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Bottleneck in the OR

HOW ANESTHESIOLOGIST SHORTAGES THREATEN SURGICAL CARE

By **Mary Beth Nierengarten**

Numerous studies have documented the shortage of anesthesiologists and its effect on surgical specialties. The shortage is largely a result of the imbalance of supply and demand, which, as described in a 2024 study by the American Society of Anesthesiologists (ASA), is not unique to anesthesiology, but cuts across all areas of healthcare (*Anesthesiology*. doi.org/10.1097/aln.0000000000005052). As in other areas of healthcare, the COVID-19 pandemic further exacerbated the already growing healthcare staffing shortages and significantly affected the shortage of anesthesia providers. The 2024 ASA report, which is based on two workforce summits held in 2022 and 2023, describes how the surge in demand for surgical procedures post COVID-19 put additional stress on an anesthesiology workforce that, before the pandemic, was already feeling a slight shortage. A 35% anesthesiology workforce shortage reported by facilities before the pandemic became a 78% shortage two years after the pandemic.

The ASA report also describes trends affecting the anesthesiology workforce that will impact surgical specialties, including the need for increased anesthesiology providers for an aging population with increased medical morbidities that require a disproportionate number of surgeries and procedures; the evolution of procedures from hospital-based to outpatient, which will result in an increased demand for non-operating room anesthesia care; an aging workforce, with 57% of anesthesiologists older than 55 years of age; and

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the number of anesthesia providers estimated to have left the workforce in 2022 (2,500 anesthesiologists, 2,200 nurse anesthetists, and 65 anesthesiologist assistants).

Although training programs for anesthesiology providers who have entered the workforce since 2023 (1,900 anesthesiologists, 3,000 nurse anesthesiologists, and 300 anesthesiologist assistants) have made up for some of this deficit, it is estimated that inefficiencies in scheduling will continue to put a strain on anesthesiology providers as the number of procedures, and the increased complexity of those procedures, only continue to grow.

Along with the pandemic, other factors continue to

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Onboarding and Working with APPs

Exploring the process, challenges, and benefits

By **Katie Robinson**

Advanced practice providers (APPs), such as nurse practitioners (NPs) and physician assistants (PAs), play an essential role in delivering timely, high-quality otolaryngology care. Yet the onboarding process for APPs and the scope of their responsibilities can look very different across subspecialties and between academic and private practice settings.

"APPs are an essential part of providing high-quality care and meeting growing demands for outpatient and inpatient timely care," said Ron B. Mitchell, MD, professor of otolaryngology and pediatrics and chief of pediatric otolaryngology in the department of otolaryngology–head and neck surgery at UT Southwestern Medical Center in Dallas. Dr. Mitchell, who has been working with APPs since 2000, added that "we currently have more APPs than physicians."

"APPs independently see new and follow-up patients in clinic, including multidisciplinary clinics, and manage

CONTINUED ON **PAGE 16**

TEZSPIRE is indicated for the add-on maintenance treatment of adult and pediatric patients aged 12 years and older with inadequately controlled rhinosinusitis with nasal polyps (CRSwNP).

TEZSPIRE is indicated for the add-on maintenance treatment of adult and pediatric patients aged 12 years and older with severe asthma. TEZSPIRE is not indicated for the relief of acute bronchospasm or status asthmaticus.

Proven in SEVERE ASTHMA and NOW APPROVED for CRSwNP[1]

IT'S TIME TO START HIGHER WITH TEZSPIRE[1,2]

FIRST & ONLY *biologic to target TSLP and help address epithelial-driven inflammation across the upper & lower airway*[1,2]

The mechanism of action of TEZSPIRE has not been definitively established.

TSLP=thymic stromal lymphopoietin.

IMPORTANT SAFETY INFORMATION

CONTRAINDICATIONS

Known hypersensitivity to tezepelumab-ekko or excipients.

WARNINGS AND PRECAUTIONS

Hypersensitivity Reactions

Hypersensitivity reactions were observed in the clinical trials (eg, rash and allergic conjunctivitis) following the administration of TEZSPIRE. Postmarketing cases of anaphylaxis have been reported. These reactions can occur within hours of administration, but in some instances have a delayed onset (i.e., days). In the event of a hypersensitivity reaction, consider the benefits and risks for the individual patient to determine whether to continue or discontinue treatment with TEZSPIRE.

Acute Asthma Symptoms or Deteriorating Disease

TEZSPIRE should not be used to treat acute asthma symptoms, acute exacerbations, acute bronchospasm, or status asthmaticus.

Abrupt Reduction of Corticosteroid Dosage

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

Parasitic (Helminth) Infection

It is unknown if TEZSPIRE will influence a patient's response against helminth infections. Treat patients with pre-existing helminth infections before initiating therapy with TEZSPIRE. If patients become infected while receiving TEZSPIRE and do not respond to anti-helminth treatment, discontinue TEZSPIRE until infection resolves.

Live Attenuated Vaccines

The concomitant use of TEZSPIRE and live attenuated vaccines has not been evaluated. The use of live attenuated vaccines should be avoided in patients receiving TEZSPIRE.

Please see Brief Summary of full Prescribing Information, including Patient Information and Instructions for Use.

You are encouraged to report the negative side effects of prescription drugs to the FDA. Visit www.FDA.gov/medwatch or call 1-800-FDA-1088.

TEZSPIRE demonstrated statistically significant improvements across

CO-PRIMARY ENDPOINTS	NPS: -2.01 IMPROVEMENT	NCS: -0.95 IMPROVEMENT
	from baseline vs placebo at Week 52[1]*	from baseline vs placebo at Week 52[1†]

Improvements in NCS were observed as early as the first assessment at Week 2.
LS mean difference in the TEZSPIRE group vs placebo was -0.19 (95% CI: -0.27 to -0.10).[3,4]

Results are descriptive only. Definitive conclusions cannot be made.

LASTING RELIEF

in NCS through Week 52[1†]

Improvements were seen from the first dose—observed at Week 2[3,4‡]

Week 2 results are descriptive only. Definitive conclusions cannot be made.

IMPROVED QUALITY OF LIFE

45–POINT REDUCTION in SNOT-22 total score

from baseline at Week 52[4§]

SNOT-22 total scores should be interpreted in the context that they may include irrelevant items or items not well understood by patients. There may also be redundancies in SNOT-22 items and WAYPOINT endpoints.

LASTING CONTROL

92% REDUCTION in need for SCS use and/or surgery

over 52 weeks vs placebo
(HR: 0.08, 95% CI: 0.03-0.17; *P*<0.0001)[1,5‖¶#]

Data from the WAYPOINT trial.
*TEZSPIRE baseline 6.1, LS mean change -2.47; vs placebo baseline 6.1, LS mean change -0.47; LS mean difference vs placebo -2.01 (95% CI: -2.33 to -1.68); *P*<0.0001.[1,4¶]
†TEZSPIRE baseline 2.59, LS mean change -1.76; vs placebo baseline 2.55, LS mean change -0.81; LS mean difference vs placebo -0.95 (95% CI: -1.12 to -0.78); *P*<0.0001.[1,4¶]
‡TEZSPIRE significantly improved the biweekly mean NCS at Week 52 vs placebo.[1,4] Improvements were observed from Week 2, the first predefined post-treatment assessment. TEZSPIRE baseline 2.59, LS mean change -0.38; vs placebo baseline 2.55, LS mean change -0.19; LS mean difference vs placebo -0.19 (95% CI: -0.27 to -0.10) and from Day 6, the post hoc analysis of daily scores.[3,4]
§TEZSPIRE baseline 68.2, LS mean change -45.23; vs placebo baseline 69.2, LS mean change -18.89; LS mean difference vs placebo -26.54 (95% CI: -31.58 to -21.50).[4]
‖Reduction in need for SCS use and/or surgery. Number of events (Kaplan-Meier estimate): TEZSPIRE 6 (5.7%) vs placebo 60 (30.6%).[5]
¶All *P* values are reported as unadjusted.[4,5]
#Denotes statistically significant level under multiple testing strategy.[5]

CI=confidence interval; HR=hazard ratio; LS=least-squares; NCS=nasal congestion score; NPS=nasal polyp score; SCS=systemic corticosteroid; SNOT-22=Sino-Nasal Outcome Test -22.

SCAN TO LEARN MORE *about how TEZSPIRE may help your patients*

TEZSPIRE® (tezepelumab-ekko) Subcutaneous Injection 210 mg

IMPORTANT SAFETY INFORMATION (cont'd)

ADVERSE REACTIONS

The most common adverse reactions (incidence ≥ 3%) are:

- **Asthma:** pharyngitis, arthralgia, and back pain.
- **Chronic rhinosinusitis with nasal polyps:** nasopharyngitis, upper respiratory tract infection, epistaxis, pharyngitis, back pain, influenza, injection site reaction and arthralgia

USE IN SPECIFIC POPULATIONS

There are no available data on TEZSPIRE use in pregnant women to evaluate for any drug-associated risk of major birth defects, miscarriage, or other adverse maternal or fetal outcomes. Placental transfer of monoclonal antibodies such as tezepelumab-ekko is greater during the third trimester of pregnancy; therefore, potential effects on a fetus are likely to be greater during the third trimester of pregnancy.

