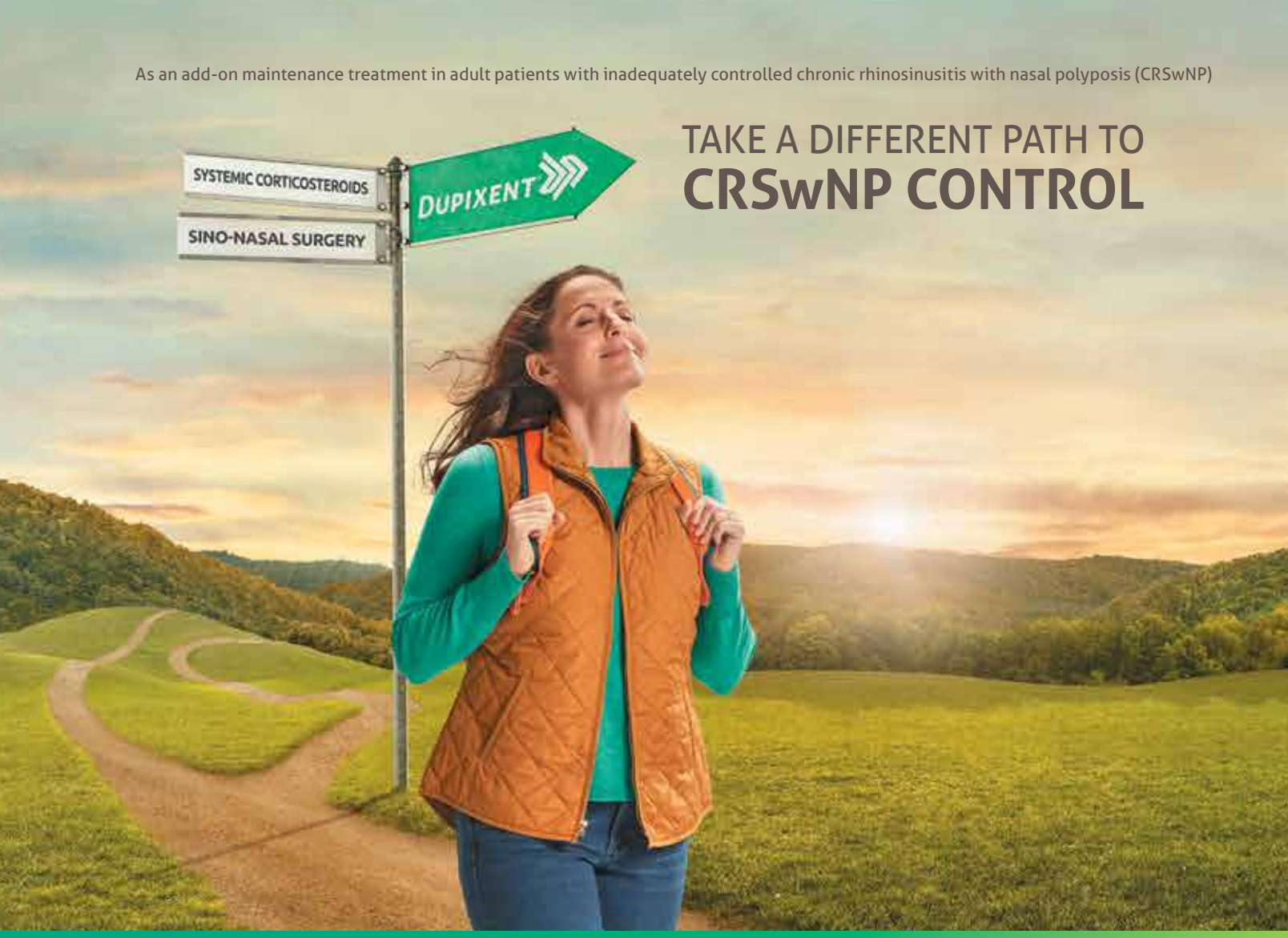
CME EVALUATIONS

Be sure to complete your CME evaluations to get all appropriate education credits. AAO-HNSF designates this live activity for *AMA PRA Category 1 Credit(s)*™ and *AAPA Category 1 Credit(s)*. Not all sessions are eligible for credit. Credit will be awarded when documented by the submission of the 2020 Virtual Annual Meeting & OTO Experience Evaluation.

AMERICAN ACADEMY OF OTOLARYNGOLOGY–HEAD AND NECK SURGERY FOUNDATION®

As an add-on maintenance treatment in adult patients with inadequately controlled chronic rhinosinusitis with nasal polyposis (CRSwNP)

TAKE A DIFFERENT PATH TO CRSwNP CONTROL



DUPIXENT IS THE FIRST BIOLOGIC APPROVED IN CRSwNP that targets the inflammation underlying the disease—so your patients can achieve and maintain control

INDICATION

DUPIXENT is indicated as an add-on maintenance treatment in adult patients with inadequately controlled chronic rhinosinusitis with nasal polyposis (CRSwNP).

IMPORTANT SAFETY INFORMATION

CONTRAINDICATION: DUPIXENT is contraindicated in patients with known hypersensitivity to dupilumab or any of its excipients.

WARNINGS AND PRECAUTIONS

Hypersensitivity: Hypersensitivity reactions, including generalized urticaria, rash, erythema nodosum, anaphylaxis and serum sickness or serum sickness-like reactions, were reported in <1% of subjects who received DUPIXENT in clinical trials. If a clinically significant hypersensitivity reaction occurs, institute appropriate therapy and discontinue DUPIXENT.

Conjunctivitis and Keratitis: Conjunctivitis occurred more frequently in subjects with chronic rhinosinusitis with nasal polyposis who received DUPIXENT. There were no cases of keratitis reported in the CRSwNP development program. Advise patients to report new onset or worsening eye symptoms to their healthcare provider.

Eosinophilic Conditions: Patients being treated for asthma may present with serious systemic eosinophilia sometimes presenting with clinical features of eosinophilic pneumonia or vasculitis consistent with eosinophilic granulomatosis with polyangiitis (EGPA), conditions which are often treated with systemic corticosteroid therapy. These events may be associated with the reduction of oral corticosteroid therapy. Physicians should be alert to vasculitic rash, worsening pulmonary symptoms, cardiac complications, and/or neuropathy presenting in their patients with eosinophilia.

Visit *DUPIXENTHCP.COM/CRSWNP*

DUPIXENT PROVIDED RAPID AND SUSTAINED IMPROVEMENT IN SENSE OF SMELL[1]

AT WEEK 52

71% IMPROVEMENT IN UPSIT SCORE

with DUPIXENT 300 mg Q2W + INCS (n=150) (**9.53** from a baseline score of **13.46**) vs **6% worsening** with placebo + INCS (n=153) (**-0.77** from a baseline score of **13.78**) (LSM difference: 10.30 [95% CI: 8.50, 12.10]) in Trial 2 (secondary endpoint)[1]

67% OF THE TOTAL IMPROVEMENT IN SENSE OF SMELL WAS SEEN AFTER THE FIRST DOSE, AS MEASURED AT WEEK 2[1,a]

[a] **Change in UPSIT score at Week 2 (LSM difference vs placebo: 5.36 [95% CI: 3.62, 7.10]).[1]**

AT WEEK 24

63% REDUCTION IN THE NUMBER OF PATIENTS WITH ANOSMIA[1,2,b]

[b] 79% (n=228/287, pooled DUPIXENT arms) of patients taking DUPIXENT 300 mg Q2W + INCS had anosmia at baseline, which was reduced to 30% (n=84/280, pooled DUPIXENT arms) at Week 24 in Trial 2. There was almost no change with placebo: 76.7% (n=115/150 total patients) of patients taking placebo + INCS had anosmia at baseline, which was reduced to 76.6% (n=111/145 total patients) at Week 24 in Trial 2.[1,2]

IMPORTANT SAFETY INFORMATION

WARNINGS AND PRECAUTIONS (cont'd)

Eosinophilic Conditions (cont'd): Cases of eosinophilic pneumonia were reported in adult patients who participated in the asthma development program and cases of vasculitis consistent with EGPA have been reported with DUPIXENT in adult patients who participated in the asthma development program as well as in adult patients with co-morbid asthma in the CRSwNP development program. A causal association between DUPIXENT and these conditions has not been established.

Reduction of Corticosteroid Dosage: Do not discontinue systemic, topical, or inhaled corticosteroids abruptly upon initiation with DUPIXENT. Reductions in corticosteroid dose, if appropriate, should be gradual and performed under the direct supervision of a physician. Reduction in corticosteroid dose may be associated with systemic withdrawal symptoms and/or unmask conditions previously suppressed by systemic corticosteroid therapy.

Patients with Co-Morbid Asthma: Advise patients with co-morbid asthma not to adjust or stop their asthma treatments without consultation with their physician.

Parasitic (Helminth) Infections: It is unknown if DUPIXENT will influence the immune response against helminth infections. Treat patients with pre-existing helminth infections before initiating therapy with DUPIXENT. If patients become infected while receiving treatment with DUPIXENT and do not respond to anti-helminth treatment, discontinue treatment with DUPIXENT until the infection resolves.

University of Pennsylvania Smell Identification Test (UPSIT) score (range 0 to 40): higher score indicates improvement.

INCS, intranasal corticosteroids; LSM, least squares mean; Q2W, once every 2 weeks.

Please see additional Important Safety Information throughout and brief summary of full Prescribing Information on the following pages.

DUPIXENT® (dupilumab) Injection 300mg

DUPIXENT OFFERS A NONSTEROIDAL OPTION TO REDUCE NASAL CONGESTION AND OBSTRUCTION

Significantly improved NC score at Weeks 24 (coprimary endpoint) and 52 (secondary endpoint) in patients who were uncontrolled on standard of care[1,3,a]

AT WEEK 52

54% IMPROVEMENT IN NC SCORE

with DUPIXENT 300 mg Q2W + INCS (n=150) (**-1.35** from a baseline score of **2.48**) vs **16% improvement** with placebo + INCS (n=153) (**-0.37** from a baseline score of **2.38**) (LSM difference: -0.98 [95% CI: -1.17, -0.79]) in Trial 2

- **51% IMPROVEMENT AT WEEK 24** with DUPIXENT Q2W + INCS (n=295, pooled DUPIXENT arms) (**-1.25** from a baseline score of **2.46**) vs **16% improvement** with placebo + INCS (n=153) (**-0.38** from a baseline score of **2.38**) (LSM difference: -0.87 [95% CI: -1.03, -0.71]) in Trial 2

[a] All patients in the placebo and DUPIXENT arms were on a background therapy of INCS, mometasone furoate nasal spray.

Trial 1[3,4]: 24-week study–276 adults (≥18 years) were randomized to receive either DUPIXENT 300 mg Q2W + INCS for 24 weeks (n=143), or placebo + INCS for 24 weeks (n=133). Subjects enrolled in Trial 1 were required to be on background INCS[a] and to have CRSwNP despite prior sino-nasal surgery or prior treatment with, or who were ineligible to receive or were intolerant to, systemic corticosteroids in the past 2 years. Patients with chronic rhinosinusitis without nasal polyposis were not included in these trials. Rescue with systemic corticosteroids or surgery was allowed at investigators' discretion. The total population of patients in Trial 1 was unrestricted by minimum baseline blood eosinophil count. **Coprimary endpoints:** Change from baseline at Week 24 in NC score averaged over 28 days and bilateral endoscopic nasal polyps score (NPS). **Key secondary endpoints:** Change from baseline at Week 24 in daily loss of smell score, LMK-CT score, SNOT-22 score, and UPSIT score. **Prespecified pooled analysis:** Change from baseline at Week 52 in proportion of patients requiring systemic corticosteroids or sino-nasal surgery. **Patient demographics:** Mean age: 50 years; male: 57%; mean CRSwNP duration: 11 years; patients with ≥1 prior surgery: 72%; patients with SCS use in previous 2 years: 65%; mean bilateral endoscopic NPS,[b] range 0-8: 5.8; mean NC score,[b] range 0-3: 2.4; mean LMK sinus CT total score,[b] range 0-24: 19; mean loss of smell score[b] (AM), range 0-3: 2.7; mean SNOT-22 total score,[b] range 0-110: 49.4; mean blood eosinophil count: 440 cells/μL; mean total IgE: 212 IU/mL; atopic medical history, overall: 75%; asthma: 58%; NSAID-ERD: 30%.

