# bulletin

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

**MAY 2022**


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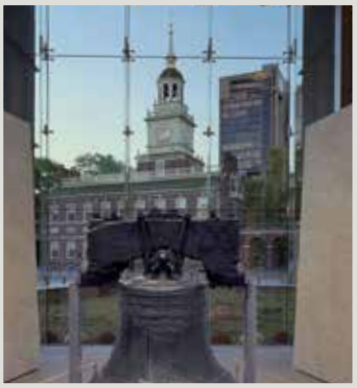
AAO-HNSF 2022

ANNUAL MEETING & OTO EXPERIENCE

SEPTEMBER 10-14 PHILADELPHIA, PA

AAO-HNSF 2022 Annual Meeting & OTO Experience

17



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*Becker's Hospital Review, 2022 **Medical Group Management Association, 2021 | 

# bulletin

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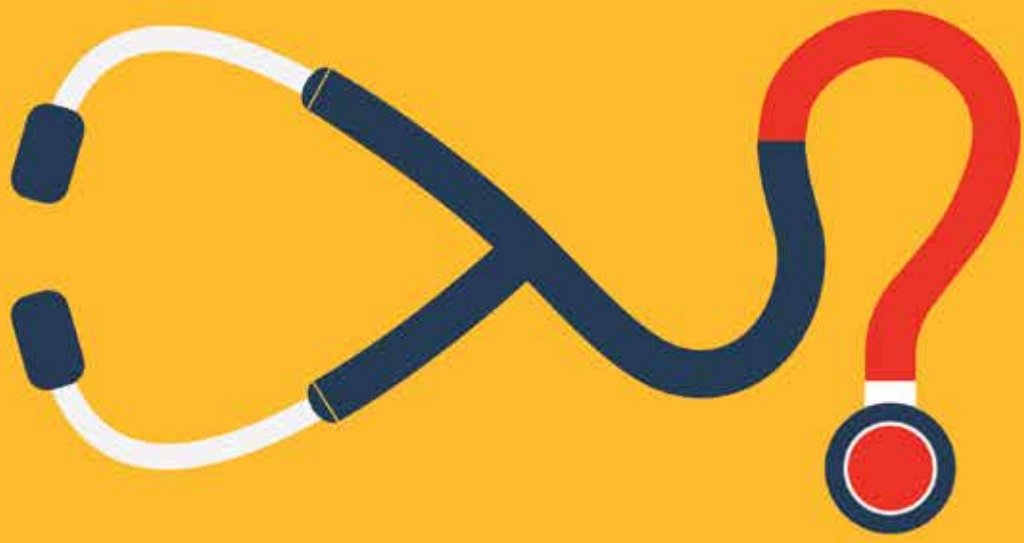
# AAO-HNSF 2022 Annual Meeting & OTO Experience



## departments

# HOW MUCH ASSURANCE

## do you have in your malpractice insurance?



With yet another major medical liability insurer selling out to Wall Street, there's an important question to ask. Do you want an insurer with an A rating from AM Best and Fitch Ratings, over $6.2 billion in assets, and a financial award program that's paid $120 million in awards to retiring members? Or do you want an insurer that's focused on paying its investors?

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# Spring Effervescence and Promise

As winter yields to spring in the Northeast, the annual parade of colors is in dazzling display with the precocious crocuses, the harbinger forsythia and magnolia, and magnificent azaleas and rhododendrons sequentially blossoming in glory.

The Academy's spring festivities are also in full bloom.

The recent April weekend with our AAO-HNSF 2022 Virtual Leadership Forum & Board of Governors (BOG) Spring Meeting, and AAO-HNS/F Boards of Directors (BODs) meeting embodied a time of rejuvenation and reflection.

The BOG Spring Meeting featured fabulous presentations and discussions about over-the-counter hearing aids, incorporation of advanced practice providers into practice, and the pros and cons of private equity. Inspiring messages about equity and diversity were highlighted by Kate Stewart from Stryker. An overview of ambulatory surgery center opportunities was delivered. A return of the Presidential Candidates Forum featured thoughtful insights and projections from our exceptional President-elect nominees, **Dr. Douglas Backous** and **Dr. Lance Manning**. Once attendees discover the BOG Spring meeting—which typically highlights business of medicine, advocacy, and leadership topics—most return annually due to the outstanding content and networking opportunities.

As we transitioned into the AAO-HNS/F BODs spring meeting, I was exhilarated by the energy and engagement exhibited by each of our Board members. The work of the Future of Meetings Task Force, chaired by current President-elect **Dr. Kathleen Yaremchuk**, is examining the needs, desires, and directions of our members and our meetings, which have shifted in this post-pandemic time period. The Board self-evaluation survey highlighted opportunities for our Social Media and ENT Connect Task Force, chaired by **Dr. Erich Voigt**, particularly as we revise and redirect our virtual presence. The Workforce and Socioeconomic Survey Task Force, chaired by **Dr. Andrew Tompkins**, will bring invaluable details and information about our cherished specialty and will help identify our current and future landscapes.

The 2022 AAO-HNS Virtual Congressional Advocacy Day brought great opportunities for members to educate and underscore our most pressing concerns to Washington, DC, legislators. These included prior authorization concerns, Medicare physician reimbursements, patient safety for hearing healthcare, and the reauthorization of the Early Hearing Detection and Intervention program. There was a palpable enthusiasm in our members who spoke on behalf of our specialty, our patients, and our membership's needs. Many thanks to all those who participated and helped to successfully deliver our messages.

The most important current item on our radar is the No Surprises Act, which **Dr. James Denneny** repeatedly cautions is one of the most impactful and onerous pieces of healthcare legislation for physicians ever to be enacted. It is imperative that all providers understand the expectations and requirements of this act and recognize that the Academy is working on multiple fronts to protect our members.

The Private Practice Study Group (PPSG) continues to attract new members, and recently elected **Dr. David Melon** as Vice Chair and three new Members-at-Large, **Dr. Dan Gold, Dr. Annette Pham,** and **Dr. Melanie Seybt**. Many thanks to **Dr. Mary Mitskavich** for her leadership and instrumental contributions. **Dr. Daniel Chelius**, AAO-HNSF Annual Meeting Program Coordinator, has invited the PPSG to spearhead a new feature of the meeting called Business Solutions for Breakfast roundtable discussions, which will be held during the upcoming Annual Meeting in Philadelphia to discuss topics of interest including staff recruitment, contracting with commercial carriers, marketing and reputation management, and building a new practice out of residency.

This spring weekend truly highlighted the camaraderie and unity of our many members. Many thanks to all those who participated and those who serve our Academy so faithfully. For any members who wish to increase participation levels, there are many opportunities for involvement.

There is no doubt that serving as a healthcare provider in 2022 poses remarkable challenges. We are responsible not only for excellent clinical care, but also tasked with grappling with and overcoming mounting regulatory and insurer demands. Time is a precious commodity for all of us, but one of the most worthwhile uses of our time is to help shape and direct our future directions within the Academy and our profession.

The 126th Annual Meeting takes place in Philadelphia, Pennsylvania, from September 10-14, 2022, with every hope and intention to proceed with a live meeting. Please register and plan to attend.

Finally, voting opens for our elected officials including our President-elect, At-Large Board of Directors, Nominating Committee, and Audit Committee. Please cast your votes—your input will impact our future directions and leaders.

I hope everyone enjoys fulfilling springtime festivities! ■

**Ken Yanagisawa, MD**
AAO-HNS/F President

> “Time is a precious commodity for all of us, but one of the most worthwhile uses of our time is to help shape and direct our future directions within the Academy and our profession.”

FORWARD TOGETHER

AAO-HNSF 2022
ANNUAL MEETING & OTO EXPERIENCE
SEPTEMBER 10-14 PHILADELPHIA, PA

# REGISTRATION OPENS ON MAY 16

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# Showcasing Otolaryngology through Innovative, Optimal Programming and Events

Registration opens this month for our 126th AAO-HNSF 2022 Annual Meeting & OTO Experience that will be held in Philadelphia, Pennsylvania, September 10-14. The Annual Meeting Program Committee (AMPC), under the leadership of **Daniel C. Chelius, Jr, MD**, has created a comprehensive scientific program that will be augmented by new, innovative features, such as Business Solutions for Breakfast and the CEO Spotlight Series, which will present timely information on pressing topics. The AMPC received 1,808 submissions for this year's meeting and has created a program that will exceed expectations in quality and breadth. We will continue last year's successful new showcase events, the combined Presidents' Reception, the ENTrepreneur Face-off, and the Hall of Distinction presentation, panel discussion, and reception.

We have only been to Philadelphia once in the past, 101 years ago in 1921. Philadelphia is one of the most historic cities in the United States and holds a special place in medical history, including being the home of the first hospital in the U.S., Pennsylvania Hospital. Philadelphia also has an extremely strong history in otolaryngology. In addition to the fabulous historic and cultural exhibits housed in Philadelphia, many otolaryngology artifacts can be seen in the Mütter Museum, so plan some free time to take advantage of these local opportunities.

We are in a period of transition and discovery as we evolve from the longstanding in-person events of the pre-COVID era as we seek the optimal integration of virtual components with in-person meetings while maximizing the appeal and value of each. This year's meeting will offer adjustments from last year's platform with more live streaming for all attendees, and the on-demand component will be delayed for future viewing. Last year during her presidency, **Carol R. Bradford, MD, MS**, formed the Future of Meetings Task Force to fully investigate and review evolving trends and opportunities in the immediate and long term. The Task Force gave a preliminary report to the Boards of Directors in April, highlighted by a presentation by 360 Live Media, our consultants on the project. The task force, chaired by President-elect **Kathleen L. Yaremchuk, MD, MSA**, will work with the AMPC and staff to implement incremental changes based on recommendations and comprehensive post-event surveys so we can continue to produce the best otolaryngology meeting in the world.

In addition to reviewing all aspects of content development and presentation, we will be exploring meeting footprint alterations, specialty society collaborations, technology advances, and content dissemination as well as optimizing our relationships with our industry partners to bring exceptional value to all of our stakeholders. We will need your help as we move forward to inform us of your needs and preferences. Your responses will help guide us as we work toward continual improvement of all of our education products.

This year's meeting will have something for everyone no matter what type of practice, what stage of career, or where you are from. There will also be many opportunities to re-engage with friends and colleagues for meaningful social experiences and make new friends.

For those looking for an event that will offer an outstanding scientific program in a relaxed atmosphere that includes a great deal of fun and entertainment, we have another meeting for you. We are hosting the XXXVII Pan American Congress of Otolaryngology-Head and Neck Surgery in Orlando, Florida, June 25-27, 2022. The first Congress was held in Chicago, Illinois, 76 years ago. The program committee has created an exceptional schedule of scientific offerings presented by over 300 internationally known faculty in a fabulous location, Caribe Royal, in Orlando. The meeting will be augmented by a number of can't-miss social activities all will enjoy. You can register for this meeting at https://www.panamorl2022.org/.

I urge all members to take part in this year's Academy elections that open May 9 and will be open until June 9. Leadership will be at a premium as we are undergoing significant changes in the U.S. healthcare system. This year we have added video presentations of the candidates to their written responses, all of which are linked for review on the ballot. I hope you will spend the two minutes or so that it will take to vote to choose your future leaders and beat our average participation rate of 12.5%.

I look forward to seeing you all in Philadelphia for our 126th Annual Meeting & OTO Experience in September. ■

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

> "The AMPC received 1,808 submissions for this year's meeting and has created a program that will exceed expectations in quality and breadth."


## 2022 AAO-HNS Annual Election Now Open

The ballot is open **May 9 through June 9, 11:59 pm (ET)**. Don't miss the opportunity to share your voice, cast your vote, and select the future leaders of your Academy.

Check your email for access to the 2022 AAO-HNS election ballot via an email from YesElections (Help+AAOHNS @yeselections.com). Questions? Contact elections@entnet.org.

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

**President-Elect**
Douglas D. Backous, MD
Lance A. Manning, MD

**At-Large Directors (Academic)**
Yuri Agrawal, MD
Jeffrey M. Bumpous, MD

**At-Large Directors (Private Practice)**
Marc G. Dubin, MD
Jeffery J. Kuhn, MD, CAPT, MC, USN (Ret.)

**Nominating Committee (Academic—Seat One)**
Nausheen Jamal, MD
Rodney J. Taylor, MD, MSPH

**Nominating Committee (Academic—Seat Two)**
Michael J. Brenner, MD
D. Gregory Farwell, MD

**Nominating Committee (Private Practice—Seat One)**
Stephen P. Cragle, MD
D. Scott Fortune, MD

**Nominating Committee (Private Practice—Seat Two)**
Darius Kohan, MD
Douglas D. Reh, MD

**Audit Committee**
Cecelia Damask, DO

**To access the candidate statements and learn more about each candidate prior to voting, go to https://www.entnet.org/about-us/leadership-governance/annual-election-results/candidate-statements.**

## AAO-HNSF Humanitarian Travel Grant: Kenya Relief Mission Trip

**Robert T. Cristel, MD**, from the University of Illinois - Chicago Department of Otolaryngology - Head and Neck Surgery, traveled with a group to the small town of Migori, Kenya, with the Kenya Relief Mission in January 2022. For about seven days, they saw hundreds of patients in clinic and completed about 45 surgeries. There is a large population with thyroid goiters in the region and removing these was their most common surgery.