INDICATION

TEZSPIRE is indicated for:

- the add-on maintenance treatment of adult and pediatric patients aged 12 years and older with severe asthma. TEZSPIRE is not indicated for the relief of acute bronchospasm or status asthmaticus
- the add-on maintenance treatment of adult and pediatric patients aged 12 years and older with inadequately controlled chronic rhinosinusitis with nasal polyps (CRSwNP)

References: 1. TEZSPIRE® (tezepelumab-ekko) [package insert]. Thousand Oaks, CA: Amgen Inc.; and Wilmington, DE: AstraZeneca Pharmaceuticals LP; October 2025. **2.** Menzies-Gow A, Wechsler ME, Brightling CE. Unmet need in severe, uncontrolled asthma: can anti-TSLP therapy with tezepelumab provide a valuable new treatment option? *Respir Res*. 2020;21(1):268. **3.** Pfaar O, Han JK, Desrosiers M, et al. Onset of action of tezepelumab in adults with severe, uncontrolled chronic rhinosinusitis with nasal polyps in the phase 3 WAYPOINT study. Presented at: European Rhinologic Society (ERS) 2025 Congress; June 22-25, 2025; Budapest, Hungary. **4.** Data on File. REF-292218, AstraZeneca Pharmaceuticals LP. **5.** Data on File. REF-287771, AstraZeneca Pharmaceuticals LP.

AMGEN AstraZeneca This product information is intended for US Healthcare Professionals only.

By **Pinky Sharma**

RHINOLOGY

Randomized Trials Comparing Inferior Turbinoplasty Techniques for Nasal Obstruction

CLINICAL QUESTION
Which inferior turbinoplasty techniques provide the most durable improvement in nasal obstruction symptoms over long-term follow-up?

BOTTOM LINE
Across four randomized trials including 2,874 patients, tissue-removing and tissue-lateralizing techniques—such as microdebrider-assisted turbinoplasty, submucosal resection, and outfracturing—produced the most durable improvement in nasal obstruction over one to three years. Thermal techniques (radiofrequency ablation, electrocautery, laser, coblation) showed early benefit but tended to worsen with time.

BACKGROUND: Inferior turbinate

hypertrophy is a common cause of chronic nasal obstruction. Numerous techniques exist, broadly grouped into tissue-removing, tissue-lateralizing, and thermal ablation procedures. Although many studies report improvement, long-term durability varies. This meta-analysis evaluates which modalities sustain benefit over extended follow-up.

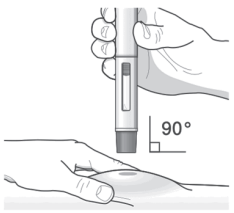
STUDY DESIGN: Systematic review and meta-analysis of randomized or randomized controlled trials evaluating inferior turbinoplasty as the sole surgical intervention, with post-operative follow-up ≥12 months. Visual analog scale (VAS) scores for nasal obstruction were standardized and pooled using random effects models.

SETTING: International literature review of randomized surgical trials across multiple countries and clinical settings

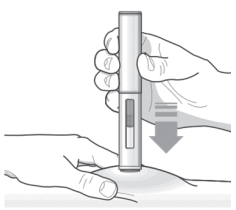
SYNOPSIS: Four randomized trials involving 2,874 adults met the inclusion criteria. All compared different inferior turbinate surgical approaches using nasal obstruction VAS as the primary outcome. Tissue-removing and lateralizing techniques demonstrated the most durable symptom relief. Microdebrider-assisted turbinoplasty, submucosal resection, and outfracturing achieved approximately 75%-85% improvement in nasal obstruction that remained stable up to three years. These procedures consistently outperformed thermal options at all time points. Thermal techniques—including radiofrequency ablation, coblation, laser ablation, and electrocautery—showed moderate initial improvement during the first months after surgery but exhibited progressive loss of benefit over longer follow-up. The meta-analysis demonstrated statistically significant improvement with radiofrequency ablation, though absolute gains were smaller than those seen with tissue-removing approaches. The authors noted heterogeneity in surgical technique, energy sources, and patient selection, which may partially account for variable outcomes, particularly in microdebrider studies. Nonetheless, the trend across randomized data strongly favored interventions that reduce turbinate volume mechanically or laterally rather than through thermal ablation alone. Limitations of this study included the small number of randomized trials, lack of standardized definitions for turbinate hypertrophy, and limited reporting of objective measures such as acoustic rhinometry.

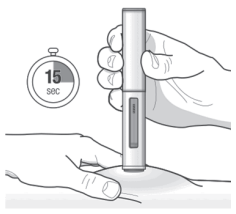
CITATION: Camacho M, et al. Randomized trials comparing inferior turbinoplasty techniques for nasal obstruction: a meta-analysis. *Otolaryngol Head Neck Surg.* 2025;173:546-551. doi: 10.1002/ohn.1269.

COMMENT: Numerous methods exist to address the inferior turbinate and its role in nasal obstructions. This meta-analysis includes randomized trials to

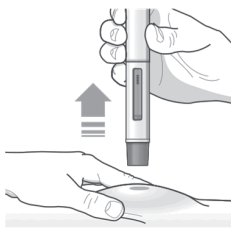
4. 

Position the pre-filled pen. Place the orange needle guard flat against the skin (90-degree angle). Make sure you can see the viewing window.

5. 
Press down firmly until you cannot see the orange needle guard. You will hear the first 'click', this tells you the injection has started. The orange plunger will move down in the viewing window during the injection.

6. 

Hold down firmly for about 15 seconds. You will hear a second 'click', this tells you the injection has finished. The orange plunger will fill the viewing window.

7. 
After you have completed the injection, lift the pre-filled pen straight up. The orange needle guard will slide down and lock into place over the needle.

8. Discard the used pre-filled pen into a sharps container.

CONTRAINDICATIONS

TEZSPIRE is contraindicated in patients who have known hypersensitivity to tezepelumab-ekko or any of its excipients *[see Warnings and Precautions (5.1) in the full Prescribing Information]*.

WARNINGS AND PRECAUTIONS

Hypersensitivity Reactions

Hypersensitivity reactions were observed in the clinical trials (e.g., rash and allergic conjunctivitis) following the administration of TEZSPIRE. Postmarketing cases of anaphylaxis have also been reported *[see Contraindications (4) and Adverse Reactions (6.2) in the full Prescribing Information]*. These reactions can occur within hours of administration, but in some instances have a delayed onset (i.e., days). In the event of a hypersensitivity reaction, consider the benefits and risks for the individual patient to determine whether to continue or discontinue treatment with TEZSPIRE.

Acute Asthma Symptoms or Deteriorating Disease

TEZSPIRE should not be used to treat acute asthma symptoms or acute exacerbations. Do not use TEZSPIRE to treat acute bronchospasm or status asthmaticus. Patients should seek medical advice if their asthma remains uncontrolled or worsens after initiation of treatment with TEZSPIRE.

Risk Associated with Abrupt Reduction of Corticosteroid Dosage

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

Parasitic (Helminth) Infection

Thymic stromal lymphopoietin (TSLP) may be involved in the immunological response to some helminth infections. Patients with known helminth infections were excluded from participation in clinical trials. It is unknown if TEZSPIRE will influence a patient's response against helminth infections.

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

Live Attenuated Vaccines

The concomitant use of TEZSPIRE and live attenuated vaccines has not been evaluated. The use of live attenuated vaccines should be avoided in patients receiving TEZSPIRE.

ADVERSE REACTIONS

The following clinically significant adverse reactions are described elsewhere in the labeling:

- Hypersensitivity Reactions *[see Warnings and Precautions (5.1) in the full Prescribing Information]*

Clinical Trials Experience

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

Adverse Reactions in Adult and Pediatric Patients 12 Years of Age and Older with Asthma

The safety of TEZSPIRE in asthma was based on the pooled safety population from PATHWAY and NAVIGATOR, which consists of 665 adult and pediatric patients 12 years of age and older with severe asthma who received at least one dose of TEZSPIRE 210 mg subcutaneously once every 4 weeks. The two placebo-controlled clinical trials were of 52 weeks duration. In addition, a similar safety profile was seen in a trial that enrolled 150 adult patients with severe asthma who required treatment with daily oral corticosteroids *[see Clinical Studies (14.1) in the full Prescribing Information]*.

Adverse reactions that occurred at an incidence greater than or equal to 3% and more common than in the placebo group from the pooled safety population (PATHWAY and NAVIGATOR) are shown in Table 1.

Table 1 Adverse Reactions with TEZSPIRE with Incidence Greater than or Equal to 3% and More Common than Placebo in Patients with Severe Asthma in the Pooled Safety Population (PATHWAY and NAVIGATOR)

Adverse Reaction	TEZSPIRE N=665 %	Placebo N=669 %
Pharyngitis*	4	3
Arthralgia	4	3
Back pain	4	3

*Pharyngitis (including Pharyngitis, Pharyngitis bacterial, Pharyngitis streptococcal and Viral pharyngitis)

Specific Adverse Reactions

Cardiovascular Events

In a randomized, double-blind, long term extension trial, patients 12 years and older with severe asthma from trials NAVIGATOR and the additional trial *[see Clinical Studies (14.1) in the full Prescribing Information]* received TEZSPIRE 210 mg subcutaneously every 4 weeks or placebo for up to 104 weeks. In the trial, the incidence rates (IR) per 100 patient-years (PY) for serious cardiac adverse events in patients treated with TEZSPIRE or placebo were 1.08 and 0.21, respectively, with an incidence rate difference (IRD) of 0.88 (95% CI: 0.24, 1.53). The types of serious cardiac adverse events were heterogeneous. In the trial, the IR per 100 PY for adjudicated major adverse cardiovascular events (MACE, defined as cardiovascular deaths, non-fatal myocardial infarctions, and non-fatal strokes) in patients treated with TEZSPIRE or placebo were 0.60 and 0.42, respectively, with an IRD of 0.18 (95% CI: -0.51, 0.75).

Injection Site Reactions

In the pooled safety population (PATHWAY and NAVIGATOR), in which TEZSPIRE or placebo was administered using the vial by a healthcare provider, injection site reactions (e.g., injection site erythema, injection site swelling, injection site pain) occurred at a rate of 3.3% in patients treated with TEZSPIRE compared with 2.7% in patients treated with placebo.