Trial 2[3,4]: 52-week study–448 adults (≥18 years) were randomized to receive either DUPIXENT + INCS 300 mg Q2W for 52 weeks (n=150),[c] DUPIXENT + INCS 300 mg Q2W for 24 weeks, followed by Q4W[d] through Week 52 (n=145),[c] or placebo + INCS for 52 weeks (n=153). Subjects enrolled in Trial 2 were required to be on background INCS[a] and to have CRSwNP despite prior sino-nasal surgery or prior treatment with, or who were ineligible to receive or were intolerant to, systemic corticosteroids in the past 2 years. Patients with chronic rhinosinusitis without nasal polyposis were not included in these trials. Rescue with systemic corticosteroids or surgery was allowed at investigators' discretion. The total population of patients in Trial 2 was unrestricted by minimum baseline blood eosinophil count. **Coprimary endpoints:** Change from baseline at Week 24 in NC score averaged over 28 days and bilateral endoscopic NPS. **Key secondary endpoints:** Change from baseline at Weeks 24 and 52 in NC score (at Week 52), NPS (at Week 52), daily loss of smell score, LMK-CT score, SNOT-22 score, and UPSIT score. **Prespecified pooled analysis:** Change from baseline at Week 52 in proportion of patients requiring systemic corticosteroids or sino-nasal surgery. **Patient demographics:** Mean age: 52 years; male: 62%; mean CRSwNP duration: 11 years; patients with ≥1 prior surgery: 58%; patients with SCS use in previous 2 years: 80%; mean bilateral endoscopic NPS,[b] range 0-8: 6.1; mean NC score,[b] range 0-3: 2.4; mean LMK sinus CT total score,[b] range 0-24: 18; mean loss of smell score[b] (AM), range 0-3: 2.8; mean SNOT-22 total score,[b] range 0-110: 51.9; mean blood eosinophil count: 430 cells/μL; mean total IgE: 240 IU/mL; atopic medical history, overall: 82%; asthma: 60%; NSAID-ERD: 27%.

Nasal congestion/obstruction (NC) score (range 0 to 3): reduced score indicates improvement.

[b] Higher scores indicate greater disease severity.
[c] In Trial 2, data from baseline to Week 24 are pooled from DUPIXENT Q2W treatment arms (n=295).
[d] The recommended dose of DUPIXENT for adult patients with CRSwNP is 300 mg given subcutaneously every other week.

IMPORTANT SAFETY INFORMATION

ADVERSE REACTIONS: The most common adverse reactions (incidence ≥1%) in patients with CRSwNP are injection site reactions, eosinophilia, insomnia, toothache, gastritis, arthralgia, and conjunctivitis.

DRUG INTERACTIONS: Avoid use of live vaccines in patients treated with DUPIXENT.

AM, morning; LMK-CT, Lund-Mackay computed tomography; NSAID-ERD, nonsteroidal anti-inflammatory drug–exacerbated respiratory disease; Q4W, once every 4 weeks; SCS, systemic corticosteroid; SNOT-22, 22-item Sino-Nasal Outcome Test.

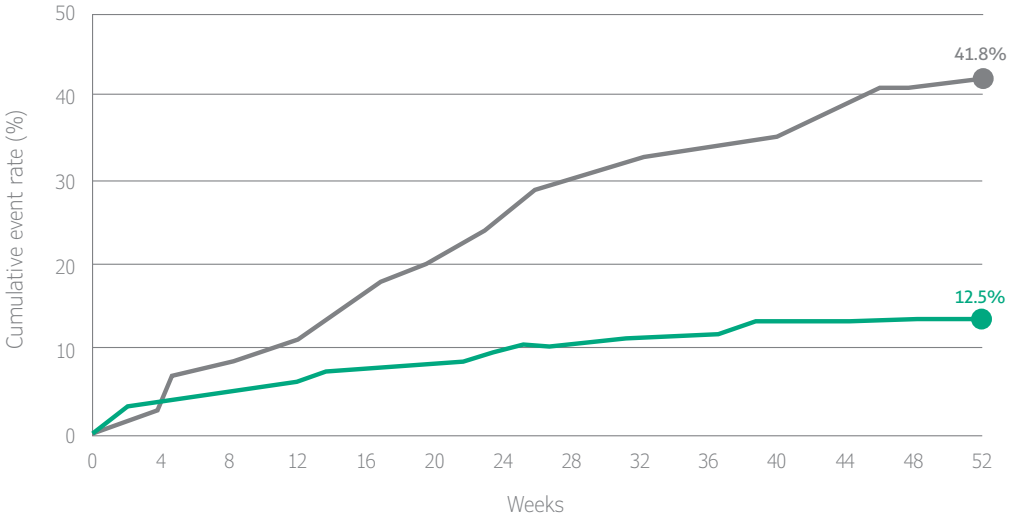
Visit DupixentHCP.com/CRSwNP

DUPIXENT® (dupilumab) Injection 300mg

DUPIXENT REDUCED STEROID USE AND SURGERY FOR THE MAJORITY OF PATIENTS

Significantly reduced SCS use or the need for sino-nasal surgery vs placebo in a prespecified multiplicity-controlled pooled analysis of Trials 1 and 2[3,a]

Time to first SCS use or CRSwNP surgery during the treatment period



76%
REDUCTION
at Week 52 with DUPIXENT vs placebo (HR: 0.24 [95% CI: 0.17, 0.35])

- **DUPIXENT 300 mg Q2W + INCS** (Day 0: n=438; Week 24: n=376; Week 52: n=100)
- **Placebo + INCS** (Day 0: n=286; Week 24: n=187; Week 52: n=61)

74% FEWER PATIENTS REQUIRED SCS USE AT WEEK 52

(HR: 0.26 [95% CI: 0.18, 0.38])[3]

- **75% REDUCTION IN SCS COURSES PER YEAR** (RR: 0.25 [95% CI: 0.17, 0.37])[3]

83% FEWER PATIENTS REQUIRED SINO-NASAL SURGERY AT WEEK 52

(HR: 0.17 [95% CI: 0.07, 0.46])[3]

[e] Individually, SCS reduction and need for sino-nasal surgery were not multiplicity-adjusted endpoints.

IMPORTANT SAFETY INFORMATION

USE IN SPECIFIC POPULATIONS

- **Pregnancy:** Available data from case reports and case series with DUPIXENT use in pregnant women have not identified a drug-associated risk of major birth defects, miscarriage or adverse maternal or fetal outcomes. Human IgG antibodies are known to cross the placental barrier; therefore, DUPIXENT may be transmitted from the mother to the developing fetus.
- **Lactation:** There are no data on the presence of DUPIXENT in human milk, the effects on the breastfed infant, or the effects on milk production. Maternal IgG is known to be present in human milk. The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for DUPIXENT and any potential adverse effects on the breastfed child from DUPIXENT or from the underlying maternal condition.

References: 1. Data on file, Sanofi US. LIBERTY NP SINUS-52, CSR. 2018. **2.** Bachert C, Han JK, Desrosiers M, et al. Efficacy and safety of dupilumab in patients with severe chronic rhinosinusitis with nasal polyps (LIBERTY NP SINUS-24 and LIBERTY NP SINUS-52): results from two multicentre, randomised, double-blind, placebo-controlled, parallel-group phase 3 trials. *Lancet.* 2019;394(10209):1638-1650. **3.** DUPIXENT Prescribing Information. **4.** Data on file, Sanofi US. Clinical overview (chronic rhinosinusitis with nasal polyposis). 2018.

HR, hazard ratio; RR, risk ratio.

Please see brief summary of full Prescribing Information on the following pages.

SANOFI GENZYME

REGENERON

DUP.19.12.0125 02/2020

DUPIXENT® (dupilumab) injection, for subcutaneous use Rx only

Brief Summary of Prescribing Information

1 INDICATIONS AND USAGE

1.3 Chronic Rhinosinusitis with Nasal Polyposis

DUPIXENT is indicated as an add-on maintenance treatment in adult patients with inadequately controlled chronic rhinosinusitis with nasal polyposis (CRSwNP).

4 CONTRAINDICATIONS

DUPIXENT is contraindicated in patients who have known hypersensitivity to dupilumab or any of its excipients *[see Warnings and Precautions (5.1)]*.

5 WARNINGS AND PRECAUTIONS

5.1 Hypersensitivity

Hypersensitivity reactions, including generalized urticaria, rash, erythema nodosum and serum sickness or serum sickness-like reactions, were reported in less than 1% of subjects who received DUPIXENT in clinical trials. If a clinically significant hypersensitivity reaction occurs, institute appropriate therapy and discontinue DUPIXENT *[see Adverse Reactions (6.1, 6.2)]*.

5.2 Conjunctivitis and Keratitis

In subjects with CRSwNP, the frequency of conjunctivitis was 2% in the DUPIXENT group compared to 1% in the placebo group in the 24-week safety pool; these subjects recovered. There were no cases of keratitis reported in the CRSwNP development program *[see Adverse Reactions (6.1)]*.

Advise patients to report new onset or worsening eye symptoms to their healthcare provider.

5.3 Eosinophilic Conditions

Patients being treated for asthma may present with serious systemic eosinophilia sometimes presenting with clinical features of eosinophilic pneumonia or vasculitis consistent with eosinophilic granulomatosis with polyangiitis, conditions which are often treated with systemic corticosteroid therapy. These events may be associated with the reduction of oral corticosteroid therapy. Physicians should be alert to vasculitic rash, worsening pulmonary symptoms, cardiac complications, and/or neuropathy presenting in their patients with eosinophilia. Cases of eosinophilic pneumonia were reported in adult patients who participated in the asthma development program and cases of vasculitis consistent with eosinophilic granulomatosis with polyangiitis have been reported with DUPIXENT in adult patients who participated in the asthma development program as well as in adult patients with co-morbid asthma in the CRSwNP development program. A causal association between DUPIXENT and these conditions has not been established.

5.5 Reduction of Corticosteroid Dosage

Do not discontinue systemic, topical, or inhaled corticosteroids abruptly upon initiation of therapy with DUPIXENT. Reductions in corticosteroid dose, if appropriate, should be gradual and performed under the direct supervision of a physician. Reduction in corticosteroid dose may be associated with systemic withdrawal symptoms and/or unmask conditions previously suppressed by systemic corticosteroid therapy.

5.6 Patients with Comorbid Asthma

Advise patients with CRSwNP who have co-morbid asthma not to adjust or stop their asthma treatments without consultation with their physicians.

5.7 Parasitic (Helminth) Infections

Patients with known helminth infections were excluded from participation in clinical studies. It is unknown if DUPIXENT will influence the immune response against helminth infections.

Treat patients with pre-existing helminth infections before initiating therapy with DUPIXENT. If patients become infected while receiving treatment with DUPIXENT and do not respond to antihelminth treatment, discontinue treatment with DUPIXENT until the infection resolves.

6 ADVERSE REACTIONS

The following adverse reactions are discussed in greater detail elsewhere in the labeling:

- Hypersensitivity *[see Warnings and Precautions (5.1)]*
- Conjunctivitis and Keratitis *[see Warnings and Precautions (5.2)]*

6.1 Clinical Trials Experience

Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to rates in the clinical trials of another drug and may not reflect the rates observed in practice.

Chronic Rhinosinusitis with Nasal Polyposis

A total of 722 adult subjects with chronic rhinosinusitis with nasal polyposis (CRSwNP) were evaluated in 2 randomized, placebo-controlled, multicenter trials of 24 to 52 weeks duration (CSNP Trials 1 and 2). The safety pool consisted of data from the first 24 weeks of treatment from both studies.

In the safety pool, the proportion of subjects who discontinued treatment due to adverse events was 5% of the placebo group and 2% of the DUPIXENT 300 mg Q2W group.

Table 4 summarizes the adverse reactions that occurred at a rate of at least 1% in subjects treated with DUPIXENT and at a higher rate than in their respective comparator group in CSNP Trials 1 and 2.

Table 4: Adverse Reactions Occurring in ≥1% of the DUPIXENT Group in CRSwNP Trials 1 and 2 and Greater than Placebo (24 Week Safety Pool)

Adverse Reaction	CSNP Trial 1 and Trial 2	
	DUPIXENT 300 mg Q2W N=440 n (%)	Placebo N=282 n (%)
Injection site reactions[a]	28 (6%)	12 (4%)
Conjunctivitis[b]	7 (2%)	2 (1%)
Arthralgia	14 (3%)	5 (2%)
Gastritis	7 (2%)	2 (1%)
Insomnia	6 (1%)	0 (<1%)
Eosinophilia	5 (1%)	1 (<1%)
Toothache	5 (1%)	1 (<1%)

[a] Injection site reactions cluster includes injection site reaction, pain, bruising and swelling.

[b] Conjunctivitis cluster includes conjunctivitis, allergic conjunctivitis, bacterial conjunctivitis, viral conjunctivitis, giant papillary conjunctivitis, eye irritation, and eye inflammation.

The safety profile of DUPIXENT through Week 52 was generally consistent with the safety profile observed at Week 24.

Specific Adverse Reactions

Conjunctivitis

In the 52-week CRSwNP study (CSNP Trial 2), the frequency of conjunctivitis was 3% in the DUPIXENT subjects and 1% in the placebo subjects; all of these subjects recovered *[see Warnings and Precautions (5.2)]*.