Many patients walked five to six hours to the clinic to have surgery, then walked several hours to get home afterward.

During the mission, the team cared for patients of all ages, including several children needing adenoidectomy or ear tubes. One young female patient in particular had an ear keloid that was extremely large and draining for years. Prior to surgery, Dr. Cristel noted she was reserved and embarrassed about the keloid, but after surgery she was socializing and laughing and appeared so happy with her peers.

READ MORE ONLINE

"This experience has forever changed my life and career. I plan to continue further mission trips around the world and provide care to communities in need. Even in the United States, there are many opportunities to help patients in great need of healthcare. I am fortunate to have had the opportunity to help these patients in Kenya, who will always hold a special place in my heart," said Dr. Cristel. ■


ENThealth
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## May Is Better Hearing and Speech Month

Better Hearing and Speech Month is a time to raise awareness about communication disorders and available treatment options that can improve the quality of life for those who experience problems speaking or hearing.

**ENThealth.org** is dedicated to helping patients by providing resources for you to share with your patients. Through the work of expert member contributors and reviewers, ENThealth offers a road map and community of support for consumers seeking health-related information about the ear, nose, throat, and head and neck.

**How to Find the Right Hearing Aid for You** provides information about how hearing aids work and the different types of hearing aids as well as tips on selecting the a hearing aid and more. https://www.enthealth.org/be_ent_smart/how-to-find-the-right-hearing-aid-for-you/

**Your Ear Gear and Hearing Health** shares the facts about noise-induced hearing loss and tips for preserving hearing. https://www.enthealth.org/be_ent_smart/your-ear-gear-and-hearing-health/

**How Can I Lessen the Impact of Tinnitus?** offers tips for reducing the impact of Tinnitus and answers some frequently asked questions. https://www.enthealth.org/be_ent_smart/how-can-i-lessen-the-impact-of-tinnitus/

**Speech and Language Development** is gleaned from the AAO-HNSF Clinical Practice Guideline (update): Otitis Media with Effusion (OME) offering patient-friendly information for caregivers when OME affects speech and language development. https://www.enthealth.org/be_ent_smart/speech-and-language-development/

For more patient information, search ENThealth.org content under Conditions and Treatments and Be ENT Smart articles by using keywords "hearing" and "speech." ■

**Follow ENThealth on Twitter at @BeENTsmart to help us share this important patient information.**

CPG
Clinical Practice Guidelines

## Recognize Better Hearing and Speech Month by Using AAO-HNSF Quality Resources

In observance of Better Hearing and Speech Month, the AAO-HNSF offers the following Clinical Practice Guidelines that provide physician- and patient-related resources on hearing-related topics:

- Tympanostomy Tubes in Children (Update)
- Ménière's Disease
- Sudden Hearing Loss (Update)
- Earwax (Cerumen Impaction) (Update)
- Otitis Media with Effusion (Update)
- Tinnitus
- Acute Otitis Externa (Update)

QUALITY MEASURES
EVIDENCE-BASED CARE

In addition, the following Qualified Clinical Data Registry (QCDR) measures are available for use exclusively through the Reg-ent[SM] registry:

- AAO12 – Tympanostomy Tubes: Topical Ear Drop Monotherapy Acute Otorrhea
- AAO16 – Age-related Hearing Loss: Audiometric Evaluation
- AAO20 – Tympanostomy Tubes: Hearing Test
- AAO21 – Otitis Media with Effusion: Hearing Test for Chronic OME ≥ 3 months
- AAO36 – Tympanostomy Tubes: Resolution of Otitis Media with Effusion in Adults and Children

To learn more, visit www.entnet.org/CPG and https://www.entnet.org/quality-practice/quality-measurement/aao-hnsf-endorsed-measures ■

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## Hearing and Speech

Through the free online study guides and surgical videos offered via OTOSource, medical professionals can learn and review an array of topics from the anatomy of the temporal bone to the most common symptoms of vestibular schwannoma. Visit the Otology / Audiology unit in OTOSource for your learning needs at www.otosource.org. ■

# Mark Your Calendar: AAO-HNS/F Grant Process Opens in May!

AAO-HNS/F provides a variety of annual grants to residents, young physicians, and medical students. The grant application process will open in May for the following:

### Diversity Endowment URM Away Rotation Grant

The Diversity and Inclusion Committee introduces medical students from under-represented minorities (URM) to the field of otolaryngology. Grant recipients receive $1,000 to use toward travel, housing, food, and other expenses during their away rotation.

### The Harry Barnes Endowment Travel Grant Application

In collaboration with the AAO-HNS Diversity and Inclusion Committee, the Harry Barnes Society provides travel grants to assist with needed funding for meritorious young residents of African descent from the United States, Caribbean, or Canada to participate in the AAO-HNSF Annual Meeting & OTO Experience.

### Medical Student Travel Grants

Travel grants to the AAO-HNSF Annual Meeting & OTO Experience are available to medical student members to learn more about the specialty, to meet and network with thousands of otolaryngologists from around the world, and to provide a foundation for continued learning.

### Resident Leadership Grants

Resident travel grants help defray the costs of attending the AAO-HNSF Annual Meeting & OTO Experience and make it possible to learn and connect with the global otolaryngology community.

### YPS Travel Grants

Young Physician Section (YPS) grants subsidize the costs of attending the AAO-HNSF Annual Meeting & OTO Experience. These grants are exclusively for young physicians in the first five years of practice. ■

For more information, please contact Pamela Gilbert at pgilbert@entnet.org.

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BOG BOARD OF GOVERNORS

# Employing Physicians and the Healthcare Team: The Road Ahead

**Troy D. Woodard, MD**
Chair, Board of Governors

As practicing physicians and sometimes patients ourselves, we cannot help but be impacted by the shortage of physicians, nurses, office staff, and others on the healthcare team. According to the recent Association of American Medical Colleges (AAMC) survey, we should expect to see a shortage in surgical specialties of 17,100 to 28,700 just when the population is expected to increase for those over 65 years of age (45.1%). Add to that the expectation that two out of five current practicing physicians will retire over the next decade. In addition, take this sobering prediction into account—500,000 workers are needed to get back to pre-pandemic levels requiring new workers to replace those leaving the workforce and covering the increase in demand.

As I reflect on what's going on today in our specialty, it is important to arm both physicians responsible for staffing their practices, administrators, and others with hiring responsibility with some approaches to face the road ahead.

The Board of Governors (BOG) is introducing resources to help during these challenging times. The four-part webinar series kicked off in April with a look at the changing landscape and how practices need to adapt. I moderated the first session and welcomed Lea Tal, CEO, Tal Healthcare and Kyle Claussen, Esq., CEO, Resolve, to discuss the short- and long-term hiring climate and the impact to employment contracts.

I encourage you to participate in the three additional sessions that will cover:

- **Webinar #2: Unconventional Strategies for Recruiting.** Learn how to build bridges with ENT residency programs, leverage your existing staff, patients, and the greater community to build a short- and long-term pipeline of candidates. **May 17 at 8:00 pm (ET)**
- **Webinar #3: Leveraging Your Website and Social Media to Recruit.** Social media has changed ENT practice dynamics and impacted the recruitment process. Potential hires are forming their opinion with every read post, watched video, and site visit. This session will explore practical ways to optimize your digital footprint and capitalize on opportunities to engage candidates. **June 7 at 8:00 pm (ET)**
- **Webinar #4: Remaining Relevant: What's Important to the Current and Next Generation.** What was important to a physician with 10+ years of practice may not match the reality of the next generation. Learn firsthand what's important to graduating residents and young physicians. **June 28 at 8:00 pm (ET)**

Register and attend one or all these informative webinars by going to **https://entnet-org.zoom.us/webinar/register/WN_quFCABykSW6atNAKIhzJPQ**

> The Board of Governors (BOG) is introducing resources to help during these challenging times.

Mark your calendars for the BOG General Assembly this fall on Saturday, September 10 at 4:00 pm (ET) in the Pennsylvania Convention Center in Philadelphia, Pennsylvania. In these challenging times of increased liability premiums, burdensome regulations, and the changing scope of our practice, the BOG continues to focus on grassroots advocacy to benefit our entire specialty.

See you in Philadelphia! ■

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WIO WOMEN IN OTOLARYNGOLOGY

# Providing Tools to Navigate the Obstacles of Pay Parity

**Priya D. Krishna, MD**
Chair, Women in Otolaryngology

In the last 20 years, we've seen four women Presidents of the AAO-HNS/F and will be installing **Kathleen L. Yaremchuk, MD, MSA**, during the AAO-HNSF 2022 Annual Meeting & OTO Experience this September in Philadelphia, Pennsylvania. On the surface, it may seem that progress for women in our specialty at the leadership level is accelerating. However, glaring discrepancies in pay and metrics of advancement for women in our specialty and medicine in general continue to exist.

In 2004, Jennifer R. Grandis, MD, showed that there was a 15% to 20% difference in compensation between male and female otolaryngologists.[1] A more recent review from **Robin W. Lindsay, MD**,[2] cites a 22.1% lower salary for women faculty at academic institutions with a projected $3 million loss of income over the duration of an otolaryngologist's career. A Doximity survey in 2020 crowned otolaryngology with the dubious honor of having the largest gender pay gap of any specialty studied. One could argue that surveys are subject to bias, however, other more rigorously conducted studies have confirmed these statistics.

Clearly, we have *much* more work left to do to ensure gender equality *and* equity.

The Women in Otolaryngology (WIO) Section is working to provide women otolaryngologists with tools that will help them navigate obstacles standing in the way of achieving pay parity. In March, a contract negotiation webinar was jointly hosted by WIO and the Young Physicians Section and featured Kyle Claussen, CEO of Resolve, a firm specializing in physician recruitment and contract review. The webinar covered such topics as contract terms that may specifically impact women (pregnancy accommodations, maternity leave, part-time employment, the impact on RVUs), COVID-19 impacts, daily considerations (schedule, call, scope of practice, staffing), compensation models, letters of intent, termination, and bonus structure. At the AAO-HNS/F 2022 Virtual Leadership Forum & BOG Spring Meeting on April 9, Kate Stewart, Vice President and General Manager for ENT at Strkyer, gave a talk titled "Raise Your Voice: Paving the Path for an Equitable Future."

There is another area of gender equity in surgery and surgical subspecialties that is often overlooked. Surgical instruments have historically been designed for male hands. An emerging field of surgical ergonomics in the operative environment and in surgical instrumentation is bringing to light the challenges women surgeons are facing on a daily basis. These challenges directly affect their ability to practice to their full potential. It may be worthwhile to establish a task force or committee to specifically educate our members on these issues and to develop impactful relationships with industry so that instruments are designed more equitably.

> "Glaring discrepancies in pay and metrics of advancement for women in our specialty and medicine in general continue to exist."

Women otolaryngologists are growing in number and have valuable knowledge to share. Engaging with the Academy and presenting at the AAO-HNSF Annual Meeting & OTO Experience is one such way to enhance the visibility of the value we provide to the global otolaryngology community and patient care. Recognizing our expertise is critical and sharing it is essential. ■

**References**

1. Grandis JR, et al. The gender pay gap in a surgical subspecialty: Analysis of career and lifestyle factors *Arch Otolaryngol Head Neck Surg*. 2004;130:695–702.
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# DONOR SPOTLIGHT:

## Col. Joan T. Zajtchuk, MC/USA, Retired, and Brig. Gen. Russ Zajtchuk, MC/USA, Retired

The **AAO-HNS *foundation*** is pleased to recognize **Joan T. Zajtchuk, MD**, and her husband, **Russ Zajtchuk, MD**, as new Millennium Society Lifetime donors.

"Our gift was made to recognize the contributions by and in the memory of the seven pioneering women otolaryngologists of the 1970s and 1980s," said Dr. Joan Zajtchuk, who spoke to the AAO-HNSF on behalf of herself and her husband.

As a member of this groundbreaking group herself, Dr. Joan Zajtchuk was a harbinger of an inclusive specialty.

"All of us were surprised by the attention given to us by our male colleagues as we began to meet informally at national annual meetings. Russ and I like to think that this early initiative was the start of the formal recognition of the WIO Section of the AAO-HNS."

In 1967 Dr. Joan Zajtchuk was the first female otolaryngology resident selected by John R. Lindsay, MD, then chair of the otolaryngology section at the University of Chicago. She and her husband went on to serve in the U.S. Army during the Vietnam War. Upon her return from Vietnam in 1972, Dr. Zajtchuk joined the AAO-HNS and served on multiple committees, including the Government Affairs Committee and the Subcommittee on Appropriations. She recommends new members join a committee as a way to stay engaged and involved with the specialty.


Dr. Joan Zajtchuk and Dr. Russ Zajtchuk at their Maine home celebrating their 62nd wedding anniversary in September 2021.

When asked about her and her husband's views on philanthropic support, Dr. Joan Zajtchuk replied, "We realized that endowments or grants are needed to support specific educational programs or research projects. Our interest in supporting people and organizations is long-standing." The Zajtchuks have an endowment for otolaryngology resident research at their alma mater. They also established two medical school scholarships to help those who are disadvantaged or underrepresented. "Several of our awardees have written to us personally expressing their gratitude for this help early on in their career," said Dr. Joan Zajtchuk. As part of their philanthropic legacy, in 2020, the Zajtchuks made a generous donation to the WIO Endowment Fund, "envisioning the establishment of educational, research, or leadership development initiatives within the WIO section."