In an open-label trial of 216 patients with asthma in which TEZSPIRE was administered by healthcare providers and patients or caregivers using either the pre-filled pen or pre-filled syringe, injection site reactions (e.g., injection site erythema, injection site swelling, injection site pain) were observed in 5.7% patients using the pre-filled pen and 0% using the pre-filled syringe. However, the trial was not designed to compare injection site reactions between patients who received TEZSPIRE by the pre-filled pen versus pre-filled syringe.

Adverse Reactions in Adult Patients with Chronic Rhinosinusitis with Nasal Polyps

The safety of TEZSPIRE in CRSwNP was based on WAYPOINT, a randomized, double-blind, parallel group, multicenter, placebo-controlled trial of 52 weeks duration, which consisted of 203 adult patients aged 18 years and older on standard of care treatment for CRSwNP who received at least one dose of TEZSPIRE 210 mg subcutaneously once every 4 weeks *[see Clinical Studies (14.2) in the full Prescribing Information]*.

Adverse reactions that occurred at an incidence greater than or equal to 3% and more common than in the placebo group from the safety population (WAYPOINT) are shown in Table 2.

evaluate whether the selection of technique impacts long-term outcomes. While the analysis has limitations regarding the number of included studies and variable inclusion criteria, it does find that techniques that involve tissue removal, such as microdebrider and submucosal resection, appear to offer superior long-term outcomes compared with tissue-preserving techniques. As less invasive procedures are increasingly offered in the clinic, it will be important to understand any differences in efficacy when counseling patients on their options. Further research will be needed to clarify these differences.—Ashoke Khanwalkar, MD

FACIAL PLASTIC/RECONSTRUCTIVE

Evaluating Treatment Patterns in Bell's Palsy Using Nationwide Employer-Sponsored Healthcare Claims

CLINICAL QUESTION

How closely do real-world prescribing patterns for Bell's palsy align with the American Academy of Otolaryngology–Head and Neck Surgery (AAO-HNS) guideline-recommended steroid and steroid–antiviral therapy?

BOTTOM LINE

Across a national cohort of 66,708 adults with Bell's palsy, 51.9% received guideline-recommended steroid therapy within 72 hours, while 44.7% received no medication at all. Antiviral monotherapy, discouraged by AAO-HNS guidelines, was used in 3.4% of cases. Substantial demographic and regional variation were observed in treatment selection.

BACKGROUND: High-dose corticosteroids initiated within 72 hours remain the standard of care for Bell's palsy, with antivirals recommended only as adjuncts. Real-world prescribing practices vary widely across settings, and the relative use of steroids versus combination therapy is not well characterized. This study evaluated national treatment patterns to better understand adherence to guideline recommendations.

STUDY DESIGN: Retrospective cohort analysis of MarketScan commercial and Medicare supplemental claims (2013-2020). Adults with idiopathic Bell's palsy and one year or more of continuous enrollment were included. Treatment categories included steroid monotherapy, steroid–antiviral combination therapy, antiviral monotherapy, or no treatment.

SETTING: Nationwide, employer-sponsored outpatient insurance claims encompassing more than 100 million covered individuals

SYNOPSIS: The study included 66,708 adults diagnosed with Bell's palsy. Overall, 44.7% received no pharmacologic therapy. Among treated patients, 34.1% received combination steroid–antiviral therapy, 17.8% received steroid monotherapy, and 3.4% received antivirals alone. Guideline-concordant steroid therapy within 72 hours was delivered in 51.9% of all cases, with 94.6% of treated patients initiating steroids on the index date.

Treatment selection varied significantly by demographics, region, and clinical presentation. Men had higher odds of receiving combination therapy, whereas women and older adults were more likely to receive steroid monotherapy. Patients in the South and West were more likely to receive combination therapy than those in the Northeast. Certain presenting symptoms influenced prescribing: Ear pain was associated with combination therapy, whereas hearing loss and loss of lacrimation were associated with monotherapy. The authors emphasize that nearly half of patients received no treatment—possibly reflecting mild presentations or spontaneous recovery, but also variability in access to care, point of presentation, and awareness of guidelines. Limitations include the lack of clinical severity measures, incomplete capture of prescriptions outside insurance, and the inability to track recovery.

Despite these constraints, the findings demonstrate persistent inconsistencies in real-world Bell's palsy management and widespread underuse of recommended steroid therapy.

CITATION: Ratna S, et al. Evaluating treatment patterns in Bell's palsy using nationwide employer-sponsored healthcare claims. *Laryngoscope*. 2025;135:2756-2762. doi: 10.1002/lary.32115.

COMMENT: This research demonstrates that only half of patients with acute Bell's palsy in the U.S. receive recommended treatment with high-dose steroids, with or without an antiviral. This statistic is concerning since starting high-dose steroids within 72 hours of symptom onset improves chances that patients make a complete recovery.—Matthew Q. Miller, MD ▲

> By **Robin W. Lindsay, MD, MBA**

Why Collaboration Is the Missing Ingredient in Healthcare GenAI

In August 2025, MIT Media Lab's Project NANDA released a striking finding: 95% of investments in generative AI (GenAI) produced zero return. Faced with this data, healthcare leaders have a choice. They can interpret it as proof that GenAI is overhyped and retreat from innovation altogether, or they can recognize it as a warning and choose a different path forward.

The problem is not GenAI itself. The problem is how it is being pursued.

In their *Harvard Business Review* article, "Beware of the AI Experimentation Trap," Nathan Furr and Andrew Shipilov echo the warning raised by MIT researchers, noting that today's GenAI failures closely mirror the missteps of the digital transformation era a decade ago (*Harvard Business Review*. https://tinyurl.com/46sucdb7). Then, as now, organizations allowed thousands of disconnected ideas to bloom, hoping that one might become a unicorn. The authors argue instead for focused, well-funded initiatives grounded in real user needs and explicit pathways to return on investment (ROI). MIT's research reinforces this conclusion, showing that the 5% of GenAI efforts that succeed follow a remarkably consistent playbook. They do not chase flashy demos or generic tools; rather, they build systems that learn, admit uncertainty, and integrate deeply into existing workflows. In healthcare—where complexity is the rule rather than the exception—this kind of disciplined focus is not optional; it is essential.

Now is the time to apply our subject matter expertise and ask better questions: What parts of our jobs create the most frustration, friction, and inefficiency? How can AI meaningfully reduce that burden? How can it better serve patients, clinicians, faculty, and staff—while also solving real business problems for the institution?

Answering these questions requires acknowledging a hard truth: AI is not magic. No single group—clinicians, administrators, technologists, or vendors—has all the answers. How GenAI will ultimately improve patient care and support healthcare teams can only be learned through iterative experimentation rooted in collaboration, with continuous input from patients, providers, administrators, and technical experts.

Yet too many efforts rely on off-the-shelf tools or flashy demonstrations that promise transformation but cannot scale. MIT's findings show that leaders often pursue cosmetic applications—particularly in marketing—while avoiding the harder work of reimagining core clinical and operational workflows. Adding "AI" to broken processes does not create value; it simply makes inefficiency more expensive.

True ROI emerges when institutions are willing to lean into friction rather than avoid it. Research highlighted in *Fortune* shows that while 95% of GenAI pilots fail because they rely on generic, brittle tools, the 5% that succeed embed AI deeply into high-value workflows, build systems that learn from correction, and design pilots with scaling in mind (*Fortune*. https://tinyurl.com/3ak2eu7x). These efforts demand collaboration—across disciplines, across hierarchies, and often across organizations.

Eugene Woods, CEO of Advocate Health, describes AI as a strategic imperative that requires deep partnerships, not transactional vendor relationships (*Harvard Business Review*. https://tinyurl.com/2p9mfshf.) This reflects what Frans Johansson calls the Medici Effect: Breakthroughs occur at the intersection of diverse expertise. Advocate Health's emphasis on co-creation, rapid-cycle decision-making teams, and direct access to senior leadership illustrates how collaboration turns experimentation into impact.

Healthcare does not need fewer AI ideas. It needs shared ownership, honest dialogue, and collective problem-solving. Collaboration is not a soft skill in GenAI—it is the infrastructure. Without it, GenAI will continue to underdeliver. With it, healthcare can finally move from pilots to progress, and from experimentation to real, durable value. ▲

—Robin

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By **Donna Petrozzello**

HEAD AND NECK

Precision Therapeutic Technique Helps Physicians Kill Cancer Cells

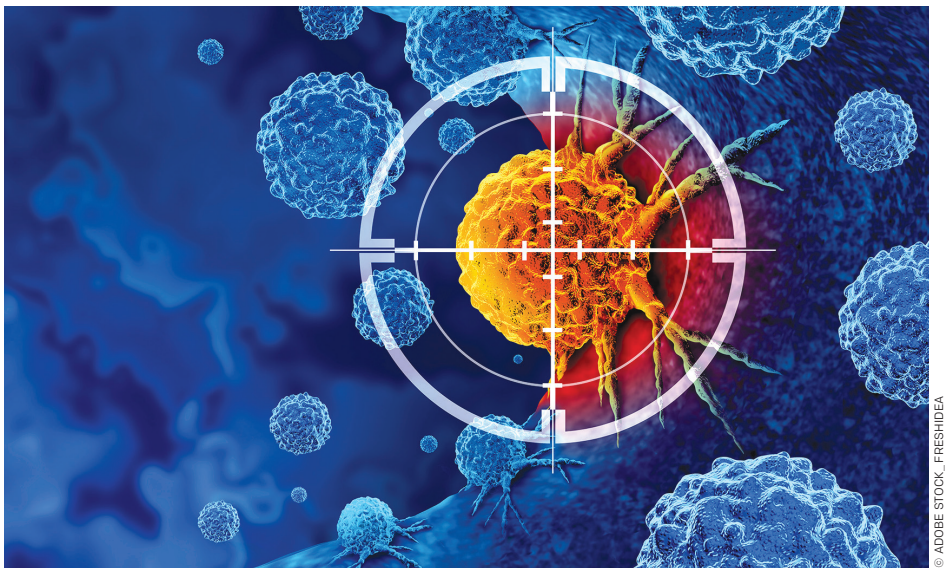
Scientists have found a pathway for targeting and selectively killing individual cancer cells in patients with head and neck squamous cell carcinomas.