Eczema Herpeticum and Herpes Zoster

Among CRSwNP subjects there were no reported cases of herpes zoster or eczema herpeticum.

Hypersensitivity Reactions

Hypersensitivity reactions were reported in <1% of DUPIXENT-treated subjects. These included serum sickness reaction, serum sickness-like reaction, generalized urticaria, rash, erythema nodosum, and anaphylaxis *[see Contraindications (4), Warnings and Precautions (5.1), and Adverse Reactions (6.2)]*.

Eosinophils

DUPIXENT-treated subjects had a greater initial increase from baseline in blood eosinophil count compared to subjects treated with placebo. In subjects with CRSwNP, the mean and median increases in blood eosinophils from baseline to Week 16 were 150 and 50 cells/mcL, respectively.

Across all indications, the incidence of treatment-emergent eosinophilia (≥500 cells/mcL) was similar in DUPIXENT and placebo groups. Treatment-emergent eosinophilia (≥5,000 cells/mcL) was reported in <2% of DUPIXENT-treated patients and <0.5% in placebo-treated patients. Blood eosinophil counts declined to near baseline levels during study treatment *[see Warnings and Precautions (5.3)]*.

Cardiovascular (CV)

In the 24-week placebo controlled trial in subjects with CRSwNP (CSNP Trial 1), CV thromboembolic events (CV deaths, non-fatal myocardial infarctions, and non-fatal strokes) were reported in 1 (0.7%) of the DUPIXENT group and 0 (0.0%) of the placebo group. In the 1-year placebo controlled trial in subjects with CRSwNP (CSNP Trial 2), there were no cases of CV thromboembolic events (CV deaths, non-fatal myocardial infarctions, and non-fatal strokes) reported in any treatment arm.

6.2 Immunogenicity

As with all therapeutic proteins, there is a potential for immunogenicity. The detection of antibody formation is highly dependent on the sensitivity and specificity of the assay. Additionally, the observed incidence of antibody (including neutralizing antibody) positivity in an assay may be influenced by several factors, including assay methodology, sample handling, timing of sample collection, concomitant medications, and underlying disease. For these reasons, comparison of the incidence of antibodies to dupilumab in the studies described below with the incidence of antibodies in other studies or to other products may be misleading.

Approximately 5% of subjects with atopic dermatitis, asthma, or CRSwNP who received DUPIXENT 300 mg Q2W for 52 weeks developed antibodies to dupilumab; ~2% exhibited persistent ADA responses, and ~2% had neutralizing antibodies.

Approximately 4% of subjects in the placebo groups in the 52-week studies were positive for antibodies to DUPIXENT; approximately 2% exhibited persistent ADA responses, and approximately 1% had neutralizing antibodies.

The antibody titers detected in both DUPIXENT and placebo subjects were mostly low. In subjects who received DUPIXENT, development of high titer antibodies to dupilumab was associated with lower serum dupilumab concentrations *[see Clinical Pharmacology (12.3) in the full Prescribing Information]*.

Two subjects who experienced high titer antibody responses developed serum sickness or serum sickness-like reactions during DUPIXENT therapy *[see Warnings and Precautions (5.1)]*.

7 DRUG INTERACTIONS

7.1 Live Vaccines

Avoid use of live vaccines in patients treated with DUPIXENT.

7.2 Non-Live Vaccines

Immune responses to vaccination were assessed in a study in which subjects with atopic dermatitis were treated once weekly for 16 weeks with 300 mg of dupilumab (twice the recommended dosing frequency). After 12 weeks of DUPIXENT administration, subjects were vaccinated with a Tdap vaccine (Adacel®) and a meningococcal polysaccharide vaccine (Menomune®). Antibody responses to tetanus toxoid and serogroup C meningococcal polysaccharide were assessed 4 weeks later. Antibody responses to both tetanus vaccine and meningococcal polysaccharide vaccine were similar in dupilumab-treated and placebo-treated subjects. Immune responses to the other active components of the Adacel and Menomune vaccines were not assessed.

8 USE IN SPECIFIC POPULATIONS

8.1 Pregnancy

Pregnancy Exposure Registry

There is a pregnancy exposure registry that monitors pregnancy outcomes in women exposed to DUPIXENT during pregnancy.

Please contact 1-877-311-8972 or go to https://mothertobaby.org/ongoing-study/dupixent/ to enroll in or to obtain information about the registry.

Risk Summary

Available data from case reports and case series with DUPIXENT use in pregnant women have not identified a drug-associated risk of major birth defects, miscarriage, or adverse maternal or fetal outcomes. Human IgG antibodies are known to cross the placental barrier; therefore, DUPIXENT may be transmitted from the mother to the developing fetus. In an enhanced pre- and post-natal developmental study, no adverse developmental effects were observed in offspring born to pregnant monkeys after subcutaneous administration of a homologous antibody against interleukin-4-receptor alpha (IL-4Rα) during organogenesis through parturition at doses up to 10-times the maximum recommended human dose (MRHD) *(see Data)*. The estimated background risk of major birth defects and miscarriage for the indicated populations are unknown. All pregnancies have a background risk of birth defect, loss or other adverse outcomes. In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2% to 4% and 15% to 20%, respectively.

Data

Animal Data

In an enhanced pre- and post-natal development toxicity study, pregnant cynomolgus monkeys were administered weekly subcutaneous doses of homologous antibody against IL-4Rα up to 10-times the MRHD (on a mg/kg basis of 100 mg/kg/week) from the beginning of organogenesis to parturition. No treatment-related adverse effects on embryofetal toxicity or malformations, or on morphological, functional, or immunological development were observed in the infants from birth through 6 months of age.

8.2 Lactation

Risk Summary

There are no data on the presence of dupilumab in human milk, the effects on the breastfed infant, or the effects on milk production. Maternal IgG is known to be present in human milk. The effects of local gastrointestinal and limited systemic exposure to dupilumab on the breastfed infant are unknown. The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for DUPIXENT and any potential adverse effects on the breastfed child from DUPIXENT or from the underlying maternal condition.

8.4 Pediatric Use

CRSwNP

CRSwNP does not normally occur in children. Safety and efficacy in pediatric patients (<18 years of age) with CRSwNP have not been established.

8.5 Geriatric Use

Of the 440 subjects with CRSwNP exposed to DUPIXENT, a total of 79 subjects were 65 years or older. Efficacy and safety in this age group were similar to the overall study population.

10 OVERDOSE

There is no specific treatment for DUPIXENT overdose. In the event of overdosage, monitor the patient for any signs or symptoms of adverse reactions and institute appropriate symptomatic treatment immediately.

17 PATIENT COUNSELING INFORMATION

Advise the patients and/or caregivers to read the FDA-approved patient labeling (Patient Information and Instructions for Use).

Pregnancy Registry

There is a pregnancy exposure registry that monitors pregnancy outcomes in women exposed to DUPIXENT during pregnancy. Encourage participation in the registry *[see Use in Specific Populations (8.1)]*.

Administration Instructions

Provide proper training to patients and/or caregivers on proper subcutaneous injection technique, including aseptic technique, and the preparation and administration of DUPIXENT prior to use. Advise patients to follow sharps disposal recommendations *[see Instructions for Use]*.

Hypersensitivity

Advise patients to discontinue DUPIXENT and to seek immediate medical attention if they experience any symptoms of systemic hypersensitivity reactions *[see Warnings and Precautions (5.1)]*.

Conjunctivitis and Keratitis

Advise patients to consult their healthcare provider if new onset or worsening eye symptoms develop *[see Warnings and Precautions (5.2)]*.

Eosinophilic Conditions

Advise patients to notify their healthcare provider if they present with clinical features of eosinophilic pneumonia or vasculitis consistent with eosinophilic granulomatosis with polyangiitis *[see Warnings and Precautions (5.3)]*.

Reduction in Corticosteroid Dosage

Inform patients to not discontinue systemic or inhaled corticosteroids except under the direct supervision of a physician. Inform patients that reduction in corticosteroid dose may be associated with systemic withdrawal symptoms and/or unmask conditions previously suppressed by systemic corticosteroid therapy *[see Warnings and Precautions (5.5)]*.

Patients with Comorbid Asthma

Advise patients with atopic dermatitis or CRSwNP who have comorbid asthma not to adjust or stop their asthma treatment without talking to their physicians *[see Warnings and Precautions (5.6)]*.

Manufactured by: Regeneron Pharmaceuticals, Inc., Tarrytown, NY 10591 U.S. License # 1760; Marketed by sanofi-aventis U.S. LLC (Bridgewater, NJ 08807) and Regeneron Pharmaceuticals, Inc. (Tarrytown, NY 10591). DUPIXENT® is a registered trademark of Sanofi Biotechnology
 Issue Date: September 2019 DUP.19.08.0284

Foundation Education: The Future is Now

Jeffrey P. Simons, MD
AAO-HNSF Coordinator for Education


Jeffrey P. Simons, MD

As I reflect on my first year as the AAO-HNSF Coordinator for Education, I am humbled by the steadfast commitment and accomplishments by the members of the Education Committee, Steering Committee, and our education committees across the specialty. While this year presented many unforeseen challenges given the complexity of the COVID-19 pandemic, our plans to implement an ambitious program set forth by the Future of Education Task Force have not been hindered. I would like to thank Tirza Lofgreen, CHES, Director, Professional Education & Digital Learning, who successfully led organizational efforts to modernize our content development process and digital transformation efforts and align the talents of her team to support the mission of Foundation education.

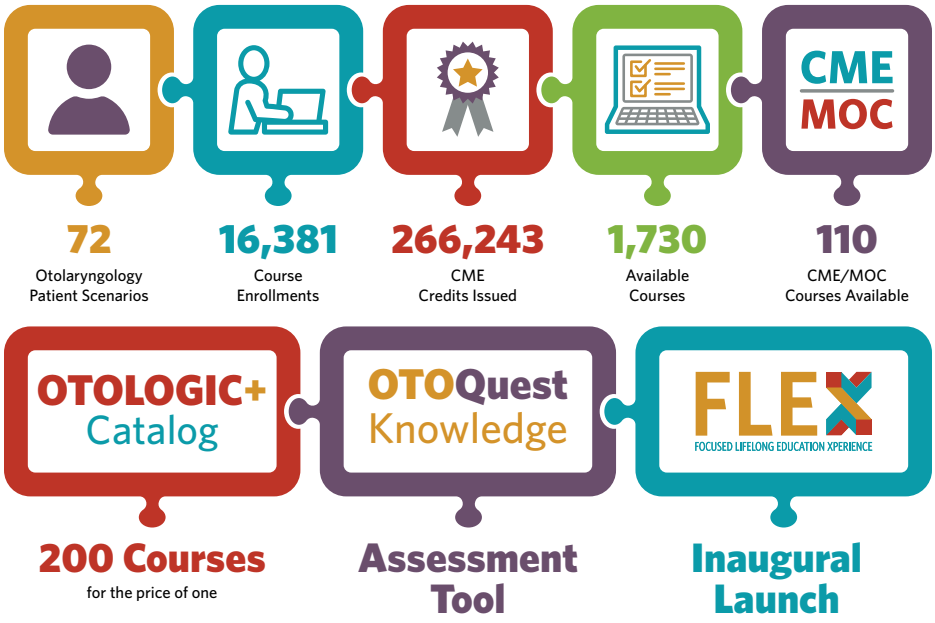
In this issue of the *Bulletin*, I am proud to share how we are working to propel our education agenda forward for the next five to 10 years and aspire to become even more indispensable to the otolaryngology community.

I would like to highlight some of our most impactful accomplishments this year:

- Unveiled OTO Logic, a successor to AcademyU® to reflect the Foundation's growing network of digital products. There has been a 614% surge in enrollments in online courses over the past year.
- Launched FLEX, our new flagship education product developed to replace the Home Study Course that was retired in August after more than three decades. More than 130 Foundation education faculty participated in curriculum development training.
- Developed seven new eCourses and four new Patient Management Perspective courses.
- Collaborated with **Esther X. Vivas, MD,** Chair of the Pan-American Committee to translate three more courses into Spanish, bringing the total to six available.
- Supported resident education in the time of COVID-19 by providing nearly 800 residents free access to the AcademyU Home Study Course+ Catalog with 200 free courses.
- Involved Education Committee leaders and members in the production of the timely COVID-19 podcast series. Topics included the rapid adaptation of telemedicine and related issues due to the coronavirus pandemic, ENT residents volunteering at Elmhurst Hospital Center in Queens, NY, and the effects of the pandemic on resident education and how approaches may change moving forward.
- Continued ABOHNS initiatives to support CERTLink™ and rebuild the Self-Assessment Models (SAMS) to offer CME that counts for MOC as a newly launched AAO-HNSF series titled, "Otolaryngology Patient Scenarios."
- Created a new column, "From the

Education Committees" in the *Bulletin* to expand clinical education with topics thus far on upper airway stimulation, skin prick testing for environmental allergens, cancer immunotherapy, and telemedicine.