They believe in establishing such a program for women otolaryngologists that would expand their opportunities to further develop skills in administration, business

practices, or health policy. "A program such as this," said Dr. Joan Zajtchuk, would put these women "on a more even playing field for early selection as chairs of departments or sections or as residency directors." She further noted that this broadened experience would make them more competitive for selection to influential positions within their organizations or institutions.

Her personal experiences within the Army provide ample evidence in support of such opportunities. Army policy has the tradition of developing educational and leadership skills and to provide these opportunities for all active duty. Early in her career in 1977, she assumed positions as director of interns and residency training program at Walter Reed Army Medical Center. In 1980 she was allowed time away from her duties to work with esteemed otolaryngology surgeon and inventor, William W. Montgomery, MD, at Massachusetts General Hospital. At Walter Reed in 1982, with her appointment as residency program chair and director of otolaryngology-head and neck surgery, she became the first woman to chair an Army graduate medical education program. In this role, she was also otolaryngology consultant to the U.S. Surgeon General and Department of Defense.

After completion of a year-long program at the Industrial College of the Armed Forces in 1990, the highest Senior Service School, she became competitive for future selection to Command positions. In 1991 she became deputy commander of Walter Reed Army Medical Center and the director of medical education. To round out her vast experience with academic studies, she completed a master's program in healthcare administration and health policy at George Washington University before retiring as Special Assistant to the Army Surgeon in Health Policy.

The Academy and its Foundation thank Dr. Joan Zajtchuk for her leadership and commitment to advancing the careers of women in otolaryngology. The generous philanthropic support of the specialty from her and her husband, Dr. Russ Zajtchuk, has a wider benefit to healthcare as a whole. ■



Dr. Joan T. Zajtchuk, COL (ret.) MC, U.S. Army, (second from left) visited the Academy headquarters in Alexandria, Virginia, with her husband, Dr. Russ Zajtchuk, (second from right), and sister, Carole Arch (left), for a special unveiling of the new History of Women in Otolaryngology permanent exhibit, located within The John Q. Adams Center for the History of Otolaryngology-Head and Neck Surgery. This exhibit showcases the impact women have made, beginning as far back as the late 1800s and continuing through today. Their stories, photographs, and artifacts are a living testament to the significant contributions women have made and continue to make to the specialty. James C. Denneny III, MD, AAO-HNS/F Executive Vice President and CEO, (right) provided a tour of the museum and exhibit.

# Tech Talk

## Internet of Things (IoT) Cybersecurity: What You Need to Know

**Mike Robey, MS**
Senior Director, Information Technology

More devices are going online. From baby monitors to medical devices, it seems that everything is connected. You can't buy a new heating, ventilation, and air conditioning (HVAC) system without the thermostat needing to be connected to your home Wi-Fi. With all this interconnectivity, how do you stay safe from hackers and protect the data that needs to be protected? This article provides practical guidance for understanding and protecting Internet of Things (IoT) devices.

### What Are IoT Devices and How Are They Built?

To be fully aware, one needs to understand what an IoT product is, how it will be used, the risks involved in connecting it to your network (office and home networks), and how to mitigate those risks.

IoT devices are designed to do a specific task and may be comprised of different components, such as a network interface; companion application software like a mobile app; and a backend, like a cloud service where data from the device is recorded. Think of an Amazon Echo. There is the physical device, the mobile app used to configure it, and Amazon's cloud services supporting its use. Each of these IoT components are potential attack vectors. The whole IoT device, including its components, must be securable.

One other important factor to note—to reduce research and development costs, manufacturers use open-source software, especially for the network interface. There is nothing wrong with using open-source software, but it must be patched whenever vulnerabilities are discovered.

IoT devices have a smaller footprint than your average computer or smartphone. The software running on these devices may be paired down and security may have been an afterthought. From an academic perspective, security needs to be baked into IoT devices and not bolted on afterward. Unfortunately, it is difficult to tell how security is integrated into the product. Often, one must rely on the reputation of the manufacturer.

### Risks

Think of risks as having two parts: **if [event] then [consequences]**. The event is something that might happen. The consequences are the negative impacts of the event occurring. The consequences may be lost revenue, exposure of protected health information, lost staff time, and/or reputation harm.

Once you have determined what your risks are using the above format, the ones with high probability and/or high impact need to be identified. To weight each risk, multiply the likelihood of the event occurring by its impact. The probability of occurring may be somewhat subjective but the negative impacts are measurable. Weighting the known risks will help identify mitigation areas to reduce the likelihood of the event occurring and to lessen its impact.

Interconnected devices with no human interaction or interface are easy to set and forget. You will want to write down what IoT devices have been deployed, the date they were deployed, and the last time they were patched.

With respect to attack vectors and integrations with other IoT devices, think of the scenario where your garage door opener is connected to your home security system. It may be convenient for your remote to not only open the door but also turn off your home security alarm. But this means that if someone hacks into your garage door opener, they can disable your home alarm.

Several years ago, Target suffered a data breach involving customer credit card numbers. The hackers broke into Target's network via the HVAC system. Somebody connected the HVAC controls directly to the data network and left default passwords on the HVAC devices. Once the hackers broke into the HVAC system, they had free reign on the data network. Remember, everything is connected.

To summarize, the risks involved with IoT devices center on the following:

- Risks of each product component (the device, companion app, and cloud-based service)
- Network intrusion through the IoT device
- How the IoT device interacts with other devices
- Data exposure for the information the IoT device collects and transmits

### Mitigation

Mitigation aligns with the proverb, "an ounce of prevention is worth a pound of cure." At a fundamental level, you need to understand what each IoT device does so that you can better understand if its benefit outweighs its risk of data exposure and/or network intrusion. You also need to know what devices are connected to your network. Prescriptive security measures

are impossible to implement without knowing what devices are connected.

One recommended mitigation strategy, particularly for office networks, is network segmentation. This calls for creating logically separate subnetworks to isolate traffic from the primary data network. For example, creating a separate guest Wi-Fi that cannot cross over to the internal data network. Consider creating a network segment for IoT devices. If Target had created a network segment for their HVAC system controls, the unauthorized exposure of customer credit card information could have been prevented.

The National Institute of Standards and Technology (NIST) recommended IoT product criteria mention the following:

- **Asset Identification.** For cybersecurity purposes it is vital that a network administrator can identify all devices plugged into the network. Without the ability to identify connected devices, asset management for updates, data protection, and digital forensics are hindered.
- **Product Configuration.** IoT devices must be configurable and upgradable to avoid specific risks and support consumers' needs. This includes the ability to reset the device back to secure default settings.

## Good IoT Cyber Hygiene

Think of the bullets below as a down-and-dirty buyers guide for IoT devices:

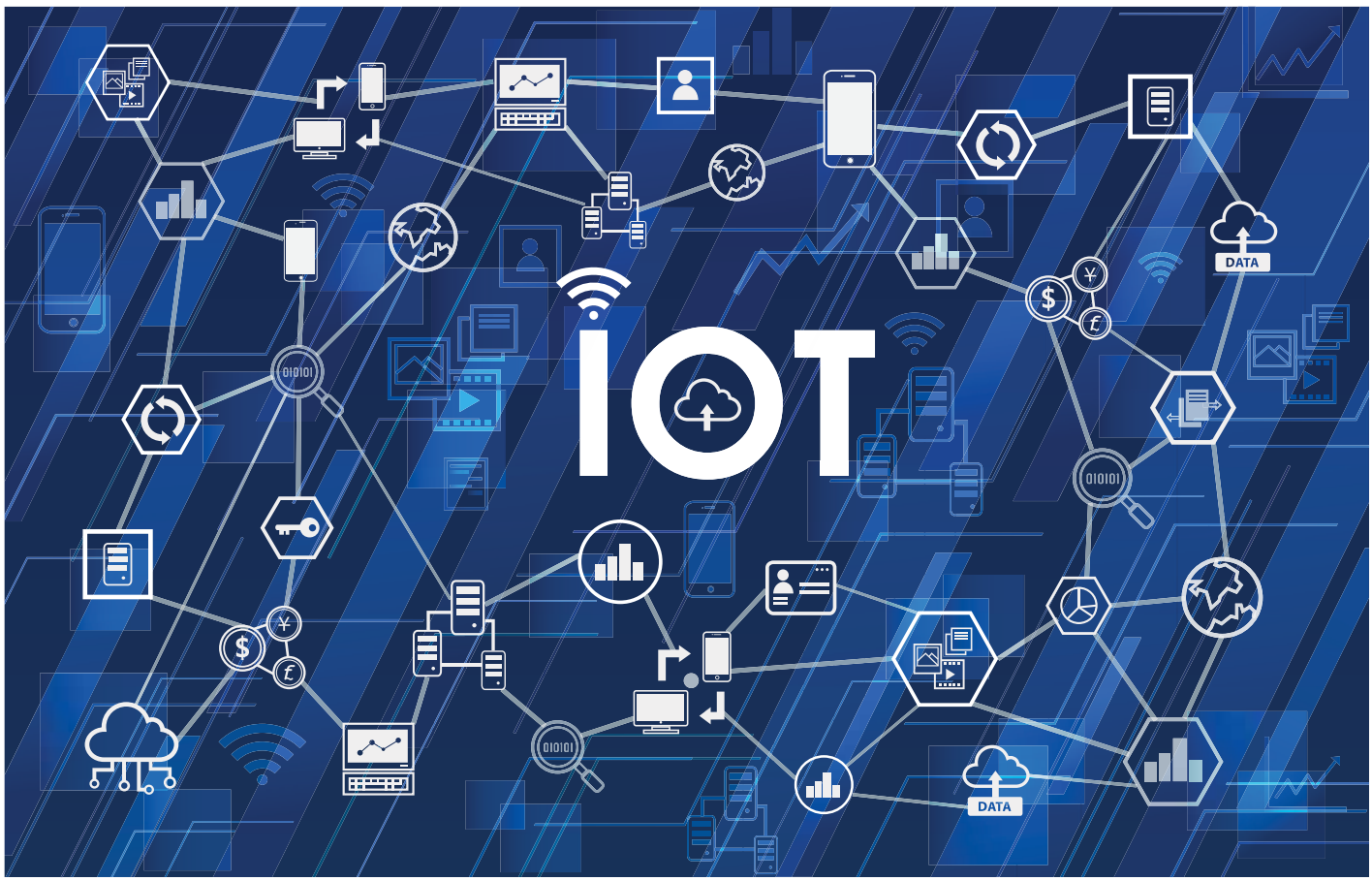
- Only buy IoT devices that are upgradable.
- Buy products from a reputable manufacturer. See what others are saying about the product before you buy, especially concerning security. However, this is no guarantee that there will not be issues.
- Change the default username and password. Hackers know what these are.
- Read through the documentation and concentrate on security-related configuration settings. If you cannot change the default configuration–do not buy it.
- Does the device have any built-in alarms or warnings when unauthorized access is attempted? This would be a bonus.

Once an IoT device is selected, be sure to write down the model number, media access control (MAC) address, and date of implementation for tracking purposes. Then, on a regular basis check for software and firmware updates.

When any IoT device reaches end-of-life, be sure to reset it to its factory default (or destroy it) before disposal. You don't want to accidently expose any data it might have collected or expose credentials to any associated cloud service component of the IoT device.

## Concluding Remarks

Technologies and risks change over time. Review the deployed IoT devices on a regular basis for configuration changes, software revisions, and functionality to determine if these devices continue to serve your needs. Make sure the benefits of the IoT device outweigh the risks of usage. Review all mitigations since these change over time, too. Remember, everything is connected. It is easier to stop something from happening than it is to repair the damage. ■



pearls from your

# peers:

# Worst Case Scenarios: Managing OTO Emergencies in Practice


**INTERVIEWEE**

**Johnathan D. McGinn, MD**

*Vice Chair and Professor of Otolaryngology - Head and Neck Surgery, Residency Program Director, Penn State Hershey Medical Center*

**INTERVIEWER**

**Katherine Kavanagh, MD**

*Associate Professor, Connecticut Children's University of Connecticut School of Medicine*


### What Is the Worst Case Scenarios: Managing OTO Emergencies in Practice?

Worst Case Scenarios is an Academy course that provides experience with high acuity, low frequency clinical events. This is an opportunity to practice and learn in a simulated, but realistic no-risk environment, with your peers.

### Who should participate in Worst Case Scenarios?

We envisioned this course as being directed toward practicing otolaryngologists and others working in otolaryngology practice, such as advanced practice providers. We have had some residents join as well, and the course is also appropriate for this level. We understand that advanced practice providers and practicing otolaryngologist may not have other facilities or access to engage in simulation education, so this course gives them that opportunity.

### What should a participant expect from the course?

First and foremost, they need to expect to participate. Some people are fearful of simulation because they are afraid of being put on the spot. We do this in a team-based setting, so everyone has the opportunity to work as a team leader and also as a team member. The scenarios have a limited introductory explanation, and then you get right into the scenario where you have to manage a problem—it is a hands-on experience. You engage with the mannequins as you would a live patient. You are encouraged to engage with your team to develop and enact a plan for managing the situation. The scenarios help you develop a process of thinking on your feet and moving through what would be a stressful situation in real clinical settings.