Using a technique called single-cell ICP-MS, a team of researchers at the University of Birmingham in the UK devised a method for seeing when standard treatments for head and neck cancers enter and exit tumor cells. From there, the researchers used, for the first time, a groundbreaking therapy known as boron neutron capture therapy (BNCT) to zero in on killing cancer cells.

The groundbreaking technique was outlined in the team's research and published in the *Journal of Analytical Atomic Spectrometry*.

As described, BNCT has patients take drugs that contain boron, allowing it to accumulate in high concentrations in tumors, and then undergo radiation on the tumor using neutrons that interact with boron, selectively killing individual cancer cells in the process. Until recently, scientists could only measure boron levels across thousands of cells.

"Until now, it's only been possible to measure average boron uptake in hundreds of thousands of cells, which masks important differences between individual cells," said



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James Coverdale, MD, from the School of Pharmacy at the University of Birmingham. "Our single-cell approach reveals this variability, which is critical in a tumor setting where heterogeneity often determines whether treatment works or fails."

The researchers note that their study results provide the first direct evidence of how much boron is present in tumor cells and how long it stays there, which could help clinicians optimize radiation treatment for the most effective results.

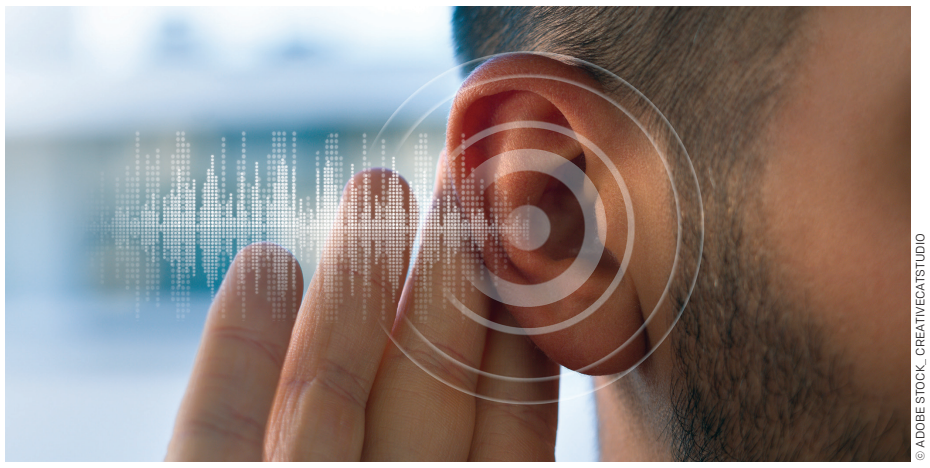
Researchers are hopeful that these advances will help them begin to understand how to most effectively deliver BNCT as a precision treatment for patients with head and neck cancers. ▲

OTOLOGY

Novel Therapy for Brain-Based Hearing Loss Advances in Clinical Trials

Described as a first-of-its-kind treatment, a short-term combination therapy designed to improve hearing loss that is based in the brain, not the ears, has moved into Phase II of clinical trial testing.

Developed by researchers at the University of Colorado Anschutz, the therapy aims to relieve hearing loss conditions that make it difficult to isolate a sound of



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interest from background noises, such as a friend's voice in a crowded restaurant, or hearing deficiencies associated with tinnitus. These types of conditions, note the researchers, stem from brain-based deficiencies that affect hearing but can't be helped by hearing aids. Typically, hearing aids are designed to alleviate ear-level hearing loss, CU Anschutz reported.

The proposed month-long therapy pairs a drug treatment with episodes of engineered sound to provide lasting benefit to people with age-related, brain-based hearing loss, said lead researcher Achim Klug, PhD, a professor of physiology and biophysics at CU Anschutz.

"I have studied the affected brain circuit for my entire career, initially in echolocating bats, because I found it fascinating and useful as a ticket to travel to exotic places," Dr. Klug said. "But then I realized the immense medical importance of this brain circuit in humans and decided to find out what exactly changes in aging and how we can change it back."

The researchers have estimated that approximately one-third of U.S. adults ages 40 to 65 and half of U.S. adults over age 65 experience brain-based hearing loss, "so the number of patients who could benefit from this is staggering," Dr. Klug said. The research initially was funded through a National Institute of Health grant to UC Anschutz. The treatment technology that was developed by the team has been licensed to the startup company Parley Neurotech, Inc. ▲

JANUARY POLL RESULTS

HAS EXPERIENCE AS A PATIENT INFLUENCED YOUR PROFESSIONAL DEVELOPMENT?

Yes **100%**
No **0%**

APPLICATIONS OPEN FOR RESIDENT MEMBERS OF THE *ENTtoday* EDITORIAL BOARD

ENTtoday **added two resident positions to its editorial board in 2025. The editorial board serves as a think tank for the publication, providing content ideas, editorial direction, and insight into the field from various perspectives. The position is open to any otolaryngology resident physicians who will be PGY2-4 during the July 2026-July 2026 Resident Fellow term. Editorial board members meet virtually quarterly and in person at COSM. Resident members will contribute articles to the Resident Focus column; the resident member tenures are for two years. Scan the QR code to apply; the deadline for submission is April 15, 2026.**

HEAD AND NECK

A Simple and Innovative Simulator Model for Sialendoscopy Basket Stone Retrieval Training

By **Emad Ahmed Magdy, MD, PhD, Samir Ali Elborolosy, MD, PhD, Ahmed M. Elbana, MD, MRCS,** and **Mohamed F. Fathalla, MD, PhD**

INTRODUCTION

Sialendoscopy requires the use of fine, delicate instruments and is mastered by relatively few surgeons worldwide. One of the key components that can facilitate the learning process is the use of simulator models in training courses or for self-directed practice.

Currently, pig heads are the most commonly used models for sialendoscopy training, as they allow for practice on the salivary duct papillae. These models do not provide adequate training for manipulating sialolithiasis, however, and in some countries, sanitation laws may prohibit the use of such animals for training, presenting additional ethical limitations. Human cadaveric heads are difficult to acquire, maintain, and work with, and they are expensive. Additionally, the mandible's postmortem rigor complicates dissection in both porcine and human cadavers.

To overcome these challenges, it is imperative to develop a low-cost, easily constructed, and reproducible training model that can be applied to any setup (laboratory or operative) and that complies with existing sanitary and ethical guidelines. Such a model could help educate and train novice practitioners, allowing them to gain proficiency in handling delicate surgical instruments before using them in real-life surgeries. In this article, we describe a simple and innovative sialendoscopy basket stone retrieval (BSR) simulator model that we developed and employed in our training courses over the past few years. Preliminary evaluation data obtained from both trainee and instructor participants are also discussed.

METHODS

Description of sialendoscopy BSR simulator

Our sialendoscopy BSR simulator was designed to mimic the real experience of grasping floating stones from the lumen of the natural major salivary gland ducts. A 1.0-mL plastic insulin syringe with a detachable needle (inner barrel diameter, 4 mm; length, 6.0 cm) is used to simulate a dilated salivary duct. The syringe needle adaptor, consisting of the plain tip of a syringe barrel (inner diameter: 2 mm; length: 8 mm), accommodates the outer diameter of the sialendoscope and mimics the narrow entrance to the salivary papilla after dilatation. The syringe barrel is uniformly wrapped with red-colored plastic adhesive tape to mimic the coloration inside the ductal system and provide lumen opacity. Dried guava fruit seeds, which imitate real sialoliths in both consistency and morphology, are inserted into the syringe lumen after filling it with saline solution, ensuring the elimination of air bubbles. The prepared insulin syringe simulator is securely fixed to a flat working table edge using an opaque, wide adhesive surgical tape, aligning the syringe tip with the table edge (Fig. 1).

The trainees worked in pairs, with one trainee passing a 1.6-mm semirigid all-in-one miniature sialendoscope with an angled tip (model 11583A; Karl Storz GmbH & Co., Tuttlingen, Germany) attached to an endoscopic camera, to visualize the floating seeds within the syringe lumen. The second trainee used various salivary stone extractor wire baskets (three, four, and six wires), developed by Karl Storz (Tuttlingen, Germany) and NCircle and NGage by Cook Medical Inc (Bloomington, Ind., USA), inside the scope's working channel to practice the refined skills needed for BSR . Other interventional sialendoscope models may be used depending on availability and preference. To enhance the realism of the training, pulsed saline injection was administered using a 10-mL syringe attached by an extension tube to the sialendoscope's irrigation channel. Trainee roles were alternated to allow practice of all required skills and to foster a harmonious training environment.

Evaluation of sialendoscopy BSR simulator

Consenting participants of the Egyptian Sialendoscopy Hands-on/Live Surgery course and the Alexandria Sialendoscopy (AlexSIAL) International Clinical/Surgical Fellowship program courses from 2023 to 2024 participated in the evaluation of the BSR simulator. These participants were all certified medical practitioners of various nationalities, subspecialties, medical qualifications, and pretraining experiences. After completing the BSR simulator training sessions, each participant answered a predesigned, anonymous web-based questionnaire within one to two weeks. The questionnaire included five questions on participant data, five questions evaluating simulator realism, and five questions assessing the usefulness of the training process. The responses were rated on a five-point Likert scale (strongly agree, agree, neutral, disagree, and strongly disagree). A footnote was added to collect personal impressions and suggestions.