- Reinvented AcademyQ™ to become OTO Quest℠ Knowledge Assessment, with nearly 1,200 case-based questions with rationales is now fully integrated into OTO Logic, our learning management system.
- Emphasized the importance of simulation in otolaryngology education. For example, we are hosting a Virtual SIM Tank on Monday, September 14 as part of the AAO-HNSF 2020 Virtual Annual Meeting & OTO Experience. The top three abstract submissions will present their simulation projects to a panel of expert judges.
- Increased the utilization of OTO Source©, the comprehensive online otolaryngology curriculum. After being launched last year, OTO Source is actively being used by residents, program directors, faculty, and practicing otolaryngologists as a standard study guide. ■

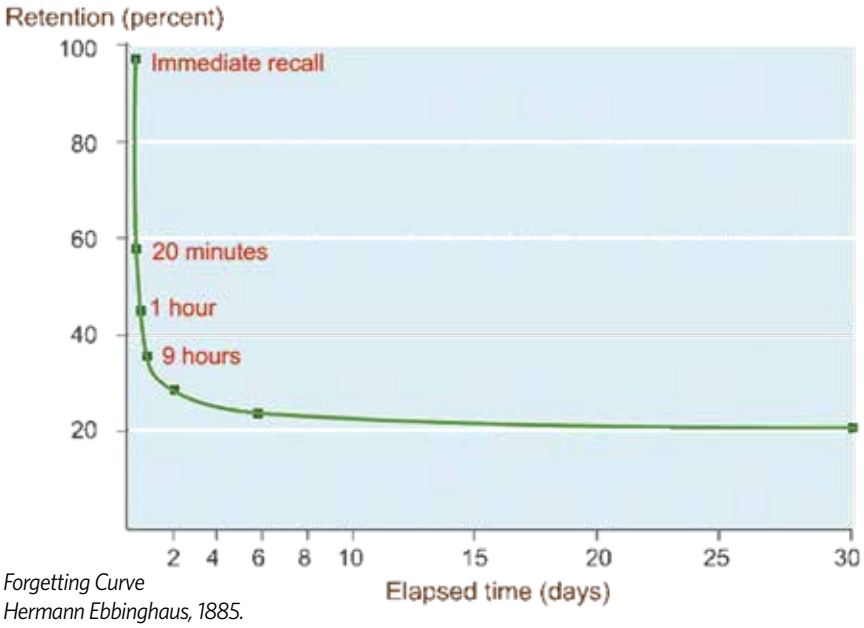


CME/MOC: A Simplified, Unified Process

The Accreditation Council for Continuing Medical Education (ACCME®) and the American Board of Otolaryngology - Head and Neck Surgery (ABOHNS) have collaborated to expand opportunities for ABOHNS Board-Certified Physicians to receive Continuing Certification (formerly known as Maintenance of Certification or MOC) credit for your participation in the high-quality accredited continuing medical education (CME) activities. The Academy will submit your completion information to ACCME® that will then report this to ABOHNS on your diplomate record. Update your "CertTraining" tab at **myspecialty.entnet.org** ■

FLEX Flipping the Curve

FOCUSED LIFELONG EDUCATION XPERIENCE



Forgetting Curve
Hermann Ebbinghaus, 1885.

Jeffrey P. Simons, MD
AAO-HNSF Coordinator for Education

This month marks the official launch of AAO-HNSF's new flagship education program, FLEX (Focused Lifelong Education Xperience). We welcome learners for what promises to be educational, interactive, engaging, challenging, and—most important of all—directly applicable to practice.

One of the foundational elements of FLEX is to offer a new curriculum centered on the principles of microlearning. Many of us are familiar with the exponential nature of forgetting. As you see from this diagram featuring the "Forgetting Curve," which originated in 1885 by Hermann Ebbinghaus, a German psychologist, we forget 80% of what we learned in 30 days.

Content developed as microlearning—short, focused learning bites—provides learners improved engagement, retention of concepts, and transfer to practice. With eight topics released throughout the year, FLEX will create a sustainable learning experience, thereby flipping the "Forgetting Curve" to a "Retention Curve."

Each FLEX topic will be presented in a variety of creative and contemporary learning modalities. FLEX is based on the fundamental learning philosophy that the needs and preferences for otolaryngology education will continue to evolve over time. The tools provided in the FLEX subscription will also evolve to ensure they remain timely and relevant for all learners.

Here is what's in store for learners participating in this new virtual classroom:

- **A FLEX-ible experience** – Log in to your classroom any time, on any device. The virtual classroom allows learners to engage in self-paced learning and live events offering peer engagement and time for Q&A.
- **Learn at your own pace** – Participate each month as the specialty topic is released, or catch up when it's convenient for you. With a subscription to FLEX, learners will receive the entire eight-module set of topics as they are released.
- **Choose your own adventure** – Whether that be at home, commuting, exercising, or in between cases, you know best how to integrate learning into your routine.
- **Every day is a school day** – This curriculum is a great way to maintain lifelong learning and continuing certification by earning up to 100+ CME/MOC credits annually.
- **Best-in-class faculty** – More than 130 Foundation education faculty have developed this curriculum to help you meet the challenges of your otolaryngology practice and build mastery throughout your career. ■

We gratefully acknowledge **Richard V. Smith, MD,** past Coordinator for Education, FLEX Workgroup Chairs, and more than 130 Foundation experts who have contributed to the successes of this inaugural year.

Education Steering Committee
Jeffrey P. Simons, MD, *Chair*

Facial Plastic and Reconstructive Surgery Education Committee
Scott B. Roofe, MD, *Chair*

General Otolaryngology and Sleep Medicine Education Committee
Jeffrey Stanley, MD, *Chair*

Head and Neck Surgery Education Committee
David M. Cognetti, MD, *Chair*

Laryngology & Bronchoesophagology Education Committee
Thomas L. Carroll, MD, *Chair*
Paul C. Bryson, MD, *Chair-elect*

Otology & Neurotology Education Committee
Marc L. Bennett, MD, *Chair*

Pediatric Otolaryngology Education Committee
Meredith Merz Lind, MD, *Chair*

Practice Management Education Committee
Lance Manning, MD, *Chair*

Rhinology & Allergy Education Committee
Stacey T. Gray, MD, *Chair*

For a complete list, visit **www.entnet.org/FLEXFaculty.** ■

FDA CLEARED FOR OFFICE USE IN YOUNG CHILDREN

The launch of the Hummingbird represents a significant breakthrough in offering a minimally invasive approach that reduces trauma and safely enables the surgeon to place in-office ear tubes in young children.

HUMMINGBIRD

THE HUMMINGBIRD DEVICE

The Hummingbird device simplifies the steps of myringotomy and tube placement using One-Pass technology. The Hummingbird has been clinically studied in over 500 patients and demonstrates a strong safety and efficacy profile. A topical anesthetic is used to anesthetize the tympanic membrane with the entire office tube placement being completed on average in 5 minutes.

SAFE

The Hummingbird reduces risk and stress sometimes associated with general anesthesia in your pediatric patients. Parents are increasingly looking for alternatives to the traditional tube placement.

SIMPLE

One-Pass technology enables the physician the option to perform routine myringotomy and tube placement in a single step using our integrated delivery system.

LESS EXPENSIVE

The overall costs associated with the Hummingbird procedure are significantly less than the operating room, creating value and convenience for your patients and parents.

OFFICE
10900 89th Ave. North, Suite #4
Maple Grove, MN 55369

GET IN TOUCH WITH US
(763) 568-7810
info@preceptismedical.com

HUMMINGBIRD® TTS
TYMPANOSTOMY TUBE SYSTEM

www.hummingbirdeartubes.com

FLEX: Leading Otolaryngology

FOCUSED LIFELONG EDUCATION XPERIENCE

Jeffrey P. Simons, MD, AAO-HNSF Coordinator for Education, spoke with several FLEX Workgroup Chairs to get their insight on this new education product, what it's been like developing the component tools, and how this will support lifelong learning and continuing certification.

Built on a fundamental learning philosophy that the needs and preferences for otolaryngology education will continue to evolve over time—so will the tools provided in the FLEX subscription to ensure they remain timely and relevant for all learners.

Stacey T. Gray, MD, Chair, Rhinology & Allergy Education Committee

Q Let's start with this new education product, FLEX. Can you share what your experience was like participating in leadership strategy discussions to develop this product over the past two years?

A It has been a really interesting learning experience watching FLEX progress through the various stages of development. I loved the fact that most of the new products that were created to present education materials were a direct result of conversations with a wide variety of Academy members. I think drawing from varied learning styles to develop different education formats will ultimately result in content that is easier to access and also more engaging.

Q The Rhinology & Allergy Education Committee (RAEC) is responsible for the first FLEX section, which lauches this month. What is one of the FLEX components you are most excited about?

A The first RAEC FLEX section focuses on the broad topic of chronic rhinosinusitis with nasal polyposis (CRSwNP). I am most excited about developing the xCase component of FLEX. A new clinical case will be presented weekly, which will stimulate discussion about nuances in the care of patients with CRSwNP. Each day a new question regarding the case will be posed and answered, stimulating thought about the topic on a daily basis throughout the week. These cases will also tie in with other education products, like podcasts and webinars, that will be offered throughout the month.

Q As a residency program director and someone who is very involved in resident education, how do you envision residency programs and residents using FLEX?

A We just recently discussed the plan to use FLEX in our residency program, and I am very excited to see how the residents like it. Having structured learning over the course of the month focused on a single education topic, with current literature to use as a starting point, will be extremely useful. Access to multiple clinical scenarios (with questions included), as highlighted with the xCase format, is going to be a great resource. The concept of lifelong, self-directed learning is something that is important to instill during training, and my suspicion is that this program will be a natural fit for the way that residents like to acquire education. ■

Education in New Directions

Thomas B. Carroll, MD, Chair, Laryngology & Bronchoesophagology Education Committee

Q What do you think of this new format for 21st century learning as we pivot from the AAO-HNSF Home Study Course, retiring the product that has been around for nearly four decades?

A I really like its design and potential. We are working hard to develop informative and interactive material that should feel more "2020" to the subscriber. The old Home Study Course was very traditional and effective for those who put the work in; however, it was not engaging for all individuals and groups of learners like the new FLEX learning program should be.

Q What are you hoping learners get out of first FLEX section topic that the Laryngology and Bronchoesophagology Education Committee (LBEC) is developing?

A The LBEC is developing their first FLEX module on the topic of laryngeal stenosis. While this problem may not be a common pathology in most general ENT practices, awareness of the issue for symptom recognition and options for treatment are important. In the last few years, more treatment options, such as laryngeal reinnervation, pacing, and local mucosal flaps for glottic stenosis, as well as office-based laser and awake steroid injections for subglottic stenosis, have been explored. This will be an excellent topic for review of traditional treatments as well as to offer education on cutting-edge diagnostic and treatment options for laryngeal stenosis. ■

Meredith Merz Lind, MD, Chair, Pediatric Otolaryngology Education Committee

Q What has your experience been like leading a FLEX specialty section workgroup? What has been the feedback from members of the team?

A The experience has really been exciting so far. The engagement and interaction with the FLEX team members from all over the country and beyond has been fantastic. People have had great ideas and their various strengths and experiences have allowed us to assign people to the portions of the product where they will be able to make the most impact.

Q What do you think that mid-career physicians like yourself can hope to get out of participating in the FLEX program?

A Developing products for the AAO-HNS education catalog has been a fun and creative challenge for me in the past. I think that the FLEX program is an evolution and improvement on the products that we have created previously. As developers, we will be creating content in a variety of new formats so that each learner can tailor an individualized education experience. It's going to be an amazing platform for Inservice and Board exam preparation, as well as Maintenance of Certification and Continuing Medical Education. ■

FLEX Specialty Topic Section Release Schedule

- Chronic Rhinosinusitis with Polyps (September)
- Glottic and Subglottic Stenosis (October)
- Oropharyngeal Cancer Update 2020: HPV, Robotic surgery, and De-escalation (November)
- Chronic Otitis Media and Cholesteatoma (January)
- Pediatric OSA (February)

The final three topics will be announced later this Fall: Practice Management (March); General Otolaryngology and Sleep Medicine (April): and Facial Plastic and Reconstructive Surgery (May).