### What would you say to a participant who has never experienced simulation education?

I think you might like it more than you thought you would. Some participants may have some anxiety about the setting. It is very immersive—it is not unusual to feel your heart rate climb and your palms get a little sweaty as you try to save your patient. Although the patient is a mannequin, it feels fairly real. The key is that this is a team-based event; you are never alone, and you can always "phone a friend" who is standing right there. The goal is to do the best for that patient scenario. It is also a great opportunity to learn from your colleagues. We as otolaryngologists have the same basic training but different life experiences. In this course, you are working with adult learners who have real world experience. I have learned things from the students—I'll think to myself, "I've never done that before, but it's a great idea."

### What do you see as advantages to learning through simulation?

I think that everyone has their own personal best learning style. The immersive nature and the mechanics of thinking in the moment and doing something with your hands, which is what we do as surgeons, helps learner retention.

### What have you found to be the most valuable aspects for the participants and facilitators?

The scenarios we have picked for this are things that are realistically situations one might experience in your day-to-day practice. You may not have experienced them with any frequency, but they are looming out there as possibilities. The opportunity to work through a case where there is no harm to patients, try new things, and learn from your colleagues is such a unique learning environment. There may be multiple ways to tackle the situation. For that low-frequency, high-stakes event that we don't want to face but will, it is great to have a trial run before we encounter it in real clinical settings. ■

LOVE

FORWARD TOGETHER

AAO-HNSF 2022

ANNUAL MEETING & OTO EXPERIENCE

SEPTEMBER 10-14 PHILADELPHIA, PA

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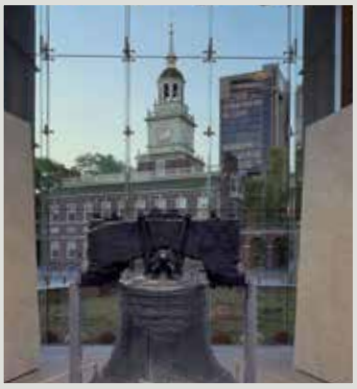

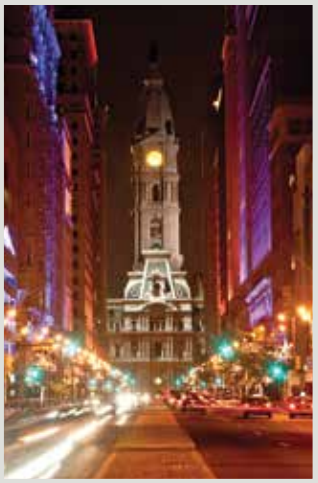

#OTOMTG22

# You Are Not Going to Want to Miss This: Claiming Your Unique 2022 Annual Meeting Experience

**Daniel C. Chelius, Jr., MD**
Annual Meeting Program Coordinator

With planning well underway for our AAO-HNSF 2022 Annual Meeting & OTO Experience and registration opening May 16, we are building on the events and encounters of what was an extraordinary gathering in 2021 in Los Angeles. As we did last year, we will continue to closely monitor the impact of the COVID-19 pandemic and put the necessary measures in place for the safety and health of all attendees and participants at the meeting.

Meeting together in person in 2021 was especially beautiful as I remember seeing so many smiles and hugs in hallway reunions. It really demonstrated how desperate we were to re-engage as a community. While we learned a lot about hosting a meeting over multiple platforms in 2021, the 2022 meeting will be built on the strength and lessons learned from more than 125 years of our meeting as a key pillar of the organization.

If we step back and think about what the Annual Meeting really is at its core, we must return to the very first meeting in 1896 in which every attendee brought a paper to present and discuss with the other participants. The construction of that first meeting started with individuals agreeing to attend, followed by scientific discussion and debate. Some of the papers would hold up in a modern scientific oral presentation format, whereas others were about identifying some problem or impediment to patient care and beginning to explore solutions with colleagues. Year after year since, the science and education offered at the Annual Meeting have become critical for our membership and the patients and communities each of us serve. The AAO-HNS/F, and really the entire house of otolaryngology today, has this meeting at its core in which we all serve by showing up, bringing our observations, engaging in debate, and developing and realizing our own future.

## At the Center of Your Own Unique Experience

The Annual Meeting offers something for everyone no matter what level of career, focus, or practice setting. There are incredible opportunities for engagement that go beyond the session rooms, and include the programs offered by the Section for Residents and Fellows-in-Training, Young Physicians Section, Women in Otolaryngology Section, Board of Governors, Private Practice Study Group, committees, and more. I cannot express enough how important these opportunities for engagement are—not only to us as an individual attendee, but also to the Academy to hear from the greater, collective voice of those of us who have committed our life's passion to the specialty and our patients.

As Meeting Coordinator, I hope that all attendees at the Annual Meeting know that we are individually at the center of our Annual Meeting experience, and that each experience will and should ideally be different from anyone else's. We want the meeting to serve the needs of both the subgroups within our organization, and those of each individual attendee. When you show up to the Annual Meeting, you become immersed in the global otolaryngology community in a way that supports both you and the specialty. Your registration affords you access to a plethora of opportunities to learn and expand your knowledge base, participate in mentoring activities, and share your voice in engaging ways.

## The Many Faces of Mentorship at the Annual Meeting

The best way for all of us to help others make the most of these unique opportunities is through mentorship. It is the gift that has been afforded to me by so many throughout my Annual Meeting experiences, and it is the gift that I can hope to pay forward as an investment in the those coming behind me, in my peers, and honestly in myself.

In the traditional sense, there is an important opportunity to mentor our residents and medical students at the Annual Meeting. If they have come to the meeting to do a poster or oral presentation, we have mentored them in the development of those presentations. I tell my residents that if the only thing you get out of the meeting is a presentation and line item on your CV, then you have missed a huge opportunity. This is where you can develop mentors outside of your program and engage with your peers in ways that can reverberate throughout your career. I think it is ideal to meet with trainees both before and after the meeting to set goals

> The AAO-HNS/F, and really the entire house of otolaryngology today, has this meeting at its core in which we all serve by showing up, bringing our observations, engaging in debate, and developing and realizing our own future.

for the meeting and to debrief on those goals and potential follow-up opportunities.

Beyond this type of structured approach, mentoring can also happen as a quick conversation in the hallway or in the back of a session room. I had the opportunity to discuss my own critical career decisions with existing mentors simply because I got to see them in person. I had colleagues I met through committee service step into spontaneous mentoring roles to connect me to others who have the same passion for my specific focus of pediatric head and neck surgery. I had the fortune to expand my circle of mentors by taking advantage of the various ways to get involved with the Academy's sections and to share my voice through those forums available to us.

One of the most underrated elements of attending the Annual Meeting is the exposure we have to critical peer mentoring moments. As we come up through our professional careers, no matter how established we are, it is often hard to access unbiased, honest peer-level mentorship in our practices or programs. But the Annual Meeting is a wonderful place to develop those peer mentorships. These individuals are friends, honest critics, and guides who can help us work through common obstacles. I can't overstate the importance of those peer relationships we can all develop by attending the Annual Meeting.

### A Community Culture

I don't think there is any better place to understand the global community of otolaryngology than at the Annual Meeting. Coming to the meeting is a critical professional development opportunity, not just for education content, and not just for developing mentorships, but also for just getting a grasp and understanding of all that is out there that is otolaryngology. It is also an excellent opportunity to sharpen our emotional and social intelligence and our presentation and networking skills in a nurturing environment with a community that supports us.

This is a meeting where everyone is open to and expecting to meet new people and to engage with a community that is not their usual. That is a wonderful thing for all attendees. Our global otolaryngology community has really rallied around the Annual Meeting. In our joy to be together in LA, so many of us acutely felt the understandable and necessary absence of so many of our colleagues, particularly our international colleagues, who were unable to be with us due to travel restrictions and mandates. Hopefully a reunion of our full global otolaryngology community will become a reality this fall in Philly. ■

Arrive Saturday for the combined Presidents' Reception, September 10! Look for more information coming soon!

## Call for Late-Breaking Science: Submit Your Abstract by June 20

The AAO-HNSF 2022 Annual Meeting Program Committee recognizes that the results of some exciting research may not have been available in time to meet the general abstract submission deadline, such as COVID-19 related research. To further enrich the Annual Meeting program, the committee has opened a call for late-breaking abstract submissions seeking ALL research that is novel, innovative, contemporary, and of high scientific significance.

Late-breaking scientific oral presentations will be a series of six-minute presentations followed by two-minutes of questions and answers. Submissions should be either clinical or basic/translational. They are limited to a maximum of six authors, including the presenting and senior authors identified at the time of submission.

**Specific Criteria:**

- A limited number of late-breaking abstracts will be accepted.
- The research must be novel, innovative, contemporary, and of high scientific significance to deserve special consideration after the original abstract deadline.
- Abstracts should describe either large clinical investigations or high-impact translational research that could not be completed prior to the original deadline.
- You will be required to answer the question, "Why is this abstract considered late-breaking?"
- Late-breaking abstracts must not be a revision of an abstract submitted prior to the original submission deadline.
- Late-breaking abstracts must not have been presented, accepted for presentation, or published at any other scientific meeting or journal at the time of submission.
- Full manuscripts of presented papers must be submitted to the journal, *Otolaryngology–Head and Neck Surgery* for consideration.

**Submission Deadline: June 20**

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# Program Information: Groundbreaking Education Program Formats

The education program is divided into 12 distinct specialty areas, allowing you to focus within your specialty or expand your knowledge in other areas.

- Business of Medicine/Practice Management
- Comprehensive Otolaryngology
- Endocrine Surgery
- Facial Plastic and Reconstructive Surgery
- Head and Neck Surgery
- Laryngology/Broncho-Esophagology
- Otology/Neurotology
- Patient Safety and Quality Improvement
- Pediatric Otolaryngology
- Personal and Professional Development
- Rhinology/Allergy
- Sleep Medicine/Surgery

Our groundbreaking education program formats have been enhanced for this year's meeting. Check out the latest offerings:

**Business Solutions for Breakfast with the Private Practice Study Group.** Engage in peer exchange and discussion on focused practice management and business of medicine topics with leading members of the Private Practice Study Group.

**Expert Series.** Expert Series are sessions led by recognized experts on current diagnostic approaches, therapeutic approaches, and practice management topics.

**Great Debates.** The AMPC education track leaders have collaborated with the AAO-HNSF Education Committees and associated subspecialty societies to identify contentious issues deserving of our collective focus and deliberation as well as prominent thought leaders who can push these discussions forward via structured debate.

**International Symposium.** International symposia are panel discussions featuring expert international panelists (i.e., from outside the United States) involving interactive, in-depth, state-of-the-art presentations employing a variety of didactic and interactive education formats.

**Lunch with the Experts.** Engage in peer exchange and discussion on focused clinical and professional topics with recognized leaders from throughout the field in an intimate atmosphere.

**Master of Surgery Video Presentations.** Demonstration videos of key surgical procedures performed by otolaryngologist–head and neck surgeons. Each presentation concludes with two minutes of audience questions and answers.

**Meet the Scientific Poster Authors.** Earn CME credit while learning about the latest advancements in research directly from the sources. Ask questions and share experiences with the poster presenters in a truly interactive session.

**Panel Presentations.** These discussion sessions are presented by panelists involving interactive, in-depth, state-of- the-art presentations on controversial topics with a variety of viewpoints.

**Rapid Poster Presentations.** This presentation format showcases the highly ranked poster submissions in each subspecialty, giving the selected poster presenters the opportunity to provide a focused oral summary with a limited set of slides highlighting and describing the major influence of their research. The presentations take place during the lunch hour in the Poster Pavilion.

**Scientific Oral Presentations.** A series of three- to six-minute presentations focusing on current evidence-based research, surgical procedures, and approaches in the clinical sciences and their application to patient care. Each presentation concludes with two minutes of audience questions and answers.

**Scientific Posters.** Visual displays detailing the latest advancements in otolaryngology research that allow the viewers the opportunity to appraise and assimilate scientific evidence for improved patient care practices. Poster authors are at their boards during specific times on Monday and Tuesday to discuss their findings.

**Simulation Presentations.** These are education presentations with simulation tools at the core. Unlike other educational adjuncts such as "audience response," the simulation tools will be integral to the conception and structure of the presentation.

## Continuing Medical Education Credit Information

**Accreditation**

The American Academy of Otolaryngology–Head and Neck Surgery Foundation is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

**AMA PRA Category 1 Credit(s)™**

The American Academy of Otolaryngology–Head and Neck Surgery Foundation designates this **other activity (hybrid: live meeting and live internet stream)** for a maximum of **21.50** ***AMA PRA Category 1 Credits*****.™** Physicians should claim only the credit commensurate with the extent of their participation in the activity.