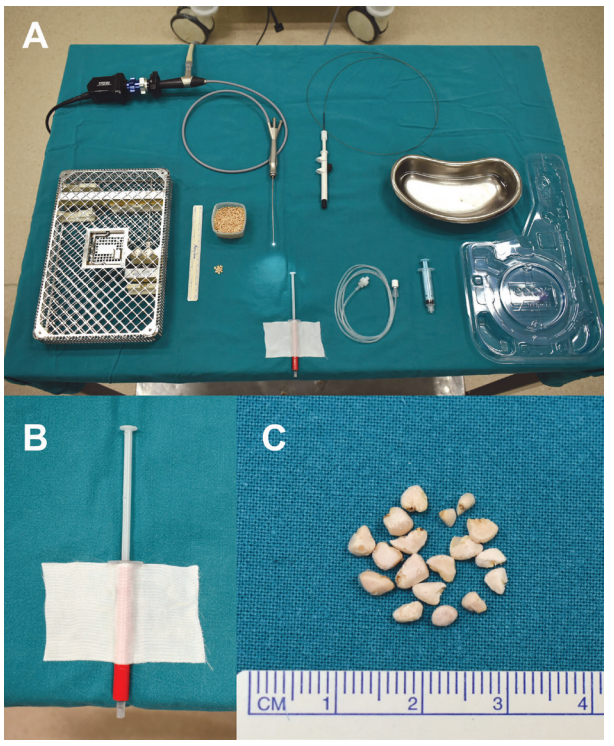

Figure 1: BSR simulator setup: (A) Components required for the simulator. (B) Insulin syringe after preparation. (C) Dried guava fruit seeds mimicking natural sialoliths.

RESULTS

All 38 consenting participants detected the dried guava seeds (imitating sialoliths) and successfully performed interventional sialendoscopy retrieval using different wire baskets. Only one untoward effect occurred in the form of one wire basket breaking during training (replaced by another), with no sialendoscope damage encountered in any training session.

Evaluation of simulator realism

Twenty-eight participants (74%) strongly agreed that the simulator setup met their training objectives, while nine (24%) agreed. Thirty-seven out of 38 participants (97%) rated the simulator model as "strongly agree" or "agree" in terms of its reproducibility (replicability) in their own training settings. Regarding the use of an insulin syringe lumen and dried guava seeds, 26 participants (68%) strongly agreed that the simulator components allowed procedural training for floating stone retrieval, and 24 participants (63%) strongly agreed that dried guava seeds mimicked real sialoliths.

Usefulness of the training process

Overall, 25 participants (66%) strongly agreed that the training improved their manual dexterity for BSR, whether as a surgeon or as an assistant. Twenty-seven participants (71%) replied "strongly agree" that the training enhanced the surgeon/assistant teamwork and facilitated role switching. Additionally, 28 participants (74%) strongly agreed that they would recommend this BSR simulator training before beginning a career in sialendoscopy. ▲

Scan the QR code to view the video of the technique described here.

THE AUTHORS PRESENT A SIMPLE AND INNOVATIVE BSR SIMULATOR MODEL. THE BSR SIMULATOR IS EVALUATED BY SIALENDOSCOPY TRAINEES TO ENSURE ITS REALISM AND EFFICIENCY.

OTOLARYNGOLOGY

High-Riding Innominate Artery: Booby Trap for ICU Tracheotomy

By **Vijay R. Ramakrishnan, MD,** and **Samuel L. Kaefer, BA**

AUTHORS DESCRIBE A CASE IN WHICH A HIGH-RIDING INNOMINATE ARTERY WAS IDENTIFIED WITHIN THE SURGICAL TRAJECTORY MOMENTS BEFORE INCISION, WHICH ULTIMATELY NECESSITATED AIRWAY SECUREMENT USING AN ALTERNATIVE LARYNGOLOGICAL PROCEDURE.

INTRODUCTION

Tracheotomy placement is an airway management procedure regularly performed by a variety of physicians, most commonly through a percutaneous route (critical care/general surgery) or open surgical approach (otolaryngology). Bedside percutaneous tracheotomy is appreciated for its convenience, quickness, and safety; however, it is not rare to encounter anatomic irregularities necessitating further imaging, a formal surgical tracheotomy, or alternative procedures.

Herein, we report a case in which formal tracheotomy was planned for long-term ventilator dependence in the setting of bilateral vocal fold paralysis. Moments before incision, a visible pulsation was noted in the lower neck. Further imaging was undertaken, which ultimately revealed a high-riding innominate artery within the surgical trajectory. This anatomical variation necessitated an alternative surgical approach for airway management, ultimately in the form of vocal fold lateralization.

The following report illustrates a cautionary tale that is of particular importance to trainees in understanding alternatives to airway management to avoid unintended major consequences.

CASE REPORT

A 73-year-old woman with a recent upper respiratory tract infection presented to the emergency department (ED) with three days of progressive dyspnea and stridor. Bedside laryngoscopy revealed bilateral vocal fold paralysis (Fig. 1). The patient decompensated in the ED, requiring subsequent intubation and transfer to the ICU, with tracheotomy placement planned for the next day for airway stabilization. Bedside clinical examination of the neck in the ICU was unremarkable, and the patient was taken to the operating room.

In the OR, following anesthesia, surgical positioning, and sterile prep, a visible pulsation was noted in the lower neck. After a discussion between the surgical team and vascular surgery, a decision was made to abort the procedure, given its non-emergent nature, and to pursue further imaging workup. A neck computed tomography (CT) revealed prominent vasculature within the surgical trajectory (Fig. 2A), with angiography confirming a high-riding innominate artery at the level of the upper tracheal rings (Fig. 2B). Vascular, cardiothoracic, and laryngology teams were formally consulted to discuss alternative approaches for airway management for the patient. Ultimately, the decision was made to avoid tracheotomy in favor of bilateral vocal fold suture lateralization performed by the laryngology team. The patient was extubated the following day without subsequent airway difficulty and was able to tolerate food while still having reasonable phonation.

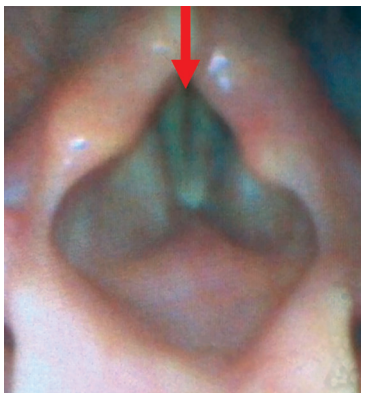

Figure 1. Vocal fold visualization as seen on bedside laryngoscopy. Arrow shows the maximal glottic opening due to bilateral vocal fold paralysis.

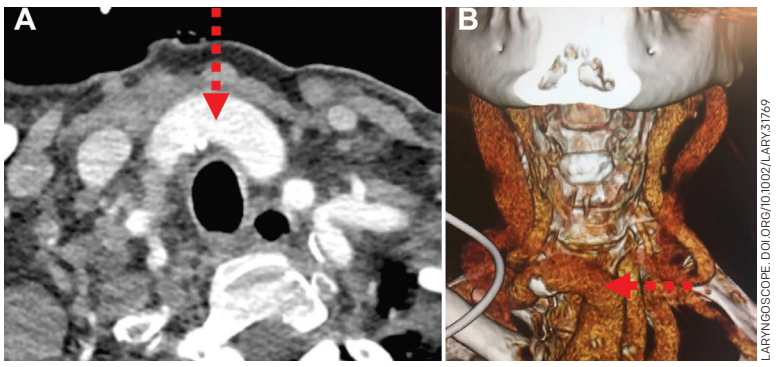

Figure 2. High-riding innominate artery. Axial CT scan of the neck with contrast demonstrating the location of the innominate artery approximately at the levels of the first and second tracheal rings (A) Three-dimensional vascular reconstruction based on CT angiography. (B) Arrows show the innominate artery obscuring the trajectory for tracheotomy placement.

LARYNGOSCOPE. DOI.ORG/10.1002/LARY.31769

CONCLUSION

Regardless of tracheotomy placement route (percutaneous or surgical), anticipation of anatomic irregularities is essential for patient safety and procedure success. A patient-centered approach that involves discussions with other surgical fields is imperative in determining the best approach for difficult airway securement.

Scan the QR code to view the video of the technique described here.

TRIO BEST PRACTICE

TRIO Best Practice articles are brief, structured reviews designed to provide the busy clinician with a handy outline and reference for day-to-day clinical decision making. The *ENTtoday* summaries below include the Background and Best Practice sections of the original article. To view the complete *Laryngoscope* articles free of charge, visit Laryngoscope.com.

OTOLARYNGOLOGY

What Is the Optimal Timing for Elective Otolaryngologic Surgery After Stroke?

By **Jordan Rubenstein, BA, Isaac L. Alter, AB,** and **Anil K. Lalwani, MD**

BACKGROUND

Patients undergoing elective otolaryngologic surgery may have a recent history of stroke. The optimal timing for elective surgery after a stroke has been the subject of significant debate. The primary concern in scheduling elective surgery after a stroke, particularly in the early months post-stroke, is the elevated risk of recurrent ischemic stroke, major adverse cardiac events, and mortality. As the population ages and stroke rates rise, this question becomes increasingly relevant in clinical practice. In this Triological Society Best Practice, we explore whether, and how long, elective otolaryngologic surgery should be delayed following stroke based on a larger selection of literature exploring this question in the broader category of noncardiac elective surgery.