To learn more and to register, visit: **www.entnet.org/FLEX**

OTO Journal

Mentorship Matters: The Resident Reviewer Development Program

Some may think reviewing for medical journals is reserved only for physicians in clinical practice, researchers in academic medicine, or other seasoned healthcare professionals. "As a resident I thought peer review was restricted to faculty. The whole peer review process seemed like a mysterious black box," says **John D. Cramer, MD,** assistant professor in the Department of Otolaryngology – Head and Neck Surgery at Wayne State University School of Medicine. During his residency, however, Dr. Cramer saw a new opportunity and participated in *Otolaryngology–Head and Neck Surgery's* Resident Reviewer Development Program (RRDP). He recalls, "Getting involved in the peer review process provided insight into that black box." Dr. Cramer completed the program with its first graduating class in 2017 and is now a mentor to residents currently in the program.

The RRDP pairs qualified residents with mentors who are peer reviewers. Participants gain the skills and insight necessary to comprehensively review scientific articles by completing reviews under the mentors' guidance. "The Resident Reviewer Development Program has been outstanding," says **Thomas S. Edwards, MD,** a 2020 program graduate, who is a PGY-4 at Emory University. For many residents who participate, the mentor-mentee relationship becomes quite meaningful. "My mentor, **Dr. Ahmad Sedaghat,** was incredibly dedicated to the program and my development," Dr. Edwards explains. "I was lucky to be paired with him."

Mentors also benefit from this relationship. According to Dr. Cramer, mentoring affords him the "opportunity to build connections with young otolaryngologists." He also appreciates how the relationship enhances his skills. "Mentees spend an enormous amount of time on reviews and come up with valid critique . . . Mentoring forces me to think about my own reviews and makes me a better reviewer."

The RRDP launched as a pilot program in 2016. **John H. Krouse, MD, PhD, MBA,** the journal's Editor-in-Chief, and **Cecelia E. Schmalbach, MD,** the Deputy Editor at the time, recognized and responded to an interest in peer review from residents and the constant need for quality peer reviewers. With the continued support of Dr. Krouse and the current Deputy Editor, **Jennifer J. Shin, MD, SM,** the program has remained strong ever since.

Molly E. Heft Neal, MD, another 2020 RRDP graduate and a PGY-4 at the University of Michigan, understands the broader reach of the program. "This program provides the training to allow residents to participate in peer review at a national level." Dr. Heft Neal also notes the value of the program's rigor: "The most challenging aspect was learning how to concisely review in a way that was both informative for the editor and constructive for the authors." But beyond that, she says, "The RRDP taught me additional ways to review and think critically about my own research." Dr. Edwards concurs, "Not only do I feel well equipped to critically review journal articles, but I look at my own research questions and manuscripts through a new lens."

Residents typically complete three to six mentored reviews before their mentors recommend them for an independent review. After successful completion of the independent review, participants graduate from the program and join the reviewer pool for *Otolaryngology–Head and Neck Surgery.* Excelling as a peer reviewer is often the first step toward becoming a star reviewer, editorial board member, or associate editor.

Being able to work with journal manuscripts while learning the peer review process is what drew **Sara Rahavi-Ezabadi, MD, MPH,** to apply. "This is an outstanding, well-known journal," explains the PGY-4 resident from Tehran University of Medical Sciences. As one of several international residents participating, she understands the myriad benefits the program offers. "Learning the peer review process will help me choose more reliable, valid publications to read for improving my own knowledge," she says. She also welcomes the opportunity to think through and comment on "the potential flaws" that some studies present.

As someone who has experienced the RRDP as both mentee and mentor, Dr. Cramer has unique insight into program benefits. "Putting on a reviewer hat from time to time makes you a better academic writer and researcher. It also forces you to pause and do a deep dive on a paper. I learn new things from each paper I review." He also understands how the experience aided in his career path. "Getting involved in peer review made me familiar with the literature, and the peer review process helped me transition from fellowship to academics."

As the program heads into its fifth year of welcoming new resident reviewers, its mentors and mentees have done an exemplary job of navigating the extraordinary conditions brought on by COVID-19. Mentors and mentees have continued tenaciously in the midst of

Mapping Resident Reviewer Development Program Geographically

the pandemic, and Dr. Shin worked to be increasingly inclusive of additional applicants as other clinical education opportunities were curtailed for residents. "While 2020 has brought much change and uncertainty, one thing that has neither changed nor wavered has been our enthusiasm to mentor our residents through this program," says Dr. Shin. "We've been fortunate to have talented residents and stellar mentors, many of whom have gone above and beyond amidst the many added demands of COVID."

The editors of *Otolaryngology-Head and Neck Surgery* invite residents to apply to enroll in the journal's Resident Reviewer Development Program, which has continued to exceed expectations. ■

To be considered for the 2021 class, applications should be submitted by January 11, 2021.

Requirements

Applicants must:

- Be PGY-3 or PGY-4
- Obtain a letter of recommendation from their department chair
- Submit a completed application
- Read and watch the **Reviewer Development Resources training material**
- Have professional working proficiency or full professional proficiency in English

To learn more, please visit the Resident Reviewer Development Program page on our website at **https://www.entnet.org/content/resident-reviewer-development-program.**

If you are an experienced peer reviewer and are interested in serving as a mentor for the program, please contact the journal office at **RRDP@entnet.org.** We also welcome communication from residency program directors regarding interest in the program.

Complex Dizziness for the General Otolaryngologist

James G. Naples, MD, Erika A. Woodson, MD, Syed F. Ahsan, MD, and Soha N. Ghossaini, MD

Dizziness is a complex symptom that often frustrates patients and physicians alike. It can affect adults of all ages and contributes to a significant decrease in patient quality of life. There are numerous possible etiologies of dizziness and various organ systems that could potentially be involved. The peripheral vestibular system is one possible source of dizziness and, as such, otolaryngologists are often involved in the care of these patients. One of the challenges in caring for these patients is that they have often seen multiple physicians by the time they make it to the otolaryngologist and do not have any specific diagnoses to explain their underlying problem. In this article, our team will review complex vestibular disorders commonly seen by the otolaryngologist, such as Ménière's disease (MD), vestibular migraine (VM), persistent postural perceptual dizziness (PPPD), and superior semicircular canal dehiscence syndrome (SCD). We will highlight key diagnostic criteria that can aid in differentiating these disorders and simplify the approach to the complex dizzy complaint. The goal of this work is to provide a simplified framework for the general otolaryngologist to understand common dizzy disorders.

In recent years evidence has suggested significant overlap in symptomatology of MD and VM. Patients in both groups may experience symptoms of vertigo and headache of variable duration. In addition patients in both groups may complain of hearing loss and aural fullness. This overlap creates diagnostic challenges because the disorders are treated very differently, and there is often pressure from the patient to make a diagnosis at the initial visit, which can be difficult.

Despite these challenges, there are key factors in the history and work-up that can lead to more confident diagnosis. MD patients, for example, must have a documented sensorineural hearing loss (typically low-frequency) before definite diagnosis can be confirmed.[1] While patients with VM can also present with hearing loss, the hearing loss does not fluctuate as in MD. Migraine symptoms can often be elicited from the history by asking a few specific questions about a personal or family history of migraine and additional, non-vertiginous migraine symptoms such as photo- or phonophobia.

Specific criteria have been created for the diagnosis of definite and possible VM by The Bárány Society and International Headache Society.[2] One of the key points in the diagnostic criteria for definite VM is that headache or associated symptoms (photophobia, phonophobia) should be present in at least 50% of vestibular/dizzy episodes and patients need to meet International Classification of Headache Disorders criteria for migraine. One common finding in patients with VM that helps to differentiate it from MD is that dizzy symptoms are of variable characteristics and duration. For example, symptoms of VM may be vague (lightheadedness, imbalance, fogginess) and patients may report that symptoms last anywhere from minutes to several days.

It is important to allow patients the opportunity to describe their symptoms because it can help guide physicians to the diagnosis. For example, giving the patient time to articulate whether they have headaches, tinnitus, or aural fullness before asking specifically may support one diagnosis over another. Unfortunately, vestibular testing typically fails to clarify diagnostic dilemmas in MD and VM. This is not to say that vestibular testing is not indicated; however, reliance on test results may lead to confusion. Ultimately, diagnostic criteria for MD and VM are largely based on history, hearing status, and a detailed yet efficient evaluation. It is important to keep in mind that some patients may meet criteria for both diagnoses and require management of both disorders.

While MD is a disorder that most otolaryngologists are familiar with, there is an emerging disorder of the vestibular system that our specialists should gain familiarity with. The disorder is called persistent postural perceptual dizziness (PPPD)—or "Triple PD" (not to be confused with BPPV). Triple PD, formerly called chronic subjective dizziness, is a complex disorder that is thought to involve the peripheral vestibular system, the central nervous system, and the visual system. And like many disorders that cause dizziness, it is associated with anxiety and depression. The underlying pathophysiology is not fully elucidated; however, it is thought that there is overreliance on visual/somatosensory stimuli for spatial orientation. Often, there is a specific vestibular-related event that "precipitates" the onset of PPPD by causing maladaptation of the system that integrates afferent vestibular information. For example, PPPD onset may occur after an episode of vestibular neuritis. Patients with PPPD will often describe symptoms of "persistent" imbalance, dizziness, or non-spinning vertigo when upright or "postural." The key criteria for diagnosis are 1) Persistent (> 3 months of daily symptoms), 2) Provoked by upright posture, motion, or visual stimuli, and 3) Precipitated by conditions that cause dizziness.[3] Like MD and migraine, PPPD is diagnosed largely by history, and testing does not often demonstrate specific findings on work-up. Therapy is often multimodal and requires vestibular therapy combined with medical and psychological management of comorbid psychiatric disorders.

Ultimately, this disorder is something that most otolaryngologists may see, and recognition of the problem will facilitate return to functioning for the patient.

The final disorder to review is superior semicircular canal dehiscence syndrome (SCD). It is amazing to think that a novel syndrome was recently identified in 1998 by otolaryngologist **Lloyd B. Minor, MD**.[4] It seems like it has been a part of our specialty for much longer. Since that time, SCD has become a well-recognized syndrome, but it is important to reinforce the disorder that it is considered a syndrome when symptoms and findings coincide. Radiographic findings of superior canal dehiscence in the absence of symptoms does not constitute the syndrome. Common symptoms include sound- and pressure-induced dizziness as originally described by Dr. Minor. Autophony, pulsatile tinnitus, and aural fullness are also common. As far as diagnostic work-up is concerned, CT of the temporal bones is essential, but the challenge is in interpreting diagnostic vestibular testing. The most relevant vestibular test is cervical-evoked myogenic potential (cVEMP), which should have a reduced threshold for the affected ear. This is due to the "3rd window" caused by the dehiscence. While other tests such as ECoG have been applied in the evaluation of SCD, they are not as clinically useful and may lead to confusion. Ultimately, it is important for the otolaryngologist to keep in mind that the diagnosis of SCD syndrome requires symptoms, radiographic findings, and abnormal cVEMP. Understanding this should guide decision-making about whether there is an indication for repair of the dehiscence.

We have tried to simplify four very complex vestibular disorders in just a few simple paragraphs. While we reference diagnostic criteria for MD, VM, and PPPD, we recognize that the clinical picture may not always be as clear. Nonetheless, we feel it is important to recognize how diagnostic criteria, in addition to a detailed history, can be used to diagnose these disorders. Additionally, we emphasize that the combination of symptoms and imaging/cVEMP findings constitute SCD syndrome. We hope that this article will simplify understanding of a complex complaint and ultimately lead to a more fulfilling experience for the patient and otolaryngologist. ■

Presented at the AAO-HNSF 2019 Annual Meeting & OTO Experience in New Orleans, LA