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 the high-quality accredited continuing medical education (CME) activities you are already participating in—including many of the activities offered by the American Academy of Otolaryngology–Head and Neck Surgery Foundation (AAO-HNSF). The sessions offered at the Annual Meeting will also count towards MOC. For more information, please visit: https://www.entnet.org/education/cme-moc. ■

## Advance Your Skills: In-Depth Workshops Led by Top Medical Minds

Start strong in Philly by making time to attend an in-depth workshop led by top medical minds. Space is limited, so reserve your seat today!

### Sialendoscopy Hands-On Course
### Saturday, September 10 | Thomas Jefferson University

This one-day course addresses current advances in minimally invasive salivary gland surgery. The morning features didactic lectures by leaders in this cutting-edge field. Topics to be discussed include: the history of salivary endoscopy, imaging and ultrasound, instrumentation, the papilla and options for access, traditional parotid techniques for stones and stenosis, traditional submandibular techniques for stones and stenosis, inflammatory sialadenitis in relation to JRO, RAI and Sjögren's syndrome, treatment of large stones (hybrid and lithotripsy techniques), and complications.

### ACS Ultrasound Course: Thyroid, Parathyroid, and Neck Ultrasound Skills-Oriented Course
### Saturday, September 10 | Philadelphia Convention Center

This highly rated course will introduce the practicing surgeon to office-based ultrasound examination of the thyroid, parathyroid, and neck for commonly encountered diseases. The distinction of normal from malignant lymphadenopathy is emphasized with a demonstration of the comprehensive examination of lymph node basins in cervical levels I-VI. The technique of ultrasound-guided fine needle aspiration (FNA) of thyroid nodules and lymph nodes are addressed in didactic lecture format. In addition, hands-on skill sessions allow the surgeon to develop techniques to perform diagnostic neck ultrasound. The use of standardized patients allows supervised hands-on experience with transverse and longitudinal ultrasound methods. The techniques of FNA of lesions are performed using phantom models. Attendees are instructed in the practical detail and hurdles in developing office-based ultrasound. Pre-requisite: Registrants must have completed "The Ultrasound for Surgeons: A Basic Course, Third Edition" online course. ■

## Hands-On Learning: Simulation in Action

### Worst-Case Scenarios Managing OTO Emergencies in Practice Workshop
### Monday, September 12 | Thomas Jefferson University

This hands-on workshop is geared toward practicing otolaryngologists to prepare them for low frequency, high stakes emergency situations that they may not encounter often in their daily routines. Attendees participate in a rotation of six simulated otolaryngology emergencies with a cohort of six peer attendees. Each simulated emergency is done as a duo with a partner from the group. Following each simulation, a debriefing is held with the group and a facilitator and includes discussion of best practices for these situations based on published guidelines and available literature. ■

## See the Latest in Simulation

#OTOMTG22 features several simulation events:

### SIM Tank

The top three most innovative simulation project authors will present to a panel of expert judges while competing for the top prize during the SIM Tank. The simulation projects will be judged on innovation and creativity, replicability throughout the specialty, and advancement of training and practice in the field of otolaryngology. These exemplary projects are selected from the 2022 Call for Simulation Proposals.


### Simulation Reception & Showcase

The Simulation Reception showcases innovative and novel otolaryngology simulators or simulation projects. Table-top simulator demonstrations and presentations will be on display to highlight individual and team accomplishments.

For more information, visit: **www.entnet.org/simulation-activities.** ■

# #OTOMTG22

| REGISTRATION RATES | EARLY MAY 16 - AUGUST 26 | | | REGULAR AUGUST 27 - SEPTEMBER 14 | | |
|---|---|---|---|---|---|---|
| | FULL | DAILY | VIRTUAL ONLY | FULL | DAILY | VIRTUAL ONLY |
| **MEMBER** | | | | | | |
| *Domestic* | | | | | | |
| Resident/In-Training | $335 | $155 | $335 | $510 | $195 | $510 |
| Medical Students | $150 | $90 | $150 | $185 | $105 | $185 |
| Physician/Non-Physician | $775 | $390 | $775 | $1,240 | $495 | $1,240 |
| Advanced Practice Provider/Administrators | $440 | $235 | $440 | $730 | $300 | $730 |
| Life Member/ Retired Physician | $675 | $290 | $675 | $1,140 | $395 | $1,140 |
| Military Physician Member | $775 | $390 | $775 | $775 | $390 | $775 |
| Military Resident/ Student Member | $335 | $155 | $335 | $335 | $155 | $335 |
| *International* | | | | | | |
| Resident/In-Training | $235 | $155 | $235 | $410 | $195 | $410 |
| Medical Students | $150 | $90 | $150 | $185 | $105 | $185 |
| Physician/Non-Physician | $675 | $290 | $675 | $1,140 | $395 | $1,140 |
| Advanced Practice Provider/Administrators | $440 | $135 | $440 | $730 | $200 | $730 |
| *International Lower Middle and Lower Income* | | | | | | |
| Resident/In-Training | $176 | $116 | $176 | $308 | $146 | $308 |
| Physician/Non-Physician | $506 | $218 | $506 | $855 | $296 | $855 |
| Advanced Practice Provider/Administrators | $330 | $102 | $330 | $547 | $150 | $547 |
| **NONMEMBER** | | | | | | |
| *Domestic* | | | | | | |
| Resident/In-Training/ Medical Student | $555 | $270 | $555 | $875 | $345 | $875 |
| Physician/Non-Physician | $1,110 | $575 | $1,110 | $1,790 | $720 | $1,790 |
| Advanced Practice Provider/Administrators | $555 | $305 | $555 | $915 | $375 | $915 |
| *International* | | | | | | |
| Resident/In-Training/ Medical Student | $430 | $145 | $430 | $735 | $205 | $735 |
| Physician/Non-Physician | $985 | $450 | $985 | $1,650 | $580 | $1,650 |
| Advanced Practice Provider/Administrators | $985 | $450 | $985 | $1,650 | $580 | $1,650 |
| *International Lower Middle and Lower Income* | | | | | | |
| Resident/In-Training/ Medical Student | $323 | $109 | $323 | $551 | $154 | $551 |
| Physician/Non-Physician | $739 | $338 | $739 | $1,238 | $435 | $1,238 |
| Advanced Practice Provider/Administrators | $416 | $229 | $416 | $687 | $281 | $687 |

| REGISTRATION RATES | EARLY MAY 16 - AUGUST 26 | REGULAR AUGUST 27 - SEPTEMBER 14 |
|---|---|---|
| | FULL | FULL |
| **OTHER** | | |
| OTO Experience | $100 | $150 |
| OTO Experience Plus | $225 | $285 |
| Exhibitor Overallotment Fee | $100 | $100 |
| Exhibitor Full Access | $865 | $1,530 |
| **Presidents' Reception Additional Tickets** | | |
| Adult Guest | $75 | |
| Child (under 18 years of age) | $25 | |
| **Additional Activities** | | |
| Shuttle Bus Pass | $50 | |
| 125 Strong Donation | Can donate any amount | |

**AAO-HNSF and ACS Thyroid, Parathyroid, and Neck Ultrasound Workshop**
**Saturday, September 10**

| | |
|---|---|
| **MEMBER** | |
| Physicians/Nonphysician Clinicians | $1,650 |
| Resident/Fellow-in-Training/Medical Student | $850 |
| **NONMEMBER** | |
| Physicians/Nonphysician Clinicians | $1,850 |
| Resident/Fellow-in-Training/Medical Student | $950 |

**The Worst Case Scenarios: Managing OTO Emergencies in Practice Workshop**
**Monday, September 12**

| | EARLY MAY 16 - AUGUST 26 | REGULAR AUGUST 26 - SEPTEMBER 14 |
|---|---|---|
| Physician | $400 | $450 |
| Resident | $250 | |

| MEMBERSHIP RATES | | | | | |
|---|---|---|---|---|---|
| **Domestic Physician and Fellow** | | | | | |
| Physician/Fellow | $945 | Scientific (MD, PhD) | $625 | Second Year Practicing | $630 |
| Military/Government | $840 | First Year Practicing | $315 | Retired | $105 |
| **International Physician and Fellow** | | | | | |
| Physician/Fellow | $625 | Second Year Practicing | $416 | Low Income | $156 |
| First Year Practicing | $208 | Lower Middle Income | $312 | Retired | $105 |
| **Practice Administrators** | | | | | |
| (ASCENT Members) | $125 | (Non-ASCENT Members) | | | $175 |
| **Associate** | | | | | |
| $945 | | | | | |
| **Affiliate** | | | | | |
| $265 | | | | | |
| **Resident/Member-in-Training/Fellow-in-Training** | | | | | |
| Regular | $105 | Lower Middle Income | $52 | Low Income | $26 |
| **Student (Medical or Undergraduate)** | | | | | |
| $25 | | | | | |

**$100 discount for International Guests of Honor for the AAO-HNSF 2022 Annual Meeting & OTO Experience are Argentina, Japan, Nigeria and Spain. Only one discount per attendee will be honored.**

# Our Town: Philadelphia, Part I

**Cecelia E. Schmalbach, MD, MSc**
The David Myers, MD Professor and Chair, Department of Otolaryngology – Head & Neck Surgery, Lewis Katz School of Medicine at Temple University
Director, Temple Head & Neck Institute
Editor in Chief-Elect, *Otolaryngology–Head and Neck Surgery* and *OTO Open*

**How does Philadelphia encompass this year's Forward Together theme?**
Philadelphia is steeped in history and has been the epicenter of "moving forward" and advancements. It is the first World Heritage City in the United States and where our founding fathers came together to write, debate, and adopt our Constitution. It is a city of innovation—Benjamin Franklin not only invented swimming fins and bifocals but is credited with the first flexible catheter. In addition, the "Father of Endoscopy," Chevalier Jackson, MD, is a renowned otolaryngologist from Philadelphia.

**How will Philadelphia's rich medical history contribute to making this year's Annual Meeting destination a unique experience?**
To be surrounded by so much medical history will be inspiring; what a unique experience to learn about innovation and otolaryngology advances during the Annual Meeting in a city founded upon so much history.

**How would you complete this sentence:**
**Don't leave Philly before you have a chance to ...**
It is impossible to list just one thing, so here is my top 10 "to do" list (no specific order).

1. Liberty Bell
2. Independence Hall; Carpenter Hall
3. Go biking or running along the Schuylkill River
4. Run the stairs of the Art Museum like Rocky (don't miss the famous statue at the bottom to the right) and then go into the Art Museum—it is magnificent!
5. Grab a bite to eat at Reading Terminal
6. Mütter Museum at the College of Physicians of Philadelphia: Don't miss Chevalier Jackson's collection of 2,374 foreign bodies inhaled and swallowed, along with the maxillectomy specimen from President Grover Cleveland
7. The Gross Clinic by Thomas Eakins, which is the famous portrait of Dr. Samuel Gross
8. The Barnes Foundation: One of the world's largest collections of Renoir, Cezanne, Matisse, Picasso, Modigliani, and Van Gogh
9. Stroll down Elfreth's Alley: A national historic landmark and the oldest residential street in America
10. Eat a Philly cheesesteak! ■

**Robert T. Sataloff, MD, DMA**
Professor and Chair, Department of Otolaryngology – Head and Neck Surgery
Senior Associate Dean for Clinical Academic Specialties
Drexel University College of Medicine
Conductor, Thomas Jefferson University Choir
Adjunct Professor, Department of Otolaryngology – Head and Neck Surgery
Sidney Kimmel Medical College
Thomas Jefferson University
Director of Otolaryngology and Communication Sciences Research
Lankenau Institute for Medical Research

**Why are you excited to host #OTOMTG22 attendees in Philadelphia?**
I am excited for my colleagues to have an opportunity to enjoy our spectacular museums, the nearly 4,000 murals that constitute the largest offering of public art in the United States, the more than 1,000 restaurants, some of which are unbelievable (with internationally renowned chefs); the oldest outdoor market in the nation (the Italian Market); the second largest Chinatown on the East Coast; the 63 parks encompassing over 10,000 acres, 270 hiking trails, and 426 miles of bicycle lanes (the most per square mile of any city in the country); 200 historical buildings; and many other delights. Most of our colleagues are not aware that Philadelphia has the third most populous downtown in the country, 18 Fortune 500 companies within an hour, more than a thousand retailers in Center City that provide spectacular shopping, or that *U.S. News & World Report* ranked Philadelphia as number two among the "Best Places to Visit in the U.S."

**What advice do you have for first-time attendees? Why is the Annual Meeting special to you?**
Wherever our meeting is held, first-time attendees always are excited by the wealth of information presented, the education sessions that give them a chance to meet the people whose writings they have read and to ask them questions, by the number and quality of the exhibits, and especially by the collegiality of otolaryngologists from around the world. The meeting is world-class not only to learn, but also to network. First-time attendees should get to know and talk with as many colleagues as possible.

**What is Philadelphia's best-kept secret?**
Philadelphia's best-kept secret is everything about the city of Philadelphia. People still think of Philadelphia through the eyes of W.C. Fields. This is not his Philadelphia!