BEST PRACTICE

The preponderance of evidence suggests delaying elective surgery in otolaryngology following a stroke for six to 14 months depending on patient factors, the complexity of the surgery, and urgency. While the highest risks are concentrated in the first three months, it appears that risks continue to decline significantly through the first year post-stroke. For high-risk patients or those undergoing complex procedures, a longer delay of nine to 14 months is advisable. Importantly, individualized assessments remain critical to balance the risks of delaying otolaryngologic surgery with the benefits of addressing underlying surgical conditions. ▲

Bottleneck in the OR

CONTINUED FROM **PAGE 1**

influence the shortage of anesthesia providers (*Journal of Medicine, Surgery, and Public Health*. doi.org/10.1016/j.glmedi.2024.100048; see Table 1).

Looking ahead, recent data from Medicus Healthcare Solutions, a leading locum tenens staffing firm, highlight the projected growing gap between supply and demand of anesthesiologists. About 52,300 anesthesiologists currently practice in the U.S., a number that is projected to see a shortage of 8,450 by 2037 (Medicus. https://tinyurl.com/2s48svzz). Making up for some of this is the increasing demand for certified registered nurse anesthetists (CRNAs), with a projected 10% growth from 49,900 in 2023 to 55,100 in 2033. Furthermore, demand for certified anesthesiologist assistants (CAAs) is predicted to increase as part of team-based anesthesia staffing models. Currently, CAAs can practice in 19 states and jurisdictions.

Like all surgical specialties, otolaryngology is affected by the anesthesiology provider workforce shortage and changes. Mary Dale Peterson, MD, executive vice president and chief operating officer at Driscoll Health System and past president of ASA, said that the ASA does not have specific data for how different surgeons are staffed, but that otolaryngology is definitely prioritized at Driscoll Health. "Our ENT surgeons are very efficient and flexible, willing to fill in scheduling gaps with their patients in addition to their block schedules," she said. "CARE teams help us be more efficient with our ENT surgeons as well."

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Experts Weigh In

Anthony Sheyn, MD, professor of otolaryngology–head and neck surgery at the University of Tennessee Health Center and division chief of pediatrics and otolaryngology at Lebonheur Children's Hospital and St. Jude Children's Research Hospital, all in Memphis, Tenn., said that the biggest impact of COVID-19 at his institution is that it forced a lot of people, including anesthesiologists, to either retire or

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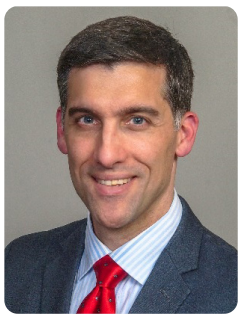

If you have a bottleneck somewhere else, in anesthesia or audiology, then it means we aren't fully able to provide care for patients in a timely manner. The shortage in the anesthesia workforce highlights that we're all interrelated and one workforce affects the other."

—Andrew J. Tompkins, MD, MBA

Table 1: Factors Influencing the Anesthesiology Shortage in the U.S.

Increased Demand	• Growing elderly population: From 2019 to 2034, it is expected that the proportional demand for surgical services will grow from 31% to 39% in people 65 years and older. • Elective and outpatient procedures increase the demand. Surgical centers have seen an increase in surgeries, such as a 9% increase in the number of ambulatory surgery centers (and 43% increase in those offering nine or more operating rooms), and a 13% increase in outpatient surgeries at major teaching hospitals from 2013 to 2019, as well as a rapid increase in other non-operating room procedures that require anesthesia, such as interventional radiology.
Supply Limitations	• The number of surgeons has declined. A 2016 report from the Department of Health and Human Services projected a deficit of 24,340 surgeons, with a deficit of 1,620 in otolaryngology. • Attrition of anesthesiologists due to age and impending retirement: In 2020, 45% of anesthesiologists were older than 55 years, with an average age of 52.6 years. A recent growth of 12% (between 2017 and 2021) in anesthesiology residency training positions will offset this decline.
Changes in Practice Patterns	• More clinicians, including anesthesiologists, are moving toward subspecialties. According to the Association of American Medical Colleges, in 2021, there were 42,496 practicing anesthesiologists, 2,843 of whom specialized in pediatric procedures and 6,240 in pain management. • Shift in specialization potentially incurs a larger workload for those who provide traditional anesthesia services. For example, in 2019, of more than 19.8 million anesthesia relative value units (RVUs) billed for Medicare fee-for-service patients, 64% were for anesthesia, 35% for pain management, and 1% for critical care services.
Practice Ecosystem	• Increase in private equity firms acquiring medical practices may shift the focus from quality of care and patient care to reduced waste and improved efficiency. • Anesthesia labor supply has increasingly been acquired by private equity firms. Before 2012, most anesthesiologists were employed by hospitals or private practices. Since 2013, private equity companies, largely dominated by four firms, have purchased major groups of providers, including MedNax's American Anesthesiology.
Counterproductive Administration	• Lack of understanding from administrators of clinical practice can negatively affect employee retention and quantity and quality of medical services, and may lead to negotiations and decisions not in the best interest of providers or patients.

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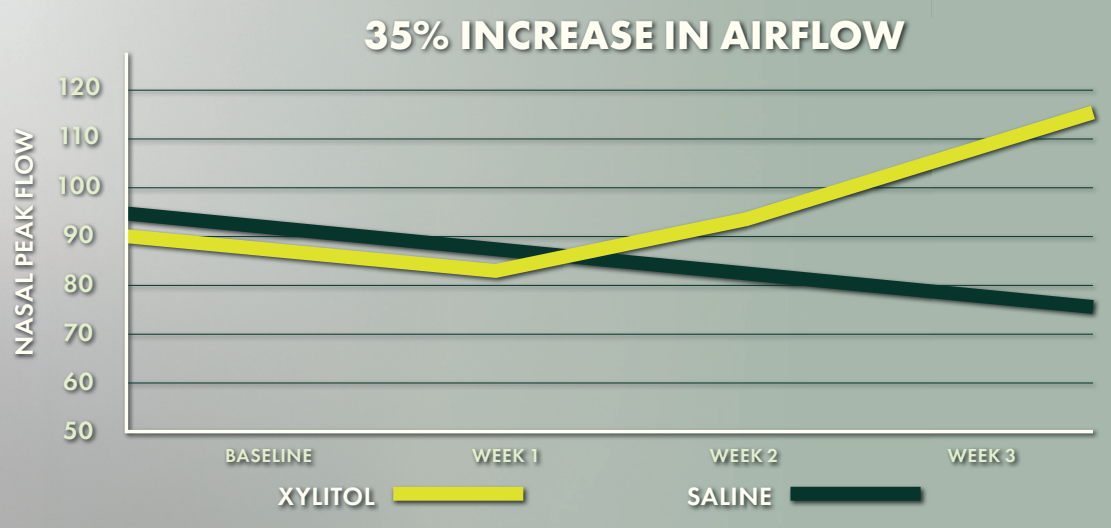

B Bellanti, J.A., Nsouli, T.M. "Xylitol Nasal Irrigation: Possible Alternative Strategy for theManagement of Chronic Rhinosinusitis, Oral Abstract #46. ACAAI Conference. 9 Nov. 2015

*Measured using rhinometry and airflow volume assessments in independent clinical settings.
[1] 35% increase in peak airflow vs. saline alone (Nsouli study, 2015))
[2] 20% increase in airway volume within 3 minutes (Olmos & Baba study, 2019)

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- **Post-Surgical Inflammation:** Post-operative xylitol nasal spray reduced nasal inflammation and improved olfactory function. — *Randomized Controlled Trial, International Forum of Allergy & Rhinology*
- **Airflow Improvement**: Xylitol nasal spray increased peak nasal airflow by ~35% compared to saline. — *Nsouli Airflow Study, 2015*
- **Allergic Rhinitis Symptom Reduction**: Xylitol (with CPM) nasal spray decreased symptom severity over 30 days. — *Double-blind Trial, Asian Pacific Allergy Journal*
- **COVID-19 Protection in Healthcare Workers:** Among 556 high-risk healthcare professionals during the Delta wave, xylitol nasal spray reduced SARS-CoV-2 infections by 62% compared to placebo.
  — *Randomized Controlled Trial, Indian Journal of Medical Research, 2021*

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Bottleneck in the OR

CONTINUED FROM **PAGE 11**

We continue to lose our best operating room anesthesia staff to private practice groups that pay significantly more and do not require call. Unless [this institution] raises pay for its academic anesthesiology staff, I fear that we'll be in a continued shortage cycle."

—Jonathan Bock, MD

move closer to their families, and the newly hired providers, specifically CRNAs, are recent grads and bring less experience and training during the expected acclimation period before they become more efficient. "This has slowed things down," he said. He said that after the initial struggle to get anesthesiology coverage coming out of COVID-19, which made it difficult to schedule surgeries, his institution has now "passed a corner and is back to the volumes we used to have to provide access to our patients."

He attributes this rebound largely to his hospital's leadership, who, for the most part, come from a clinic background and almost all of whom have directly cared for patients in the past, including the president of the hospital, who previously served as the surgeon in chief. "So, our anesthesia departments are growing, [and] our surgery center has been able to open up more rooms and is more efficient than a tertiary center," he said.

He said the bigger challenge currently, like other otolaryngology practices, is not having enough surgeons to perform procedures. "But we are going from six to eight surgeons in July," he said, "so our staffing will be good, or at least better."

Dr. Sheyn emphasized that despite some problems with getting anesthesiology provider coverage before COVID-19, he believes his institution was not as affected because of the leadership of a clinician who understood the importance of otolaryngology as a specialty that generates a lot of finances for the hospital.

Other institutions, he said, may be more affected because they are operated by private equity firms and run by leaders with MBA degrees who do not necessarily understand the importance of taking care of surgical needs efficiently. Others have just not recovered as quickly from COVID-19, and he noted that pediatric anesthesiologists are particularly in demand right now because of their scarcity.