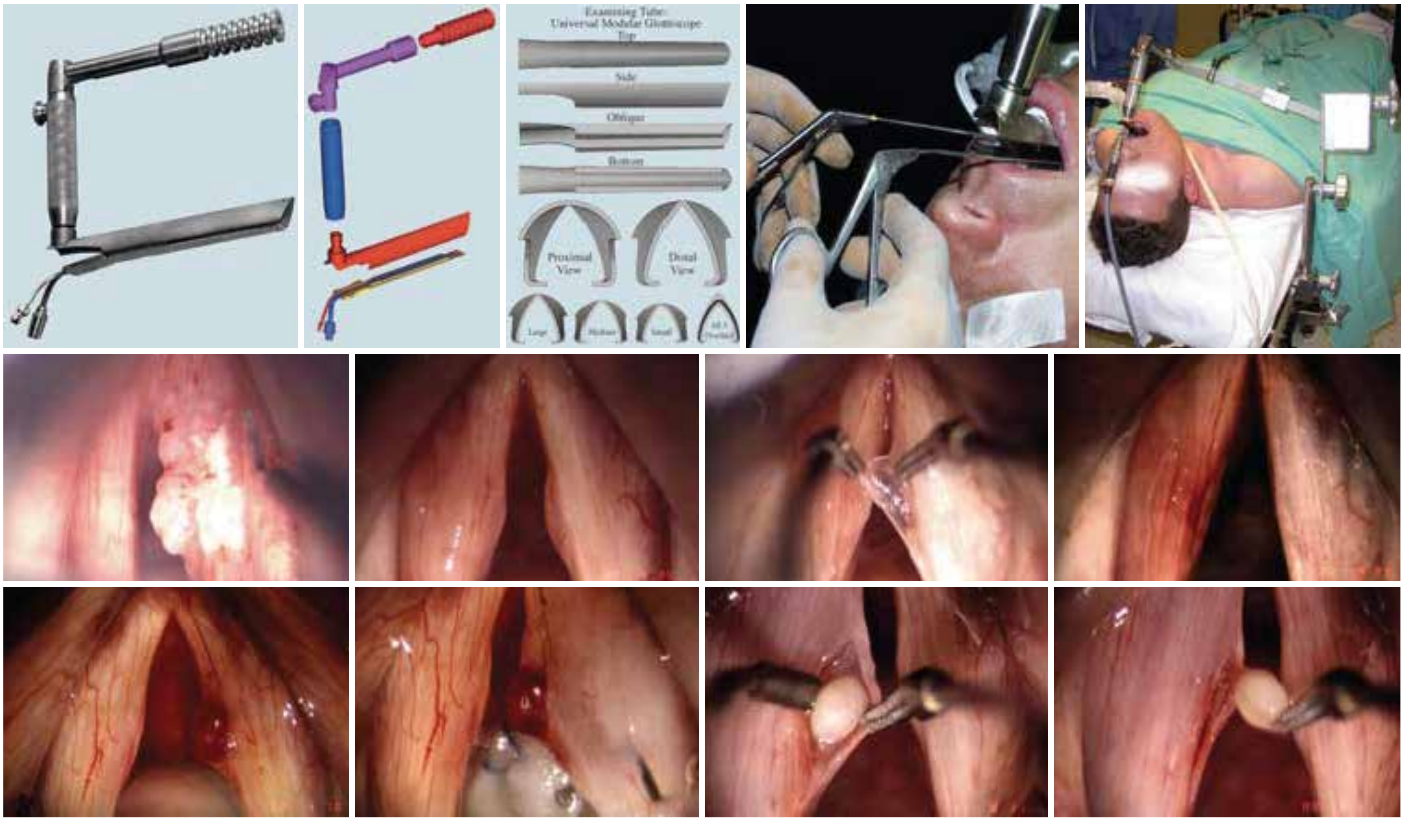
References

1. Lopez-Escamez JA, Carey J, Chung WHet al. "Diagnostic Criteria for Meniere's Disease." *J Vestib Res* 2015; 25:1-7.
2. Lempert T, Olesen J, Furman Jet al. "Vestibular Migraine: Diagnostic Criteria." *J Vestib Res* 2012; 22:167-172.
3. Staab JP, Eckhardt-Henn A, Horii Aet al. "Diagnostic Criteria for Persistent Postural-Perceptual Dizziness (PPPD): ConsensusDocument of the Committee for the Classification of Vestibular Disorders of the Barany Society." *J Vestib Res* 2017; 27:191-208.
4. Minor LB, Solomon D, Zinreich JS, Zee DS. "Sound- and/or Pressure-Induced Vertigo Due to Bone Dehiscence of the Superior Semicircular Canal. Archives of *Otolaryngology–Head & Neck Surgery* 1998; 124:249-258.

Zeitels Universal Modular Glottiscope & Suspension System

Evolutionary Designs for Laryngeal Instrumentation

The patented UM Glottiscope System & true suspension gallows was conceived from the study of a century of direct laryngoscope designs to incorporate the most valuable prior design features with novel new ones. The glottiscope system provides the surgeon with a versatile laryngoscope that optimally exposes vocal folds for diagnosis and instrumental manipulation, regardless of the diversity of human anatomic factors, e.g. age, gender, and pathology. The UM glottiscope is optimally used with the specially designed true suspension gallows; however, it can be combined with commonly used chest-support holders & stabilizers.



Design Features

- **The distal lumen of the UM glottiscope is a triangular lancet-arch configuration that distracts the false vocal cords & conforms to the anterior glottal commissure.**
- **Unlike virtually all microscope-compatible tubular laryngoscopes, which widen the proximal aperture to facilitate angulation of hand instruments, the UM glottiscope has bilateral proximal slots that dramatically improve the tangential positioning of hand instrumentation.**
- **The UM glottiscope has a variety of speculae that accommodate to the spectrum of human anatomy, irrespective of gender, age, or disease, & that attach to a single universal handle.**
- **The universal, ergodynamically designed titanium handle can be joined with a suspension gallows, as well as American & European chest-support holders.**
- **The detachable base-plate is ideally suited for difficult intubations**

ENDOCRAFT LLC

Phone:* (401) 369-7344** ***www.endocraftllc.com ***Fax:* (401) 228-7397** ***E-mail:info@endocraft-llc.com***

Treatment Modalities for Ménière's Disease

Marc L. Bennett, MD, for the Otology & Neurotology Education Committee

Ménière's disease (MD) is one of the most common causes of vertigo. It typically affects people between the ages of 40 and 60 years old but can impact anyone at any age. Symptoms include vertigo, hearing loss, tinnitus, and aural fullness. While MD usually starts confined to one ear, in 10-50% of patients it extends to involve both ears over time (Stahle, Silverstein). Hearing loss is often intermittent at first, occurring mainly around the attacks of vertigo, but over time patients usually develop a low frequency hearing loss which is progressive in nature.

The most common opinion is that MD results from an excessive pressure of fluid within the inner ear. The diagnosis of MD is based on a combination of the right set of symptoms, hearing tests that document fluctuating hearing loss, and the exclusion of alternative causes. While many vestibular suppressants, including Valium, Phenergan, and Meclizine are used during an acute attack, the mainstay of medical treatment occurs between attacks. Patients are generally started on a low salt diet (< 1200mg) and Dyazide, or triamterene-hydrochlorothiazide, a diuretic. With this conservative treatment, nearly 80% of patients have good control of their symptoms (Boles).

More recently, a lot of attention has been paid to the increased prevalence of migraines in patients with MD. Kuritzky was the first to report more vestibular symptoms in classical migraine patients compared to controls and hinted at a link to MD. Vestibular migraine (VM) then became an emerging diagnosis for vestibular symptoms in patients with current or previous headaches with migraine characteristics. Neuhauser introduced the first criteria to define the disease, and in 2012 the International Headache Society (IHS) and The Bárány Society created criteria for both definite VM and probable VM as seen above.

Definite VM

1) At least five episodes with vestibular symptoms of moderate or severe intensity, lasting five minutes to 72 hours

2) Current or previous history of migraine with or without aura according to the International Classification of Headache Disorders (ICHD)

3) One or more migraine features with at least 50% of the vestibular episodes: a) headache with at least two of the following characteristics: one sided location, pulsating quality, moderate or severe pain intensity, aggravation of routine physical activity; b) photophobia and phonophobia; c) visual aura

4) Not better accounted for by another vestibular or ICHD diagnosis

Probable VM

1) At least five episodes with vestibular symptoms of moderate or severe intensity, lasting five minutes to 72 hours

2) Only one of the criteria B and C for vestibular migraine is fulfilled (migraine history or migraine features during the episode)

3) Not better accounted for by another vestibular or ICHD diagnosis

Both MD and VM present with episodic vertigo, and distinguishing between both can be challenging. Duration of attacks is often different. While vertigo in VM may last longer than 24 hours and persistent imbalance after attacks can last for many weeks, vertigo from MD lasts only 20 minutes to 12 hours. Other symptoms pointing toward VM would include photo- or phonophobia, lack of sensorineural hearing loss, and history of migraines, as well as history of motion intolerance. While patients may have either disease, a larger percentage of patients have an overlap or combination of the two diseases. Ghavami et al found almost 50% of patients with MD had VM. Two recent studies evaluated the overlap and found VM showed statistically significant lower age of onset, less tinnitus, aural fullness and hearing loss, more vomiting, headaches, aura, and photophobia (Neff). Most otolaryngologists note that the absence of any abnormality on caloric testing and the lack of hearing loss would exclude a diagnosis of MD. Differentiating between the two diseases remains a diagnostic dilemma. There is no single balance test that was able to adequately separate MD and VM (Neff) but the diagnosis of VM is more plausible when patients lack the otologic symptoms of hearing loss, increased tinnitus, and aural fullness during an attack. Because there is significant overlap between the two diseases, it is important to consider treating both in patients with refractory or uncontrolled symptoms. ■

References

1. Stahle J, Friberg U, Svedberg A. Long-term progression of Ménière's disease. *Acta Otolaryngol* 1991; 485: 78-83.
2. Rosenberg S, Silverstein H et al. Bilateral Ménière's disease in surgical versus nonsurgical patients. *Am J Otol.* 1991; 12(5): 336-40.
3. Boles R, Rice D et al. Conservative Management of Ménière's disease: Furstenberg regimen revisited. *Ann Otol Rhinol Laryngol.* 1975; 84: 513-7.
4. Kuyritzky A, Toglia UJ, Thomas D. Vestibular function in migraine. *Headache* 1981; 21:3: 110-12.
5. Neuhauser H, Leopold M et al. The interrelations of migraine, vertigo, and Migrainous vertigo. *Neurology.* 2001: 56(4): 436-41.
6. Lempert T, Olesen J et al. Vestibular Migraine: diagnostic criteria. *J Vestibu Res.* 2012; 22(4) 167-72.
7. Neff BA, Staab JP et al. Auditory and vestibular symptoms and chronic subjective dizziness in patients with Ménière's disease, vestibular migraine, and Ménière's disease with concomitant vestibular migraine. *Otol Neurotol.* 2012; 33(7): 1235-44.
8. Ghavami Y, Mahboudi H et al. Migraine features in patients with Ménière's disease. *Laryngoscope.* 2016; 126(1): 163-8.

Vestibular Migraines and Vestibular Therapy

Misheelt Batjargal, MD, Varun V. Varadarajan, MD, and Oliver F. Adunka, MD

Vestibular migraine (VM) has become an increasingly recognized etiology of episodic vertigo.[1-5,7] However, due to its overlapping symptomatology with peripheral vestibular disorders and a lack of awareness in the medical community, VM is frequently underdiagnosed or mismanaged.[3] The diagnostic criteria for VM are based on the International Classification of Headache Disorders and the International Classification of Vestibular Disorders (ICVD) of The Bárány Society (Table 1).[1,3,5,6,11-14] The Bárány Society criteria classifies the diagnosis as either "actual" VM or "probable" VM.[3,5,9,12]

Atypical presentations or patients presenting early in their disease course (i.e., forme fruste) often pose a diagnostic challenge; headache symptoms may be less severe or not present.[3] However, migraine features such as photophobia, phonophobia, and visual aura may accompany vertigo attacks with or without headache.[5] There are a range of vestibular complaints reported during VM attacks, including spontaneous vertigo, positional vertigo, head motion induced vertigo, postural unsteadiness, oscillopsia, visually induced dizziness, directional pulsion, and head fullness or pressure.[3-6] VM is also more prevalent in patients with benign paroxysmal positional vertigo (BPPV) and migraineurs may have an increased risk of developing BPPV.[5] VM patients have a lower threshold for motion sickness, and approximately half of sufferers have been reported to experience motion sickness.[3,6]

The association of VM with audiologic symptoms may mislead the clinician and subsequently lead to a particularly challenging diagnostic process. To add to the confusion, there is an increased incidence of cochlear disorders in migraine patients.[8] Pure tone audiometry may be affected to a mild degree, particularly in the low frequencies. A symmetric and nonprogressive pattern has been described by several authors.[3,5,7] Central auditory pathways also appear to be affected in some individuals, with a prolonged wave V peak and interpeak latencies reported on auditory brainstem response.[3,7] In up to two-thirds of affected individuals, VM may closely resemble Ménière's disease (MD) with accompanying tinnitus, aural fullness, fluctuating low-frequency sensorineural hearing loss (SNHL), or sudden SNHL.[5,7,8] Conversely, migraines are more commonly reported in patients with MD, and patients may meet diagnostic criteria for both conditions.[5,8] Cervical and ocular vestibular-evoked myogenic potentials (VEMPs) have shown conflicting results in VM patients, and some reports shows no difference between patients with migraine, VM, and healthy controls.[3,5]

Identifying triggers may aid in the diagnosis of VM when the history does not suggest a clear etiology. Common triggers for VM attacks are stress, bright lights, sleep deprivation, weather (barometric pressure) changes, physical motion, visual triggers, noisy environments, and dietary tyramine such as aged cheese, cured meat, and alcohol.[6] There has been an increased prevalence of sleep disorders and poor sleep quality in VM patients.[5,6] Psychiatric comorbidities, especially anxiety and depression, are also common in patients with VM and are associated with an increased incidence of migraine disorders.[3] Some patients with VM may experience Alice in Wonderland syndrome, characterized by dysperceptions between episodes that may be mistaken for psychosis.[3]