**Is there anything else you would like to share?**
All of the otolaryngology chairs in the Philadelphia area are good friends. We pride ourselves in collaboration across institutions, and we will join together to do everything that we can to make our colleagues' visit to Philadelphia pleasant, rewarding, and one that they will want to repeat. ■

#OTOMTG22

# The OTO Experience: A Must-Attend Event where Industry, Science, and Education Connect the Global Otolaryngology Community

"The OTO Experience is a huge opportunity for both domestic and international attendees. It's a theme park for the otolaryngologist—to walk through the hall and see the new technologies; to have easy access to buy whatever you need to augment your practice right now; in many ways, to be kicked in the brain about what's possible! I think our industry partners do a great job helping us think in an innovative fashion. Every year I come home from the OTO Experience with at least one or two follow-up calls planned with industry partners to consider if I can integrate a new technology into my practice. In 2021, it was imaging technology to help with neck dissection and thyroid surgery. If you are in the OTO Experience, it is impossible to walk out of there without being wowed by something … and maybe with a new pair of loops too."

**– Daniel C. Chelius, Jr., MD,** Annual Meeting Program Coordinator

Similar to Reading Terminal and the Italian Market, two famous must-see locations during your time in Philadelphia, Pennsylvania, so too is the marketplace that is the OTO Experience! Peruse the cutting-edge technologies and innovation on display via the exhibitors. Make it a frequent stop during your daily Annual Meeting schedule as it houses some of the latest science and education offerings. In addition to all of that, it also serves as networking central in 2022 where you can connect and engage with other attendees, leaders in the specialty, industry partners, colleagues, peers, and more. Exploring the OTO Experience is a once-a-year opportunity, and in 2022, it is the place to be!

This year's OTO Experience, located inside the Pennsylvania Convention Center in the historic city of Philadelphia, is a mecca for attendees. It provides a central location for myriad opportunities to engage with each other and the 250+ exhibitors representing a vast array of industries that specialize in surgical tools, robotics, imaging and video, diagnostic technology, and more. Additionally, it is truly representative of a cornucopia of education, cutting-edge science, innovative technologies, hands-on learning, networking with peers, colleagues, and leaders in the specialty, and so much more.

The OTO Experience is known for creating an environment where science, education, and industry work collaboratively and encourage mutually beneficial partnerships within the house of otolaryngology. All exhibits, education, and networking opportunities offered within the OTO Experience serve the common purpose of supporting otolaryngology-head and neck surgery to advance patient care.

In the OTO Experience, you will find a multitude of engaging opportunities to capitalize your time. The industry-focused **Thought Leadership Series** includes both one-hour **OTO Pavilion** and 30-minute **OTO Theater** sessions. With these attractions on both sides of the exhibit hall, sponsors will spotlight their product, new scientific research, or company position on trending topics within the field of otolaryngology to provide attendees the insight of our industry partners.

In 2022 we are building upon the past success of **Lunch with the Experts** to also

offer **Business Solutions for Breakfast with the Private Practice Study Group**. During the Breakfast, attendees engage in peer exchange and discussion on focused practice management and business of medicine topics with leading members of the Private Practice Study Group. **Lunch with the Experts** offers peer exchange and discussion on focused clinical and professional topics with recognized leaders from throughout the field in an intimate atmosphere. Both activities require a ticket to the event(s), which you can add on during the registration process. Free boxed lunches and occasional refreshments throughout the day will be available daily for all attendees in the exhibit hall as well.

Another opportunity attendees can take advantage of is the **Rapid Poster Presentation**. This presentation format showcases the highly ranked poster submissions in each subspecialty, giving the selected poster presenters the opportunity to provide a focused oral summary with a limited set of slides highlighting and describing the major influence of their research. The presentations take place during the lunch hour in the **Poster Pavilion**.

New this year, the OTO Experience will be the site of the **Women in OTO (WIO) General Assembly**, which is an opportunity to meet women within the field and shed light on their accomplishments. This annual event is open to all attendees and gives everyone the opportunity to celebrate and support the women who have dedicated their lives to the advancement of the specialty, their colleagues, and their patients. A ticket is required to attend this activity, which can be added during the registration process.


2019

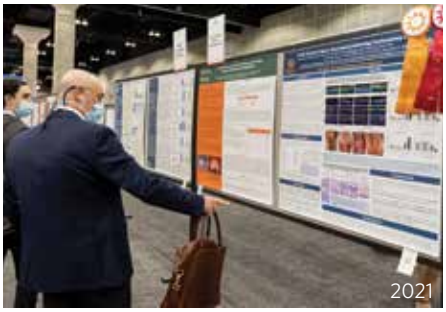
Also new this year to the OTO Experience, will be the **ENTrepreneur Faceoff**. This event, which debuted in 2021, allows industry entrepreneurs to go head-to-head with their latest innovations with a panel of judges and audience members viewing the top presentations and products within the industry.

We are also happy to announce that coming back to the OTO Experience in 2022 is the **Portrait Studio**, a popular attraction for attendees to get a professional headshot photo. This service is offered complimentary to all attendees.

The OTO Experience is a core location to ensure you are making the most of your Annual Meeting attendance, and we hope that you will find yourself a frequent participant in all the OTO Experience has to offer. With so many new and exciting opportunities being added this year, you will not want to miss the OTO Experience in Philadelphia! Look for more details about programming and schedules within the OTO Experience at **www.entannualmeeting.org**. ■

2021


2021


2021

# Allergy and Otolaryngology Just Go Better Together

**Cecelia Damask, DO, Chair,** and **Matthew W. Ryan, MD**

*Some things are just meant to be together ...*

- *Peanut butter and jelly*
- *Marshmallows, chocolate bars, and graham crackers*
- *Grilled cheese sandwiches and tomato soup*
- *Milk and chocolate chip cookies*
- *Otolaryngology and allergy*

One of the things I hear at least once a week in my practice is, "I did not know that you also treated allergies."

Does this sound familiar to you? Allergic rhinitis (AR) is a comorbidity with many other diseases treated by otolaryngologists, and it shares significant symptom overlap with a variety of diseases that are relevant to our practices. So why wouldn't otolaryngologists also treat allergies? AR is one of the most common chronic diseases and is estimated to affect between 40 and 60 million people in the United States.[1] AR may present with a wide spectrum of symptoms, including sneezing, runny nose, watery itchy eyes, nasal congestion, cough, and sore throat.

Currently there is a growing need for specialists to treat allergic conditions, and otolaryngologists are uniquely positioned to assess for the presence of allergic disease in patients with upper aerodigestive tract symptoms. Incorporating allergy testing and immunotherapy into your practice would allow you to provide comprehensive care to your patients, and as an ancillary service it can help build your practice.

Allergy diagnostic testing is one of the first services you can offer your patients. Although a presumptive diagnosis of allergic disease may be made from the patient's history, allergy testing has several important roles. These include confirming the clinical diagnosis, identifying the patient's relevant allergen sensitivities, and selecting a safe starting dose for the provision of immunotherapy.[2]

Several different testing modalities are available. Allergen-specific IgE in the serum can be used as a marker of sensitization. An in vitro-specific IgE test may be accomplished with a simple blood draw sent to a reference laboratory. Some busy practices obtain CLIA certification and perform their own in vitro-specific IgE analysis from patient serum samples in-house. However, the most commonly employed allergy testing technique is skin testing. A simple prick test, performed with an allergen extract and a plastic disposable device, is able to identify preformed allergen-specific IgE via cutaneous mast cell degranulation and the classic wheal-and-flare reaction of the skin. Another technique is to use a small needle to inject diluted allergen into the dermis, looking for a similar reaction (intradermal test). Some practices may choose to incorporate a blended technique of both prick and intradermal tests, commonly known as "modified quantitative testing," as initially described by **John H. Krouse, MD, PhD, MBA**.

Allergy diagnostic testing provides the clinician with important information to aid in clinical decision making and is a cornerstone in the management of allergic disease. Most otolaryngology practices should be able to add some form of allergy diagnostic testing with minimal initial investment.

Most patients with AR are treated with allergen avoidance and pharmacotherapy. However, allergen-specific immunotherapy is the only treatment that addresses the underlying immunologic derangement in allergic disease. Successful immunotherapy decreases symptoms and improves disease-specific quality of life.[3] Immunotherapy achieves these benefits via a variety of mechanisms. It reduces mast cell and basophil degranulation, induces the production of IgG4 blocking antibody, upregulates tolerogenic regulatory T cell populations, and reduces allergen-specific IgE over the long term. Comprehensive allergy care thus includes allergen-specific immunotherapy.

A variety of immunotherapy options are used in practice. The simplest method for allergen-specific immunotherapy is sublingual immunotherapy (SLIT) using FDA-approved sublingual tablets. These are currently available for the treatment of grass, ragweed, and dust mite allergies in the U.S. Another option is SLIT using a customized formulation of aqueous allergen extracts that is based upon clinical determination of a patient's relevant allergen sensitivities. The advantage of this approach is that allergens other than grass, ragweed, and dust mite can be treated.

Although SLIT has many advantages, the mainstay of immunotherapy in the U.S. is subcutaneous injection immunotherapy (SCIT). SCIT has the longest track record of clinical use and has been demonstrated to be effective in multiple randomized, placebo-controlled trials.[3] SCIT is FDA approved and covered by most health insurance plans. Although SLIT is used by many practices in one form or other, most allergy practices employ SCIT for these reasons.

Otolaryngologists should carefully examine their reasons for incorporating comprehensive allergy care in their practices.

Before initiating these services, a practice should consider its goals as well as the requirements for success. Is there a need for allergy services in the area? Will allergy care increase convenience for patients? Do all the partners agree about the importance of allergy? Will allergy care make the practice more profitable or build overall patient numbers? Will allergy care disrupt current referral patterns in your community? These and other questions need to be considered before embarking.

Like any other decision involving the services offered by a practice, incorporating allergy care should be undertaken with a business plan in mind. The business plan should include tangible metrics of success, such as monitoring of referral trends, financials, retention rates of patients, and analyzing patient outcomes. The primary financial investment when starting an allergy practice is the cost of supplies, including allergen extracts, syringes, testing devices, and emergency supplies (for anaphylaxis treatment). Usually the existing personnel in a medical office are able take on the new roles required for allergy care. These roles include performance of allergy skin tests, preparation of testing and immunotherapy vials, and administration of immunotherapy. Medical office assistants or nurses are able to perform these duties depending upon individual state regulations. Ultimately, successful allergy practices will have personnel who are completely dedicated to providing these services.

Office space for the allergy practice must also be considered. A location for preparation of allergen extracts needs to be defined, as well as space for testing and administration of immunotherapy injections. Because SCIT carries with it a risk for anaphylaxis, a monitored location within the office will need to be designated for patient observation after injections are administered. When beginning an allergy practice, existing office space can be used. However, as the practice grows, so will requirements for space. An ideal office environment includes a dedicated check-in desk for allergy patients, a separate waiting room for observation, and an allergenic extract compounding area, as well as space for testing multiple patients simultaneously and to give injections.

Although office staff perform most of the day-to-day tasks, the physician (or advanced practice provider) is the leader of the team and should be the content expert for every aspect of the allergy practice, including the nuances of testing and immunotherapy, management of allergy emergencies, regulatory and compliance issues, proper billing and coding, and documentation. This responsibility entails considerable investment of time and energy on the part of the physician. Becoming an expert in these topics can be accomplished in a variety of ways. Trusted colleagues are a potential source of information and advice. Allergy-specific CME offerings at the AAO-HNSF Annual Meeting & OTO Experience and from other sources should be sought out. Read a variety of texts and monographs on allergy directed toward otolaryngologists. Talk to allergen supply vendors. And finally, enroll in a course that reviews proper billing and compliance information.

There is never an ideal time to get started on the journey of building an allergy practice. Fortunately, allergy services can be gradually added to what you are already offering your patients. It is OK to start slowly. Allergy testing is a simple starting point. In vitro testing and skin prick testing are easy to introduce into your practice flow. Sublingual immunotherapy tablets are a safe and effective way to begin offering immunotherapy to your patients. As you and your staff learn more about allergy and are more comfortable with your knowledge and skills, you can expand to offer a full spectrum of allergy services. Once you start offering allergy services to your patients, you will find that allergy and otolaryngology go together like peanut butter and jelly. ■

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FROM THE EDUCATION COMMITTEES

# How to Diagnose and Manage the Patient with Olfactory Loss

**Zara M. Patel, MD**, Chair, Rhinology and Allergy Education Committee

Many budding physicians and surgeons who choose the field of otolaryngology do so based on our specialty's ability to help patients regain their senses and help them interact more fully with the world around them. In otology, we help people hear again; in laryngology and head and neck surgery, we help people speak and swallow again; and in facial plastic surgery, we help patients regain lost facial function, smile again, and feel their most confident.

One sense integral to our interaction with the world around us, that of smell and taste, had been somewhat left behind, called the "orphan sense" by some, as the pace of research and even simple clinical interest was not present for many years.

One silver lining of the COVID-19 pandemic has been the sudden interest in this sense, as hundreds of millions of people around the world fell prey to what would become one of the hallmarks of the early COVID-19 variants—a loss of smell and taste. Now with millions of those people suffering from long-term loss and dysfunction, general otolaryngologists and rhinologists will continue to be sought out for help in diagnosing and treating these symptoms at rates higher than ever before.

The quantity and quality of evidence in this field has a wide range, and desperate patients will look to anyone and anything they hear may help. It is our responsibility to educate them about the evidence we currently have and let them know there are options for treatment, while also protecting them from treatments lacking in evidence and could potentially be harmful.