Andrew J. Tompkins, MD, MBA, an otolaryngologist at Ohio ENT and Allergy Physicians in Columbus, Ohio, said the effect of COVID-19 on the shortage of anesthesiology providers, as documented in the literature, is borne out by the salaries that anesthesiology providers can now garner. "You need to offer CRNAs much more than what

Table 2: Closing the Gap Between Supply/Demand in Anesthesiology

Increasing the Pipeline of Anesthesia Providers	• Increase training capacity (e.g., through federally funded graduate medical education slots and academic–community partnerships). • Develop needed competencies, such as in geriatric care. • Focus on developing the optimal number and distribution of provider types.
Facilitate Retention	• Improve the workplace environment by developing programs that address issues such as burnout, harassment, and incivility. • Develop flexible schedules to accommodate family life and needs. • Create programs to transition to retirement. • Develop an inclusive environment.
Practice: Improve Capacity Through Innovation	• More rapid implementation of practice strategies to develop stable, highly effective, and cohesive teams. • Efficient coordination of non-operating room anesthesia (NORA) scheduling. • Using models that make supervision more efficient. For example, using current technology to send automatic notifications to anesthesiologists to let them know the status of the patient (i.e., arrived at hospital, in holding, and in operating room). • Develop and incorporate pre-anesthesia evaluation protocols. • Develop and follow standardization and protocols for anesthesia care. • Consider whether an anesthesia team is needed in many non-operating procedures. Well-trained sedation teams may be able to provide moderate sedation, but providing high quality must be ensured (i.e., the appropriate patient is receiving the sedation, the sedation team is properly trained, including the ability to identify a high-risk patient and know when to ask for assistance, and ensuring a high quality oversight by the anesthesia department.)
Leverage Technology	• Incorporate artificial intelligence to manage low-value, mundane tasks. • Rapidly integrate of technology solutions. • Augment the ability to supervise to ensure greater patient safety. • Augment procedural skills.
Financial Constraints	• Correct payment systems that result in market distortion. For example, address barriers that prevent anesthesiologists from working in rural hospitals where insufficient Medicare payments and low patient volumes make it difficult to attract and retain providers. Another example is continual advocacy by the ASA, along with other specialties, and the American Medical Association, which continue to advocate to correct the physician-fee schedule that has decreased over a couple of decades and not kept up with inflation. • Each anesthesiology department should appoint a Medical Director of Procedural Sedation who is responsible for all sedation at a facility and who, among other tasks, is responsible for improving efficiencies, scheduling, conducting evaluations, and assisting sedation clinicians in situations where patients are deteriorating.

Anesthesiology, doi: 10.1097/ALN.0000000000005052

was typical prior to COVID-19," he said. "Hospitals are having problems with staffing as well and are trying to put together a good package to get them to stay."

He added that hospitals are particularly intent on snatching up nurse anesthesiologists and are offering to pay them a lot of money. "This may set the market rate much higher and create a shortfall elsewhere," he said.

Dr. Tompkins said the shortage in anesthesiology providers points to the need to understand other workforces that affect our own. "We need other specialties to function, including audiology, so a shortage in any one area affects our ability to provide care," he said.

"If you have a bottleneck somewhere else in anesthesia or audiology, then it means we aren't fully able to provide care for patients in a timely manner," he said. "The shortage in the anesthesia workforce highlights that we're all interrelated and one workforce affects the other."

As the chair of the American Academy of Otolaryngology–Head and Neck Surgery Workforce and Socioeconomic Survey Task Force, Dr. Tompkins said the anesthesiology provider workforce shortage's effect on otolaryngology is a good issue to study in the next iteration of the workforce survey.

As an otolaryngologist working at a Veterans Affairs (VA) hospital, Jonathan Bock, MD, professor of otolaryngology–head and neck surgery at Froedtert Hospital and Medical College of Wisconsin, in Milwaukee, has seen the anesthesiology provider workforce shortage significantly impact the number of surgeries performed. "We have had to limit our operating cases at our VA hospital significantly, including dropping 25% of our current OR capacity," he said, adding that posting elective cases has become increasingly challenging due to timing constraints.

"This has affected case volumes significantly and added increased challenges to the timely booking of urgent/emergent cases," he said.

At the main medical campus of Froedtert Hospital and Medical College, he said a significant patient safety concern arises from the need to hire many locum tenens anesthesia staff, as well as multiple new practitioners. These healthcare professionals are now responsible for handling high-complexity cases for which they lack prior experience, including JET anesthesia cases and complex airway procedures.

Dr. Bock emphasized that the shortage of anesthesia providers at his facility has been a longstanding issue and has often been the "rate-limiting" step for operating room flow at their major tertiary care operating room. "The department here appears to be doing some stopgap solutions, but I am concerned that these are temporary fixes and not a real answer," he said, citing the increased hiring of locum tenens, part-time hires, temporary hires, and international hires.

"We continue to lose our best operating room anesthesia staff to private practice groups that pay significantly more and do not require call," he said. "Unless [this institution] raises pay for its academic anesthesiology staff, I fear that we'll be in a continued shortage cycle."

Solutions for Overcoming the Shortage

Solving the anesthesiology provider shortage will require a multiprong approach that basically addresses the problem of supply and demand. As laid out in the article by Abouleish et al, closing the gap between supply and demand requires both short- and long-term approaches, some of which can be done at the local level and some that require broader support from various stakeholders (Table 2). The ASA intends to continue focusing on this issue in its annual stakeholder summit, which will help to continue to monitor trends and progress, as well as modifying strategies to ensure the anesthesiology workforce can meet the demands of surgical specialties such as otolaryngology. ▲

Mary Beth Nierengarten is a freelance medical writer based in Minnesota.

Onboarding and Working with APPs

CONTINUED FROM **PAGE 1**

It is important for the APP to feel a part of the team and to be allowed to function at the highest level of their license—they are more than glorified scribes. It is helpful to have career development opportunities for APPs and a leadership trajectory for their field."

—Cecelia E. Schmalbach, MD, MSc

inpatient consultations. They perform procedures in clinic and in the inpatient setting. They take day and night calls for urgent/emergency cases," Dr. Mitchell said. APPs "promote efficiency and patient access, they participate and lead policies, and are leaders in writing and improving educational material for patients."

Cecelia E. Schmalbach, MD, MSc, David Myers MD professor and chair in the department of otolaryngology–head and neck surgery and director of the Temple Head and Neck Institute at Lewis Katz School of Medicine at Temple University, and chief of the head and neck division at Fox Chase Cancer Center, both in Philadelphia, has worked with PAs and NPs throughout her entire otolaryngology career. The impactful partnership "helps to ensure timely and quality care," she said. "It has been an incredibly rewarding working relationship that allows me to do more for my patients and their families."

"In my current cancer practice, our APPs participate in patient care in both the outpatient and inpatient settings. In the outpatient setting, they assist attending physicians during clinic sessions by seeing patients. In addition, they hold their own independent clinics, which include a 'survivorship clinic' when patients are more than five years out from cancer care, wound checks, and add-ons. On the inpatient side, they participate in daily multidisciplinary rounds to assist with timely discharge. This inpatient rounding provides a great opportunity for the APP and patient/family to get to know one another; in doing so, there is meaningful continuity of care, which facilitates seamless transition in the outpatient setting," Dr. Schmalbach said. "The APPs assist in returning patient phone calls (managing the electronic health record patient portal), sharing non-urgent test results, and following up on orders/recommendations from our weekly tumor board."

C. Gaelyn Garrett, MD, MMHC, Guy M. Maness chair and professor of laryngology and voice in the department of otolaryngology–head and neck surgery at Vanderbilt University Medical Center in Nashville, explained that her department first hired an APP—Ken Watford, MSN, DNP—in 2000 to focus on the medical management of balance disorders presenting to the ENT practice. Dr. Watford "also saw some general presenting symptoms, as our MD faculty was much smaller than it is now and we had a need for a generalist practice," Dr. Garrett said.

"Since then, APPs have been an integral part of our practice, with involvement primarily in the pediatric otolaryngology area, but also with a specific focus in head and neck, rhinology, general otolaryngology, facial plastics, and sleep," Dr. Garrett said. "We now have a total of 18 APPs in our department, including on both the pediatric and adult sides. They also enhance our regional presence with satellite offices, providing more local care to surrounding communities and counties with otherwise less access to specialty care."

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Onboarding Process

"Prior to 2023, new APPs would rotate within our various divisions to gain experience. Each APP has an MD overseeing their clinical decision making early on, and the APPs are encouraged to reach out when appropriate for questions, etc.," Dr. Garrett said.

"In 2023, our department developed an APP training program specific to otolaryngology–head and neck surgery, with the initial fellow starting in January 2024," Dr. Garrett said. The General Otolaryngology–Head and Neck Surgery (O-HNS) Advanced Practice Provider Fellowship Program of Vanderbilt University Medical Center is run by Filipina Cevallos Schnabel, MD, MPH, DNP, FNP-BC, APRN, who is the lead director of the program, and Dr. Watford, co-director of the program. Dr. Garrett explained that Dr. Schnabel and Dr. Watford "have created a curriculum incorporating knowledge and practical learning in all areas of otolaryngology clinical practice."

Dr. Schnabel believes the fellowship program was the first to accept both PAs and NPs. "This is a one-year program wherein the fellow spends 75% of their time in clinical settings with general O-HNS and its subspecialties, and 25% on didactics, research, and professional development," Dr. Schnabel said. "The goal of the program is not only to improve the APP's skill set in O-HNS, but that also leads to safety, increased provider/patient satisfaction, increased APP retention, and decreased costs."