Trigger avoidance, the avoidance of high tyramine and caffeine foods, proper sleep hygiene, regular meals, exercise, and stress management are considered by many to be the first line treatment for suspected VM. Diet and lifestyle modifications alone may be effective in some patients.[3,5] Pharmacologic treatment may be classified into abortive treatment as well as preventative management. Benzodiazepines, meclizine, dimenhydrinate, or transdermal scopolamine could be offered for abortive treatment during severe attacks. Newer serotonin receptors antagonist (triptan derivatives),[1] venlafaxine, and valproic acid are effective in early phase of the VM attack and overall dizziness.[3] Prophylactic treatments are indicated when VM attacks occur for several months, continue over several weeks, or if the patient's lifestyle is severely impacted. Antihypertensives, antidepressant, and antiepileptic drugs are often effective in reducing the frequency and severity of VM symptoms.[5] A stepwise approach may start with beta-blocker or calcium-channel blocker (Propranolol 40-240 mg, Metoprolol 50-200 mg, diltiazem 120-240 mg, nimodipine 30-90mg).[1] Flunarizine and cinnarizine are alternative calcium channel blockers that may decrease the severity or frequency of vertigo.[3,5,9] Tricyclic antidepressants and carbonic anhydrase inhibitors (acetazolamide) have been reported to demonstrate similar efficacy in symptom reduction.[5,9] Surgical intervention remains controversial: neuromodulation with vagal nerve stimulation or external trigeminal nerve stimulation have been described as potentially effective rescue treatments.[2,4] However, prospective clinical trials are warranted before surgical intervention is routinely recommended for VM.[10]

Vestibular rehabilitation (VR) may be offered as an adjunct in the treatment

of chronic balance dysfunction in VM. VR is based on central mechanisms of neuroplasticity, which includes adaptation, habituation, and substitution that facilitate vestibular compensation.[10,11] VR aims to reduce functional impairment by targeting gaze stability, habituation, and enhancing gait and overall balance. Some other components of VR are general strengthening and stretching exercises, balance retraining exercises, aerobic training, swimming or cycling, and vestibulo-ocular and vestibulo-spinal reflex training.[11] The efficacy of VR has yet to be confirmed via larger, prospective studies; however, a recent systematic review reported that all patients benefitted to some degree from a customized VR program.[10] Outcome measures such as the Activities-Specific Balance Confidence Scale, Dizziness Handicap Inventory, and/or the Perception of Dizziness Symptoms tool all demonstrated significant improvement in both VM patients as well as nonmigrainous vestibular disorder group.[10] ■

Definite vestibular migraine	Probable vestibular migraine
A. At least five episodes fulfilling criteria C and D B. A current or past history of 1.1 Migraine without aura or 1.2 Migraine with aura C. Vestibular symptoms of moderate or severe intensity, lasting between 5 minutes and 72 hours D. At least 50% of episodes are associated with at least one of the following three migrainous features: 1. Headache with at least two of the following four characteristics: • Unilateral location • Pulsating quality • Moderate or severe intensity • Aggravation by routine physical activity 2. Photophobia and phonophobia 3. Visual aura E. Not better accounted for by another ICHD-3 diagnosis or by another vestibular disorder	A. At least five episodes with vestibular symptoms of moderate or severe intensity, lasting five minutes to 72 hours B. Only one of the criteria B and D for vestibular migraine is fulfilled (migraine history or migraine features during the episode) C. Not better accounted for another vestibular or ICHD diagnosis

References

1. Lapira A. (2019). Vestibular migraine treatment and prevention. Behandlung und Prävention von vestibulärer Migräne. *HNO,* 67(6), 425–428. https://doi.org/10.1007/s00106-019-0661-3
2. Beh, S. C., & Friedman, D. I. (2019). Acute vestibular migraine treatment with noninvasive vagus nerve stimulation. *Neurology*, 93(18), e1715–e1719. https://doi.org/10.1212/WNL.0000000000008388
3. Beh S. C. (2019). Vestibular Migraine: How to Sort it Out and What to Do About it. *Journal of Neuro-Ophthalmology,* 39(2), 208–219. https://doi.org/10.1097/WNO.0000000000000791
4. Beh S. C. (2020). External trigeminal nerve stimulation: Potential rescue treatment for acute vestibular migraine. *Journal of the Neurological Sciences,* 408, 116550. https://doi.org/10.1016/j.jns.2019.116550
5. Huang, T. C., Wang, S. J., & Kheradmand, A. (2020). Vestibular migraine: An update on current understanding and future directions. *Cephalalgia,* 40(1), 107–121. https://doi.org/10.1177/0333102419869317
6. Beh, S. C., Masrour, S., Smith, S. V., & Friedman rescue, D. I. (2019). The Spectrum of Vestibular Migraine: Clinical Features, Triggers, and Examination Findings. *Headache,* 59(5), 727–740. https://doi.org/10.1111/head.13484
7. Xue, J., Ma, X., Lin, Y., Shan, H., & Yu, L. (2020). Audiological Findings in Patients with Vestibular Migraine and Migraine: History of Migraine May Be a Cause of Low-Tone Sudden Sensorineural Hearing Loss. *Audiology & Neuro-otology,* 1–6. Advance online publication. https://doi.org/10.1159/000506147
8. Hwang, J. H., Tsai, S. J., Liu, T. C., Chen, Y. C., & Lai, J. T. (2018). Association of Tinnitus and Other Cochlear Disorders With a History of Migraines. *JAMA Otolaryngology – Head & Neck Surgery,* 144(8), 712–717. https://doi.org/10.1001/jamaoto.2018.0939
9. Domínguez-Durán, E., Montilla-Ibáñez, M. A., Álvarez-Morujo de Sande, M. G., Domènech-Vadillo, E., Bécares-Martínez, C., González-Aguado, R., & Guerra-Jiménez, G. (2020). Analysis of the effectiveness of the prophylaxis of vestibular migraine depending on the diagnostic category and the prescribed drug. *European Archives of Oto-Rhino-Laryngology,* 277(4), 1013–1021. https://doi.org/10.1007/s00405-020-05802-5
10. Kinne, B.L., Baker, B.J., Chesser, B.T (2017). The use of Vestibular Rehabilitation for Individuals with Migraines: A Systematic Review. *Otolaryngol* (Sunnyvale) 7: 334. Doi:10.4172/2161-119X.1000334
11. Alghadir, A. H., & Anwer, S. (2018). Effects of Vestibular Rehabilitation in the Management of a Vestibular Migraine: A Review. *Frontiers in Neurology,* 9, 440. https://doi.org/10.3389/fneur.2018.00440
12. Lempert T, Olesen J, Furman J, Waterston J, Seemungal B, Carey J, et al. Vestibular migraine: Diagnostic criteria. *J. Vestib. Res. Equilib. Orientat.* 2012;22:167–72.
13. Neuhauser H, Leopold M, von Brevern M, Arnold G, Lempert T. The interrelations of migraine, vertigo, and migrainous vertigo. *Neurology.* 2001;56:436–41.
14. Radtke A, Neuhauser H, von Brevern M, Hottenrott T, Lempert T. Vestibular migraine--validity of clinical diagnostic criteria. *Cephalalgia.* 2011;31:906–13.

FOR YOUR PATIENTS FROM ENTHEALTH.ORG

ENThealth
POWERED BY AMERICAN ACADEMY OF OTOLARYNGOLOGY–HEAD AND NECK SURGERY

Vestibular Schwannoma (Acoustic Neuroma)

Vestibular schwannoma is a benign (non-cancerous) tumor that grows on the eighth cranial nerve, which is responsible for hearing and balance. The tumors are rare, accounting for only 5-7% of all brain tumors. However, for the part of the brain where they are located, called the cerebellopontine angle, it is the most common tumor type.

The annual incidence of being diagnosed with a vestibular schwannoma is one per 100,000 people, with approximately 3,000 newly diagnosed tumors each year in the United States. This number may be rising as our ability to detect smaller tumors has improved. The tumor grows on the eighth cranial nerve, which travels from the inner ear to the brainstem to communicate hearing and balance information to the brain. The nerve has three distinct parts that connect to the inner ear: the superior and inferior vestibular (balance) nerves and the cochlear (hearing) nerve, which come together at the brainstem.

Vestibular schwannomas are also referred to as **acoustic neuromas.** It was once believed that the tumor originated on the cochlear portion of the eighth cranial nerve because hearing loss is often the first symptom. We now know that the tumor most often arises from one of the vestibular portions of the eighth cranial nerve, therefore the more accurate name is vestibular schwannoma. Both names are still commonly used and refer to the same tumor.

Vestibular schwannomas come in different sizes and cause a variety of problems. This tumor does not spread (metastasize) nor does it invade the brain, but if large enough, it can push on and squeeze the brain.

What Are the Symptoms of a Vestibular Schwannoma?

The symptoms of a vestibular schwannoma may include:

- Sudden or gradual hearing loss (sensorineural hearing loss)
- Ringing, roaring, buzzing, or hissing in the ears or head, known as tinnitus
- Ear fullness
- Vertigo, or feeling like you are spinning when you are still
- Imbalance, or unsteadiness
- Headache
- Facial weakness
- Facial numbness

What Causes a Vestibular Schwannoma?

The exact cause of most vestibular schwannomas is unknown. Ninety-five percent of tumors occur spontaneously and are found on one side (unilateral) only. A small subset of vestibular schwannomas is associated with a genetic condition called Neurofibromatosis Type 2 (NF2). NF2 is rare and results in bilateral vestibular schwannomas. Regardless of the cause, the tumor originates from Schwann cells, which insulate nerves allowing them to transmit their neural signal quickly. When a tumor develops, the Schwann cells grow too quickly and can damage the nerve. In general, vestibular schwannomas grow slowly with an average growth rate of one to two millimeters per year. However, some tumors do not grow for several years and others grow rapidly.

Researchers continue to look for potential causes of vestibular schwannomas. High-dose therapeutic radiation to the head may increase the risk. Overall, there is no clear evidence that environmental factors, such as cell phones, cause these tumors. The rising incidence of vestibular schwannomas likely relates to improvements in magnetic resonance imaging (MRI) and increased screening for concerning symptoms.

What Are the Treatment Options?

Management of vestibular schwannomas centers around three different options: observation with repeated imaging, radiation, and surgery. The decision is complex and must account for tumor size, hearing status, symptoms, patient health, patient preference, and physician preference. Weighing these factors requires a thorough discussion with your ENT (ear, nose, and throat) specialist, or otolaryngologist, and often referral to additional specialists in neurotology, neurosurgery, and/or radiation-oncology.

Tumors can be classified as small, medium, or large. In general, small tumors are less than 1.5 cm, medium tumors are between 1.5 – 2.5 cm, and large tumors are greater than 2.5 cm. As tumors grow, they tend to cause more problems including hearing loss and compression on the brainstem.

For more information about treatment options and to Find an ENT, go to **https://www.enthealth.org/conditions/vestibular-schwannoma-acoustic-neuroma/.** ■

Positions are available at the Assistant or Associate Professor level in the Department of Otolaryngology-Head & Neck Surgery

AUGUSTA UNIVERSITY
MEDICAL COLLEGE OF GEORGIA

PEDIATRIC OTOLARYNGOLOGIST

- Excellent opportunity at our Children's Hospital of Georgia
- Rank commensurate with experience
- Excellent resources are available
- Fellowship training required

OTOLOGIST/NEUROTOLOGIST

- Rank commensurate with experience
- Excellent resources are available
- Fellowship training required

To apply and receive additional information, please contact:

Stil Kountakis, MD, PhD
Professor and Chairman
Department of Otolaryngology-Head & Neck Surgery
1120 Fifteenth Street, BP-4109
Augusta, Georgia 30912-4060

Or email skountakis@augusta.edu

Augusta University is an Equal Opportunity, Affirmative Action and Equal Access employer.

Ear, Nose & Throat Consultants
QUALITY HEARING AID CENTER
THE SINUS AND ALLERGY CENTER *OF GREATER DETROIT*
THE SLEEP CENTER *OF GREATER DETROIT*

PRIVATE PRACTICE GENERAL BC/BE OTOLARYNGOLOGIST POSITION

Ear, Nose and Throat Consultants, PC (ENTC) is a 5 ENT, 4 office, progressive, well established, rapidly growing, high patient volume practice in the suburban metropolitan Detroit area. A beautiful region with numerous lakes, restaurants, professional sports, theater and entertainment. Our downtown and suburbs are rapidly expanding and developing with a recent huge influx of tech and population. We are associated with three tertiary care hospital organizations. ENTC has teaching responsibilities for otolaryngology, multiple family practices, and audiology residency programs. We have fully developed product lines including: comprehensive audiology, hearing aid dispensing, allergy, in office balloon sinus center, videostroboscopy, home sleep testing and an affiliation with a physician owned ASC.