Although COVID-19 may be a common cause of smell loss currently, there are dozens of different potential etiologies, ranging from the commonly known ones of post-viral, sinonasal inflammation, and post-traumatic, to neurodegenerative, metabolic, endocrinologic, environmental, and many more.

The first step in accurate diagnosis is a thorough history, including onset, timing, duration, quality, severity, or any inciting events. Specific questions to ask should be about history of sinonasal inflammatory disease, viral illness, trauma, toxin exposure, medications, anesthetic events, radiation, other cancer treatment, autoimmune disorders, endocrine disorders, vitamin/mineral deficiency, neurodegenerative disease or any cognitive changes, seizure activity, headache history, other neurologic disorder, changes in BMI, and smoking history.

The next step is to perform a validated, quantifiable smell test. There are many commercially available options from which to choose. And the next step is to perform a full head and neck exam, including cranial nerve examination and nasal endoscopy. If anything about the history leads you to suspect a specific underlying disorder, the physical exam should be widened and directed to other sites (for example, a full neurologic exam in someone suspected of developing Parkinson's disease).

With regard to imaging, if the history/physical exam suggests sinus disease, a CT sinus is indicated. If history/physical exam suggests an underlying neoplasm, a CT or MR could be indicated. If the history/physical gives a specific underlying etiology not related to the sinuses or underlying neoplasm, no imaging is indicated. If the history/physical does not provide any specific etiology, an MR is an option to rule out any underlying intracranial pathology. An MR can also be used as a prognostic tool in patients with long-term loss or dysfunction.

For treatment, this should be tailored specifically to the underlying disorder and referral to the appropriate specialist. For example, for olfactory dysfunction related to chronic rhinosinusitis, we are the appropriate specialists, but for olfactory dysfunction related to an underlying kidney disorder, a nephrologist would be more appropriate. There are some treatment options that are globally applicable, such as olfactory training, and others that have only proven to help a particular type of smell loss, such as oral zinc for post-traumatic loss.

Depending on the etiology (see reference for details), topical steroid irrigations (but not sprays), topical vitamin A, and omega-3 may be helpful, as well as topical sodium citrate, but this one is only for short-term improvement. Physicians and other providers should not offer systemic vitamin A, minocycline, systemic phosphodiesterase inhibitors, such as theophylline, pentoxyphylline or caffeine, intranasal zinc, or oral zinc for non-trauma-related smell loss. There are many other proposed treatments that simply need more study and data before they can be recommended or recommended against as options in treating these patients.

Finally, due to the significant burden experienced by patients suffering from loss or dysfunction of smell, counseling should be provided regarding physical safety and psychological sequelae, or patients should be referred to someone who can. ■

**Reference**

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# Acupuncture in Otolaryngology: A Primer

**Chau T. Nguyen, MD; Marilene B. Wang, MD;** and **Malcolm B. Taw, MD**

Acupuncture, a therapeutic modality of traditional Chinese medicine (TCM), has been used for centuries in Asian countries. It involves the placement of needles into specific points along the body.[1] According to TCM theory, energy or vitality called "qi" flows throughout the body along channels or meridians. Disruption of this flow may lead to impaired function and disease. Acupuncture seeks to restore health and homeostasis through accessing specific points along targeted meridians. Additional core features of TCM are herbal medicine and tai chi.

There are many proposed mechanisms of action for acupuncture's effects. When a needle is inserted into an acupoint, the feeling elicited is often described as a deep ache, soreness, heaviness, or even numbness. This is referred to as "de qi" in TCM. On a neuroanatomic basis, de qi is generated from the activation of various sensory receptors, small fiber-innervated nociceptors, and myelinated fiber-innervated mechanoreceptors.[2] Acupuncture stimulation may create a steady stream of impulses transmitted to the substantia gelatinosa in the spinal cord, causing the gate for pain impulses to close.[3]

Within otolaryngology, acupuncture has been used for a variety of conditions from perioperative management to hyposmia and xerostomia. Since the 2013 U.S. Food and Drug Administration ban on codeine for post-tonsillectomy pain in children,[4] there has been a renewed interest in effective nonopioid therapies. Acupuncture has been used in pediatric pain conditions ranging from headache to complex regional pain, cancer pain, and perioperative pain.[5]

One of the earliest U.S. reports to address this was from **James W. Ochi, MD**, in 2013. He retrospectively reviewed 31 cases of children who received acupuncture but not narcotics after tonsillectomy over a three-month period. He found the mean reported pain level before acupuncture was 5.52 (SD = 2.28) out of 10, falling to 1.92 (SD = 2.43) after acupuncture. Duration of effect varied, with 30% reporting pain relief > 60 hours and 30% < 3 hours.[6]

A group from Stanford performed a randomized, double-anonymized, placebo-controlled trial of intraoperative acupuncture for post-tonsillectomy pain. Through home surveys of patients, the group found significant improvements in pain control in the acupuncture treatment-group postoperatively ($p = 0.0065$ and 0.051, respectively), and oral intake improved significantly earlier in the acupuncture treatment group ($p = 0.01$). No adverse effects of acupuncture were reported.[7]

In 2018 a literature review of complementary and alternative medical treatment of post-tonsillectomy pain and nausea found the greatest amount of evidence for acupuncture and honey. Both were deemed cost-effective and safe.[8] As patients, parents, and providers seek nonopioid alternatives, acupuncture may play a useful adjunct role.

A survey of nearly 400 parents showed 98% chose acupuncture for their child when offered for tonsillectomy pain relief.[9] A systematic review of the literature found most adverse events in pediatric acupuncture were categorized as mild, such as pain and bruising.[10] In a 2021 guideline on procedure-specific postoperative pain management recommendations for tonsillectomy, interventions that improved postoperative pain were paracetamol, nonsteroidal anti-inflammatory drugs (NSAIDs), intravenous dexamethasone, ketamine (only assessed in children), gabapentinoids, dexmedetomidine, honey, and acupuncture.[11] With a strong desire to avoid opioids and the concern for bleeding from postoperative NSAIDs, acupuncture presents an attractive option for pain control.

Smell dysfunction is a well-documented symptom of COVID-19 illness, which recovers in the majority of patients. A German study published in *Otolaryngology-Head and Neck Surgery* in 2010 found positive results using acupuncture in a small historical cohort study of 15 patients with post-viral olfactory dysfunction. The mean time with smell loss in the group was 4.3 years (range 2-10). Eight patients had improved smell using Sniffin' Sticks test as a measurement tool, following 10 weekly sessions of acupuncture.[12]

Within the realm of head and neck cancer, Matovina et al. reported on the use of acupuncture as an integrative therapy for symptom management of xerostomia, pain, nausea/vomiting, and pain after neck dissection. Their review suggested that acupuncture may be a therapeutic option for patients with head and neck cancer suffering from these adverse effects of treatment.[13]

With the emerging evidence base for acupuncture use in tonsillectomy, there remain barriers to adoption. Chief among them are training and regulations. States in the U.S. differ in their regulation of acupuncture practice, with some requiring

300 hours of specific training and others open to medical practitioners without additional training. One resource may be the American Academy of Medical Acupuncture at **https://medicalacupuncture.org/**. Beyond this, there is the time required for counseling and procedure. Finally, the billing and payment for acupuncture is not uniform among insurance providers.

Despite these challenges, interest in this centuries-old practice remains high, judging from continued research and attendance at acupuncture proffered courses for the AAO-HNSF Annual Meeting. More questions remain to be answered, including the individual attributes that may affect acupuncture efficacy, as well as the optimal timing and specific regimen for its application. ■


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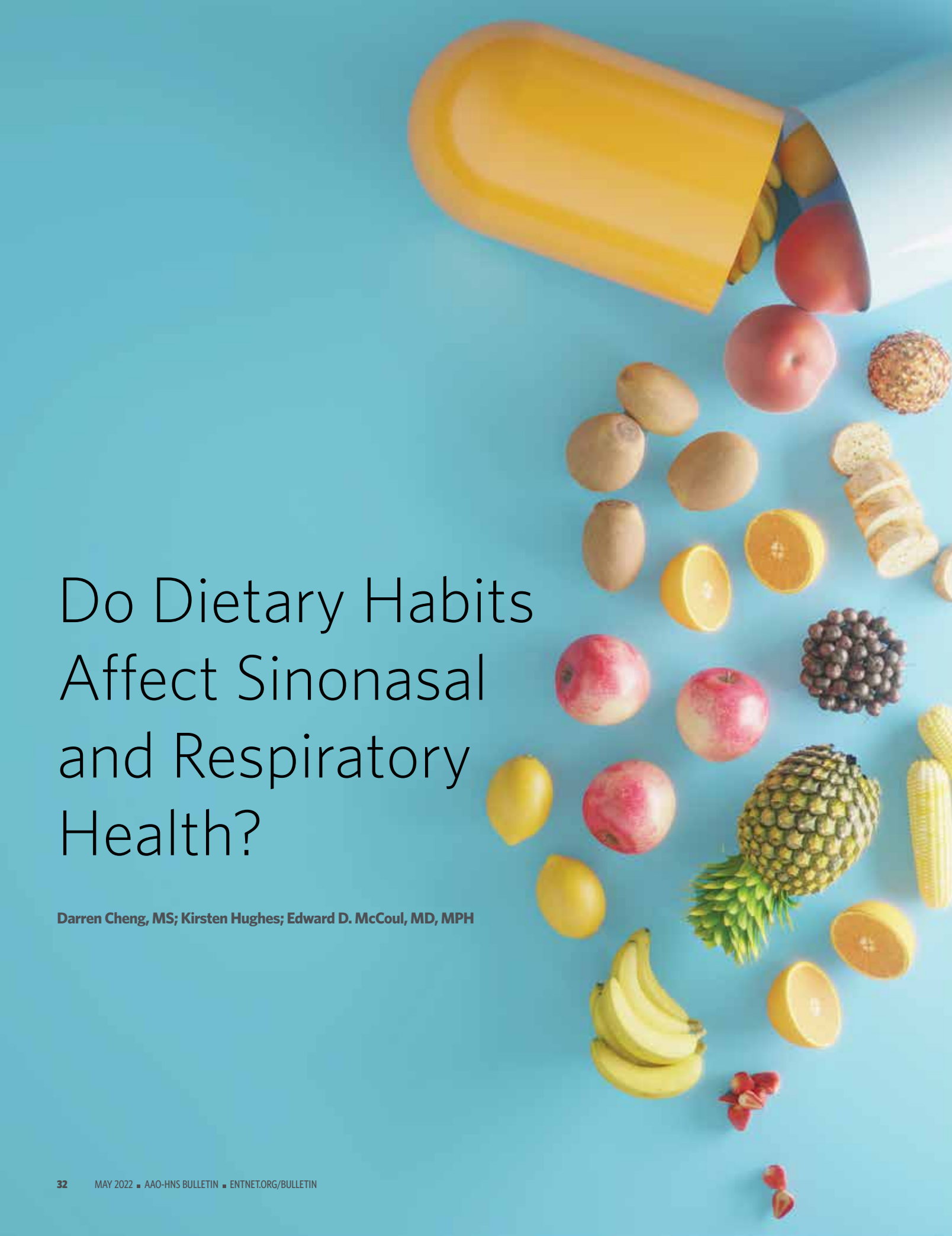

# Do Dietary Habits Affect Sinonasal and Respiratory Health?

**Darren Cheng, MS; Kirsten Hughes; Edward D. McCoul, MD, MPH**

Recent years have seen an increased interest in the association between diet and respiratory health, including allergic disease, rhinitis, and asthma. A growing body of evidence suggests that certain dietary habits are associated with favorable respiratory health, while other dietary habits have a detrimental effect.

Most studies exploring the effects of diet on asthma, allergies, and rhinitis have originated in Asia, Europe, and Latin America. Dietary traditions and movements—including low-carb, vegan, and modified Mediterranean diets—have all reportedly led to some reduction in frequency and severity of rhinosinusitis symptoms, with variable results. Reports from some parts of the world suggested that specific dietary habits in children may be protective (or non-protective) in the development of rhinitis.[1-6] Despite minimal published research from the United States, anecdotal evidence suggests that changes in dietary habits may lead to abatement of rhinitis symptoms.