We are seeking established practitioners or senior residents with strong clinical and surgical skills. Locum tenums need not apply.

Our large patient volume and practice expansion means an immediate established practice for the candidate. Professional satisfaction and salary expectations are high.

Contact and send CV to:
Jeffrey S. Weingarten, MD or
Steve Piotrowski, COO
ENTforYou.com
248.569-5985, ext 1275
spiotrowski@entforyou.com

FAYETTEVILLE OTOLARYNGOLOGY
Advanced Hearing Services • Allergy
Ear, Nose, & Throat Surgery
Facial Plastic & Reconstructive Surgery

A well-established, premier and highly respected ENT private practice in Fayetteville, North Carolina is seeking a full time BC/BE General Otolaryngologist or Otologist. We offer a full spectrum of ENT services including complete audiology, hearing aids sales, vestibular services, laryngology, otology, head and neck surgery, in-office CT, allergy, Tru Di navigation balloon sinuplasty, eustachian tuboplasty, LATERA implants.

The Fayetteville Sandhills region enjoys easy access to mountains and coastal beaches. We offer a competitive compensation package with potential buy in opportunity after 2 years of joining our practice. Admitting privileges and pay for call at Cape Fear Valley Hospital.

For confidential consideration please email your CV to Dr. Shan Tang at shantangMD@gmail.com or Gwendolyn Parks at gwenp@fayent.com.
You may visit us at www.fayent.com.

FLORIDA OTOLARYNGOLOGY GROUP, P.A.
Caring for Central Florida Since 1983
ORLANDO SINUS & ALLERGY CENTER

JOIN A WELL-ESTABLISHED PRACTICE IN ORLANDO, FLORIDA

Florida Otolaryngology Group, a six-physician independent and expanding practice operating in Orlando, Florida, is seeking a highly motivated BC/BE General Otolaryngologist to join our team. Our well-established physician owned practice is Central Florida's premier provider of otolaryngology care with a large referral base. Our patients enjoy an on-site CT scanner, audiological/vestibular testing, allergy testing/treatment, and retail hearing aid business.

We offer an excellent salary/bonus, compensation for hospital on-call services, and ownership opportunity. Benefits include health, life and disability insurance, malpractice insurance, CME reimbursement, 401K / Profit Sharing Plan, paid time off, and potential ancillary investment opportunities including an outpatient ambulatory surgery center and real estate.

This is a unique opportunity to join a successful practice in one of the fastest growing geographic regions in the country, and the ideal candidate will share our desire to build a busy clinical practice while working in a dynamic team environment. This position is primarily outpatient based with an emphasis on quality of personal and professional life. Interested candidates seeking partnership in a long-standing, stable practice in a family-friendly community should contact:

Nick Debnath MD, FACS
Managing Shareholder
7251 University Blvd, Suite 300
Winter Park, FL 32792
407-677-0099
ndebnath@flotogroup.com
www.flotogroup.com

ENT AND ALLERGY ASSOCIATES, LLP
ENTANDALLERGY.COM

Full time Specialty and Sub-Specialty Positions Available At the Preeminent Otolaryngology Partnership in the Nation

Here's your opportunity to become a member of ENT and Allergy Associates, LLP (ENTA) and serve patients in state-of-the-art clinical offices in the **Hudson Valley**, **Metro NYC, Long Island** and **Central / Northern New Jersey**.

We offer new associates:

- The collegial expertise and guidance of nationally and internationally recognized specialists and subspecialists
- The prestige of an academic institution, without the bureaucracy
- Clinical faculty appointments at renowned tertiary centers including Mount Sinai, Northwell and Montefiore
- A starting salary of $300,000
- A well-traveled road to partnership without buy-ins and buy-outs
- A governance structure that gives you a voice from Day 1, and colleagues who understand there is more to life than just practicing medicine

Our continued growth, coupled with upcoming physician retirements, means opportunity for you!

For more information, contact our President, **Robert Green, MD** (Rgreen@entandallergy.com) or our Chief Executive Officer, **Robert Glazer** (Rglazer@entandallergy.com or call 914-490-8880).

Cape Cod Healthcare - Cape Cod, Massachusetts Live and Work Oceanside

New Otolarygology career opportunity on beautiful Cape Cod, Massachusetts. Open to both new and seasoned graduates. When you can, visit our Cape Cod Healthcare website at: https://www.capecodhealth.org/medical-services/ear-nose-throat/

Details include:

Cape Cod Ear, Nose, and Throat Specialists in beautiful Cape Cod, Massachusetts is a 5-physician practice. Practice is seeking a BC/BE general Otolaryngologist to join the team. The candidate will provide a full spectrum of care to all types of otolaryngologic conditions. The provider will perform surgeries and have some practice call.

This is a practice with a collegial working environment. This is an employed position with Cape Cod Healthcare. Working as a team player and excellent communication skills are essential. Audio, VNG, CO2 laser, allergy, in-office Sinuplasty, and video/strobe laryngoscopy.

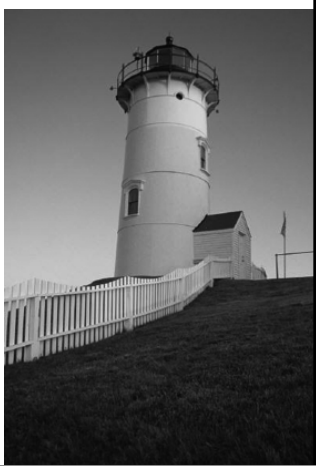
Call is 1:5.

Check out the website at: www.capecodent.com

Enjoy coastal living at its best with miles of sandy beaches, quaint villages and beautiful sunsets over Cape Cod Bay. This is truly a great place to practice medicine and enjoy the amenities the Cape has to offer.

To learn more please contact:

Jolia Georges, Director of Physician Recruitment
Phone: 508-862-5481
Email: jgeorges@capecodhealth.org



CAPE COD HEALTHCARE

SOUTH FLORIDA ENT ASSOCIATES

South Florida ENT Associates, a fifty plus physician group practice operating in Miami-Dade, Broward and Palm Beach Counties, has immediate openings for full-time ENT Physicians. Established since 2001, South Florida ENT Associates has been a market leader in ENT services in a dynamic, multicultural community. We provide full service ENT including Audiology, Hearing Aid Sales, Allergy, Facial Plastics, Robotics, CT services and more.

We offer an excellent salary and bonus structure, health insurance, paid vacation time, malpractice insurance and CME reimbursement, plus other benefits.

Candidate must have strong clinical knowledge, excellent communication skills, be highly motivated and hardworking.

This position will include both office and hospital settings.

Requirements:

Board Certified or Eligible preferred
MD/DO from approved medical/osteopathy school and graduation from accredited residency program in ENT
Current Florida license
Bilingual (English/Spanish) preferred
Excellent communication and interpersonal skills
F/T - M-F plus call
For more information about us, please visit www.sfenta.com.

Contact Information:

Contact name: Stacey Citrin, CEO
Phone: (305) 558-3724 • Cellular: (954) 803-9511
E-mail: scitrin@southfloridaent.com

Otolaryngologist

Expanding Practice in York, PA

A well established, busy five physician group in York, Pennsylvania is looking to add a sixth, full time Board Eligible/Board Certified Otolaryngologist. Our services include Audiology and Hearing Aid Sales. Our office has been running on an EMR system since 2006. On-Call rotation is 1:6. Initial employment includes an excellent salary and productivity bonus. Partnership offered after 1 to 2 years of employment.

York is a fast growing community with excellent schools and a very comfortable cost of living. It is convenient to Baltimore, Washington and Philadelphia.

Local inpatient hospital is well run and state-of-the-art. Surgical Center is well equipped, and partnership in the Surgical Center is available.

We are looking for a dynamic, motivated individual for partnership track. Income potential in the 90th percentile.

YORK ENT associates 50th ANNIVERSARY

Contact: Renee Gohn
Office: 717-843-9089 Email: yorkent@comcast.net

Board Certified, Director of GME Education

Department of Otolaryngology – Head & Neck Surgery

Worcester, MA

UMass Memorial Medical Center, the clinical partner of the University of Massachusetts Medical School in Worcester, MA, is seeking a Board Certified Otolaryngologist to serve as the **Director of GME Education** with a minimum of 3 years of clinical practice in the specialty post-residency/fellowship, a minimum of 1 year of experience as an associate program director of an ACGME accredited Otolaryngology program or 3 years of participation as an active faculty member of an ACGME accredited Otolaryngology program, and evidence of periodic updates of knowledge and skills to discharge the roles and responsibilites for teaching, supervision, and formal evaluation of residents. The appropriate candidate must have a proven ability to develop and enhance the educational program for UMMS medical students, as well as playing a vital role in the development of a new residency program as directed by the Department Chair.

UMass Memorial Health Care is the largest healthcare system in Central Massachusetts. As the clinical partner of UMass Medical School, you will have access to the latest technology, research and clinical trials. Come join an established group of eight physicians in a busy tertiary care referral center. We are looking for ideal candidates with energy, desire, and drive to ramp up their careers and help expand our scope and presence. There are ample opportunities for clinical and basic science investigation and research. An academic appointment commensurate with education and training is offered.

Centrally located, Worcester is just miles from Boston, Providence, Berkshire mountains, mountains of Vermont and New Hampshire, Cape Cod beaches, Martha's Vineyard and Nantucket. The diverse city of Worcester has nine colleges and universities including the University of Massachusetts Medical School that overlooks Lake Quinsigamond. As the second largest city in New England, it has powered a rise of biotechnology, research, manufacturing and healthcare industries. Worcester is also home to the Hanover Theatre for Performing Arts, Worcester Art Museum, Mechanics Hall and the family-friendly Ecotarium.

Come join the Best Place to Give Care, the Best Place to Get Care, and the best place for YOU!

Interested applicants should submit a letter of interest and curriculum vitae addressed to:

Daniel Kim, MD, FACS
Chairman and Professor
Department of Otolaryngology - Head and Neck Surgery
UMass Memorial Medical Center
c/o Adriana Dietlin, In-House Physician Recruiter
Department of Human Resources
Email: Adriana.Dietlin@umassmemorial.org

As the leading employer in the Worcester area, we seek talent and ideas from individuals of varied backgrounds and viewpoints.

At Geisinger, we've been focused on advancing the future of health for more than a century. That spirit of innovation still drives us today with a 20-year clinical data warehouse (Geisinger was one of the earliest implementers of Epic), our groundbreaking population genomics program which links multiple generations of clinical data, and an unwavering commitment to value-based primary and specialty care. When you join Geisinger, you'll be a part of an organization that's leading healthcare change.

Join our team throughout Pennsylvania:

- **Rhinology**
- **Otology/Neurotology**
- **Head & Neck Surgery**
- **Pediatric Otolaryngology**
- **General Otolaryngology & Sleep**

Fellowship training or experience in health services research is preferred.

We take pride in the support we provide:

- Excellent compensation and benefits package, including recruitment loans, relocation and malpractice and tail coverage
- Opportunities to participate in teaching, research and optimizing access for patients
- Monthly stipend available to residents and fellows upon signature of an offer letter
- Support and leadership from a full range of dedicated, experienced specialists and subspecialists

As a physician-led system, we offer several convenient locations that are 2.5 hours from New York City, Philadelphia and Baltimore. We serve over three million residents in Pennsylvania and New Jersey in a system of 13 hospital campuses, a nearly 600,000-member health plan, two research centers and the Geisinger Commonwealth School of Medicine. With approximately 32,000 employees and more than 1,800 employed physicians, Geisinger recognizes over $8B in annual revenues.

Interested candidates, please reach out to **Ken Altman**, MD, PhD, Chair, Department of Otolaryngology – Head & Neck Surgery, and Professor – Geisinger Commonwealth School of Medicine, at **kaltman@geisinger.edu** or **Karen Rubbe**, Senior Provider Recruiter, at **klrubbe@geisinger.edu**. To learn more, visit **geisinger.org/careers**.

Geisinger | *The future of health is in you.*
geisinger.org/careers

Does not qualify for J-1 waiver. AA/EOE: disability/vet.

Geisinger Commonwealth School of Medicine

GET THE ADVANTAGE OF SPEED

ENT'S FASTEST EHR & PM ALL-IN-ONE SOLUTION

GUARANTEED TO INCREASE YOUR EFFICIENCY

and Bottom Line in less than ***90 days!***

Our **Advantage SMART Practice**® EHR and practice management solution uses real-time data to make every part of your workflow faster.

EHR | PM | TELEHEALTH | ASC

PATIENT ENGAGEMENT | RCM | MIPS

WWW.COMPULINKADVANTAGE.COM/ENTEHR | 805.716.8688

compulink