As westernization increases in low-resource countries, traditional diets have shifted toward greater consumption of fast food and other energy-dense, low-cost foods. Fast food intake in Latin America is common in children, particularly adolescents, with nearly 20% reporting eating fast food more than three times per week.[4] A study of Latin American children demonstrated that children characterized as high fast-food consumers (i.e., greater than three times per week) and low-fruit consumers had increased risk for recurrent wheezing.[1]

A second study in Latin America found that consumption of fast food is positively associated with wheezing, rhinoconjunctivitis (RCJ), and eczema in older children, while fruit and vegetable consumption are negatively associated with RCJ and eczema in younger children.[4] Unfortunately, despite public health promotion of daily intake of fruits and vegetables in Latin American countries, 60% of children consumed these food groups less than three times per week.[4] Cross-sectional studies in Bolivia, Colombia, and Ecuador have shown a negative association between fruit and vegetable intake and symptoms and severity of asthma and rhinitis.[4]

Studies in Europe pointed to the Mediterranean diet as protective against allergic rhinitis (AR) with modest protection for wheezing and atopy; in particular, intake of common fruits such as grapes, oranges, apples, and fresh tomatoes showed no association with atopy but were protective against wheezing and AR.[5] Of note, the Western diet consisting of red and processed meats, high-fat dairy products, and low vegetable intake contradicts the tenets of a whole food, Mediterranean diet.[6] The risk of RCJ was found to be three times higher in children who consumed animal fats more often than three times per week compared to children who consumed animal fats one to two times per week or not at all.[3]

Cross-sectional studies in Italy and England demonstrate that intake of vegetables, tomatoes, and fresh fruit rich in vitamin C were protective factors for wheezing symptoms and found to be positively associated with ventilatory function, with an even stronger association among children with a history of wheezing.[5,7] Furthermore, similar evidence in European countries suggests a strong positive association with rhinitis and other allergic symptoms in children eating candies and lollipops more than three times per week.[3]

Comparable associations have also been found in Asian countries, relating certain dietary patterns and the frequency and severity of allergic symptoms and rhinitis. With grains as a primary staple in most Asian diets, rice consumption more than three times per week has been associated with reduced risk of rhinitis.[2]

A study of primary school children in Hong Kong found that a dietary pattern of legumes, butter, nuts, and potatoes was associated with a significantly increased risk of rhinitis.[2] Leguminous crops have been considered a source of IgE-mediated allergic sensitivity in both Mediterranean and Asian countries. As such, proposed mechanisms of this immunologic pathogenesis include cross reactivity among different legumes and other allergens. A high intake of saturated fatty acids may ultimately influence arachidonic acid in cell membranes, affecting lymphocyte function and bronchial reactivity.[2]

The contribution of greater intake of fruits and vegetables to a decreased prevalence of sinonasal and respiratory disease may derive from the role of oxidative stress, which contributes to inflammatory processes in the clinical expression of asthma and other allergic conditions.[5-7] Further, the growth of airways during childhood may be vulnerable to oxidative exposures and thus suboptimal antioxidant intake during this critical period may result in oxidative airway damage, reductions in airway compliance, or both.[5] Consequently, fruits and vegetables rich in antioxidant vitamins and flavonoids help reduce and modulate both airway and allergic disease. Additionally, high dietary intake of certain omega-3 fatty acids are associated with decreased risk of AR and an inverse association with allergic sensitization.[8]

From a microbiological standpoint, a study has shown that, relative to industrially produced products, organically derived foods may protect against the risk of asthma and allergies.[4] Moreover, fruits and vegetables are densely covered with microbes, and the existence of this ubiquitous plant microbiota has been a subject of recent interest.[9] It is theorized a low gut microbiota may be linked to diminished respiratory and allergic health in children and that a rich microbiota facilitated by freshly produced plant-based foods may reduce those outcomes.[4,10,11] Additionally, as frequent colonization of *S. aureus* occurs in the nasal cavity, staphylococcal enterotoxin B has been suggested to play a role in the pathogenesis of food allergy and, subsequently, allergic rhinitis and rhinosinusitis.[12-14] Involuntary ingestion of these bacterial by-products may lead to an immunologic cascade that induces AR via IgE-mediated mechanisms.[13,15-23] This may explain the presence of large amounts of IgE antibodies to *Staphylococcus* enterotoxins in patients with persistent AR and suggests that immunomodulation contributes to the pathogenesis of AR via sensitization of the upper airway.[12,13,15,16,23-25] Moreover, the presence of Th1/Th17 inflammation of the sinonsal mucosa may facilitate colonization of unfavorable, dysbiotic microbial flora.[26] Patients with chronic sinonasal inflammation may plausibly benefit from dietary modifications

as an adjunct to existing medical therapy.

In conclusion, a limited but growing body of evidence suggests that dietary habits influence health beyond the widely known effects on body mass and the digestive and cardiovascular systems. As clinicians, otolaryngologists share a responsibility to educate patients on the benefits of sound dietary habits. This encompasses respiratory and sinonasal health as well as other systemic benefits. Given the substantial consumption of healthcare resources stemming from management of sinonasal and allergic disease, clinicians who evaluate and treat these conditions may consider incorporating dietary history into their clinical encounters. This additional information would enable the clinician to suggest modifications that may yield a complementary benefit in overall health while providing comprehensive otolaryngologic care. ■

**Table.** Summary of Dietary Patterns with Observed Effect on Respiratory Health

| Observed Dietary Habit | Effect on Respiratory Health |
|---|---|
| **Low fruit consumption** | Increased risk for recurrent wheezing[1]<br>Increased risk for rhinitis[1] |
| **High fruit and vegetable consumption** | Protective for wheezing, asthma, and rhinitis[5]<br>Increased protection from wheezing[6]<br>Decreased prevalence of allergic symptoms[4]<br>Decreased prevalence of asthma[27]<br>Decreased risk of AR[28] |
| **High fast-food consumption** | Increased risk for recurrent wheezing[1]<br>Increased risk for RCJ[3]<br>Increased prevalence of allergic symptoms[4] |
| **Low pasta consumption** | Increased protection from recurrent wheezing[1] |
| **Low meat consumption** | Increased protection from rhinitis[1] |
| **Mediterranean diet** | No protective effect against wheezing or rhinitis[1]<br>Protective for AR with modest protection for wheezing[5] |
| **High nut consumption** | Protective for wheezing[5] |
| **Low nut consumption** | Increased risk of RCJ[2] |
| **High margarine consumption** | Increased risk for wheezing and AR[5]<br>Increased risk for wheezing[6]<br>Increased allergic sensitization and AR[29] |
| **High rice consumption** | Decreased risk of rhinitis[2]<br>Increased protection from AR[3] |
| **High cereal consumption** | Increased protection from AR[3] |
| **High cocoa (chocolate) consumption** | Increased protection from RCJ[3] |
| **High candy consumption** | Increased risk of RCJ[3] |
| **Low potato consumption** | Increased risk of RCJ[2] |
| **High meat, deep-fried foods, and oily fish** | Increased prevalence of asthma[30] |
| **Higher monounsaturated fats consumption** | Decreased prevalence of rhinitis[31] |
| **High-protein, high-fat, Western diet** | Increased risk of AR, wheezing, and bronchitis[32] |

Note: AR = allergic rhinitis; RCJ = rhinoconjunctivitis

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# Frontal Sinus Surgery for the General Otolaryngologist

**Abtin Tabaee, MD; Gurston G. Nyquist, MD;** and **Jeffrey D. Suh, MD**

Surgical management of the frontal sinus remains one of the most challenging and demanding aspects of sinus surgery. The need for specialized instruments, narrowness of the surgical corridor, proximity to critical neurovascular structures, and significant anatomic variability of the frontal recess pose challenges to surgical success. Additionally, the increasing indications and popularity of advanced endoscopic procedures (e.g., Draf III) for complex frontal sinus pathology necessitate a thorough understanding of the various approaches to the frontal sinus.

Surgical confidence requires a comfort level with angled endoscopes (45 and 70 degrees) and dedicated frontal sinus instrumentation as well as the ability to translate the patient's frontal recess CT findings into a surgical plan by studying all three planes of the CT scan. Furthermore, understanding the modern nomenclature for the variety of frontal recess anatomic variants is critical to developing a safe surgical plan. (Wormald, et al.). The pneumatization patterns of the frontal recess cells and frontal sinus are highly variable, and the surgeon must often navigate through multiple layers of bony partitions that include the supra agger and supra bullar frontal cells to successfully perform frontal sinus surgery. Additional important anatomic landmarks to consider include the attachment of the uncinate process to the skull base and anterior-posterior diameter of the frontal recess. A narrow frontal recess that is less than 5 mm in diameter is associated with higher rates of stenosis and may require drilling the frontal beak to obtain an adequate opening.

The available procedures include balloon dilation, functional endoscopic sinus surgery (FESS), and open approaches to the frontal sinus. Determining the optimal surgical approach for a given patient is based on a critical analysis of a number of factors, including the patient's disease pattern and individual imaging findings. A modification to the Draf classification that includes Grades 0-6 has been developed to address the variable anatomy and help compare outcomes of frontal sinus surgery based on the extent of surgery. (Wormald, et al.) Frontal sinus balloon dilation (Grade 0) and the Draf IIa (Grade 1-4) procedures are most appropriate in patients with limited inflammatory disease and favorable anatomy. These are the workhorse techniques for the majority of cases. Balloon dilation aims to identify and dilate the natural frontal outflow tract, while preserving the entirety of the mucosa and bony architecture. The Draf IIa technique involves systematic clearance of the frontal recess partitions and creation of a neo-recess that spans from the skull base to the frontal beak (posterior-anterior) and lamina papyracea to middle turbinate (lateral-medial). In a Grade 4 procedure, the bony frontal beak is drilled to enlarge the frontal ostium.

Extended endoscopic approaches (Draf IIb, III) are considered in patients with more severe inflammatory disease, complex pathology (e.g., neoplasm, mucocele, osteitis), or significant potential for postoperative stenosis. The Draf IIb (Grade 5) procedure involves clearance of the anterior head of the middle turbinate and the floor of the frontal sinus medially to the level of the nasal septum. This maneuver provides additional access to the frontal sinus and a wider recess postoperatively compared to a Draf IIa, which can be beneficial for surveillance and administration of topical therapies. The Draf III (Grade 6) procedure involves bilateral IIb procedures and clearance of the intervening portion of the nasal septum and frontal sinus floor, essentially creating a single large, common cavity. The IIb and III procedures have increased the range of sinus pathologies amenable to an endoscopic surgery. Open approaches such as the osteoplastic flap have become less commonly used but still have an important role for advanced disease or select tumors. The obliteration and cranialization techniques are indicated in patients with non-salvageable frontal sinus patency and functionality. Finally, hybrid endoscopic and open approaches such a trephination can be used to assist with difficult to reach areas, including the far lateral aspect of the frontal sinus.

Several factors related to the safe performance of surgery have been identified. Injury to the orbit, skull base, anterior ethmoidal artery, and olfactory neuroepithelium are all known potential complications. Mitigating these risks requires preservation of hemostasis and a clear surgical view, mucosal sparing technique, and the ability to translate the preoperative CT scan to a three-dimensional visual model of the frontal recess cells. Mucosal preservation and limiting exposed bony surfaces are critical to limit the risk of ostial stenosis. From an individual surgeon learning curve, the ability to perform the more advanced procedures is based on a graded, step-wise mastery of safely identifying the frontal recess, then progressing to more difficult approaches for patients with severe disease or complex anatomy. ■

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Our clinic is located in a new state-of-the-art facility and provides comprehensive pediatric and adult ENT care with in-office CT scanner, Allergy, and Audiology/hearing aid services.

Salem is a growing community with numerous local wineries and breweries, excellent restaurants, and abundant recreational opportunities with close proximity to the coast, mountain skiing, and lakes and rivers. Come join a practice that values work-life balance in the beautiful Pacific Northwest.

**Requirements:**
- MD/DO degree, Board certified or Board eligible
- Eligible for Oregon licensure

**Practice Details:**
- Competitive compensation and benefits
- Early partnership track
- Light call
- Flexible work schedule

**Please contact or send CV to:**
Elaine Steiner, Practice Manager
Email: esteiner@entnorthwest.com
Ph: 503-980-1950

THE OHIO STATE UNIVERSITY
WEXNER MEDICAL CENTER

## Department of Otolaryngology-Head and Neck Surgery
## Come Grow with Us!

The Department of Otolaryngology at The Ohio State University Wexner Medical Center is experiencing tremendous growth and offering multiple opportunities to join one of the top ranked departments in the country. Applicants must demonstrate excellence in patient care, research, teaching and leadership. Current openings are:

- **General ENT:** The medical center is currently opening multiple state of the art ambulatory clinic locations throughout the greater Columbus area. This is a great opportunity to kick-start your practice. The division currently consists of two general otolaryngologists and two nurse practitioners.

- **Otologist/Neurotologist**: Seeking an academically productive Otologist/Neurotologist for a clinician or clinician/scientist position. Applicants must be board certified/board eligible in otology/neurotology and fellowship trained. The division has nine full-time clinical and research faculty, several research scientists, a robust audiology division, and a vestibular program.

- **Rhinology Division Director:** Seeking an academically productive Rhinologist for the position of division director. Applicants must be board certified/board eligible in rhinology and fellowship trained. A history of research funding is desirable, but not required. Collaboration with department leadership to create a vision for the future of the program is a high priority. The ideal applicants will be highly motivated to set up a successful clinical or basic research effort, work well independently, and be funded or on track to submit for NIH or equivalent funding. There are currently two full-time clinical faculty and a dedicated full-time research faculty member.

Located in the heart of Ohio, Columbus is the fastest growing city in the Midwest and offers a population of over 1.5 million people. Voted as one of the most-livable cities in the USA, Columbus has excellent cultural, sporting, and family activities.

To build a diverse and inclusive workforce, all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability status or protected veteran status. The Ohio State University Wexner Medical Center is an Equal Opportunity/Affirmative Action employer.

Send letter of interest and CV to:
James Rocco, MD, PhD, Professor and Chair
The Ohio State University Department of Otolaryngology
915 Olentangy River Rd. Suite 4000
Columbus, Ohio 43212

Contact the Department Administrator via
Email: mark.inman@osumc.edu
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