Currently, the program is planning for its Advanced Practice Provider Fellowship Accreditation (AAPFA) credential through the American Nurses Credentialing Center (AACN). This accreditation recognizes transition-to-practice programs for both PAs and NPs, Dr. Schnabel said.

Adam Zanation, MD, MBA, an otolaryngologist and head–neck surgeon, partner of Carolina Ear Nose and Throat–Sinus and Allergy Center, and shareholder and board co-chair of Viewmont Surgery Center, both in Hickory, N.C., previously worked with APPs in academia for over five years and has been working with APPs now in private practice for approximately five years.

"Our APPs rotate with each physician, shoulder to shoulder, learning their practice as well as in clinic procedures for a total of approximately three months. After this, they do run independent, clinical practices. However, they have access to physician mentorship and input at all times," Dr. Zanation said, adding that this onboarding process is important because the learning curve for laryngology-specific diseases and procedures is very steep and often not taught in schools related to APPs.

According to Dr. Schmalbach, "One should anticipate that onboarding will take approximately six months." During this period, the APP is not seeing patients independently but "shadowing each attending with whom

they will work to learn the different practice patterns. Participating in our laryngologist's clinic is immensely helpful, as those clinic sessions are a great opportunity to gain hands-on experience with scoping. Similarly, the APP shadows our residents on morning rounds to gain insight into the surgeries and associated post-operative care of our patients. Lastly, we have the other APPs and residents reach out to onboarding APPs when they are doing drain pulls and tracheostomy tube changes in order to gain hands-on-experience," Dr. Schmalbach said. "This onboarding process is imperative in order to give APPs the needed skill set to allow them, as well as the patients/families, to feel comfortable with the care rendered."

Dr. Mitchell explained that UT Southwestern Medical Center takes care of the paperwork required for onboarding APPs. "Within the department, we have a detailed process for clinically onboarding APPs that is focused on the experience and background of the individual. We allow three to six months for onboarding new APPs."

Challenges and Best Practices

"The main challenge is to hire the correct people who work effectively with the current APPs and interact effectively with residents, fellows, and faculty. We want APPs who are well-trained and plan to work with us for many years. Turnover of APPs is wasteful and should be avoided," Dr. Mitchell said, adding that "we have an excellent track record."

Onboarding success is constantly monitored, ensuring that clinical competence is present and grows over time. Productivity and patient satisfaction metrics are available monthly, Dr. Mitchell said, adding that it generally takes two years for an APP to be fully trained.

According to Dr. Schmalbach, "One of the greatest challenges is allowing patients and their families to feel comfortable being seen and treated by APPs. This challenge can be overcome by having APPs participate on the inpatient floors during rounds so that they are a familiar face and very knowledgeable of the patient's diagnosis, care, challenges, and needs, and having APPs spend some clinic sessions working side by side with the attending physician. During this time, the patient/family can meet the APP and establish a rapport. I have found it very helpful to have the attending physician then introduce the idea that the follow-up is with the APP."

Success is measured through formal performance reviews that include competency measures, patient satisfaction scores, and informal feedback. "The ultimate measure of onboarding success is the APP gaining independence to conduct clinic. Equally important is both the patient's satisfaction with the care as well as the APP's satisfaction with growth and career development. A great deal of time is required for the physician to onboard an APP, so retention becomes imperative," Dr. Schmalbach said. "It is important for the APP to feel a part of the team and to be allowed to function at the highest level of their license—they are more than glorified scribes. It is helpful to have career development opportunities for APPs and a leadership trajectory for their field."

The best practices for onboarding AAPs, according to Dr. Zanation, include "a longitudinal mentorship experience that focuses both on learning anatomy and disease processes as well as the technical expertise in performing procedures. Additionally, having direct access to a laryngologist as long-term mentors or to ask questions about specific patients at all times is important—never leaving your APPs solely on an island."

Private Versus Academic Settings

The APP's role in private practice is inherently different from most of the academic practice environments Dr. Zanation has worked in. He explained that in academic settings, "APPs are often partially supported by health system resources and have a significant component of their work related to inpatient care. Additionally, APPs would often see clinic patients with the doctor in the doctor's clinic, not working with their own independent schedule that results in independent revenue."

"In private practice, the traditional model for APPs is to run independent clinical practices in the outpatient setting, usually as part of new and returning patient overflow care," Dr. Zanation said. He explained that his clinic is moving away from this model. "Our practice is moving to more disease-specific APP clinic processes. These include a head and neck cancer survivorship clinic and a vestibular disorders clinic. Additionally, there are plans for endocrine as well as sleep disease follow-up as additional disease-specific APP clinics. These types of clinics allow us to have templated patient workup as well as integration with our physician clinics."

According to Dr. Zanation, this type of APP strategy has four major benefits. First, "the expectation for the provider and the patient is well delineated by the standardized workflows within that

There are fewer endocrinology and sleep/neurology practices in N.C. than ever before … we have a huge patient need in these areas that has developed faster than we are creating otolaryngologists …. It's a win for the patients, a win for the referring practices, and a win for us as owners and operators of private practice businesses."

—Adam Zanation, MD, MBA

A PHASED ONBOARDING TOOL FOR NOVICE APPS

A 2025 paper detailed a formal onboarding tool for APPs, comprising four phases during which novice practitioners gain "increasing independence throughout their orientation period to ensure competency and confidence," explained corresponding author Laurie Newton, DNP, RN, CPNP, a pediatric nurse practitioner in the department of otolaryngology at Medical College of Wisconsin in New Berlin, where she is also director of the Children's Specialty Group APP fellowship. (*Int J Pediatr Otorhinolaryngol*. doi: 10.1016/j.ijporl.2025.112363).

"The tool includes physical examination, documentation, and procedural competencies, with an area for preceptors to sign off on skills. The novice APP can use this to individualize their orientation and seek out learning experiences they have not yet had prior to launching their independent practice. The novice APP meets with the APP lead and medical director at the end of each phase to discuss progress and identify goals for the next phase of orientation. Feedback on progress is provided in real time and throughout. Most APPs will work through the tool in six months to one year, based on previous experience. The tool can always be adjusted in time based on the needs of the novice APP.

"There has been marked interest in this tool since it was published, and I have shared it with other pediatric ENT practices throughout the country to modify and have also adapted this to other pediatric surgical practices within our organization. APPs who have used this tool have appreciated the transparency and the easy way it allows them to track progress over time. Should there ever be performance issues with an APP in the future, the formalized tool can aid in any type of remediation needed," Dr. Newton said.

specific subject area. For example, in the survivorship clinic, each patient knows they will have alternating visits with the physician and the APP. They also understand they're likely to be scoped as well as have speech and swallow evaluations, as well as yearly TSH [thyroid-stimulating hormone test] and health labs."

"Second, these clinics free up patient access on the physician's schedule for urgent disease-specific problems. Third, each one of these clinics aligns very well with our ancillary care services, which also drives additional utilization and revenue. In the vestibular disorders clinic, we have a complete setup for vestibular testing, including rotary chair testing as well as CNS [central nervous system] and vertebrobasilar testing. By increasing needed patient access, we can drive appropriate utilization of our ancillary investments," Dr. Zanation said. "Fourth and finally, there is an educational and expertise component to seeing the same types of patients over and over again. For APPs, this drives confidence in clinic procedures as well as understanding of complex diagnostic testing and clinical needs."

Expanding Demand

Dr. Schmalbach explained that there are many different models for APPs. "The otolaryngologist and department/practice should aim to identify the greatest need and manner in which an APP can best augment patient care."

As more and more is being asked of physicians, the role of otolaryngology–head and neck surgery APPs will increase, Dr. Schmalbach said. "A well-trained APP allows better communication with patients, timely discharge/decrease in length of stay, and increased access to patient care. APPs will also be invaluable in rural regions and other areas where there is limited patient access to otolaryngology physicians."

Looking ahead, Dr. Zanation expects APPs will significantly impact disease-specific intake and long-term follow-up for ENT patients. "Disease-specific pathway strategies will be important for both maintaining appropriate access for patients as well as physicians' schedules," he said.

Healthcare access, especially in rural settings, continues to deteriorate as the breadth of ENT practice continues to expand. Many academic centers in North Carolina will not "see balance patients, and there are fewer endocrinology and sleep/neurology practices in North Carolina than ever before. So, we have a huge patient need in these areas that has developed faster than we are creating otolaryngologists," Dr. Zanation said. APP-based specialty clinics enable a much faster start-up at a lower cost to provide care. These clinics also create synergy with medical and surgical practices and enhance the utilization of ancillary departments. Dr. Zanation said, "It's a win for the patients, a win for the referring practices, and a win for us as owners and operators of private practice businesses."

Over the next few years, Dr. Mitchell expects the number of APPs will grow. APPs "will have more national leadership roles and will be recognized as the essential part of the healthcare system that they clearly are," he said. "Most new patients/families who see APPs are extremely satisfied. APPs consistently get higher patient satisfaction scores than physicians. This speaks for itself." ▲

Katie Robinson is a freelance medical writer based in New York.

The "Fine Art" of Medicine

Empathy and understanding in the era of artificial intelligence

By **G. Richard Holt, MD, MSE, MPH, MABE, MSAM, D Bioethics**

Clinical Scenario

You are seeing Reverend Smith today for a follow-up appointment after he completed radiation therapy for a unilateral T2 glottic cancer. He is a 71-year-old minister and still leads his church's congregation, so preservation of vocal function was very important to him in his decision for primary radiation therapy. He is accompanied today by his wife of 50 years. During the greeting, you indicate to Reverend Smith that you will be using a virtual scribe today for the visit, if he approves. After you provide a detailed description of the artificial intelligence-based ambient scribe system, Reverend Smith gives his approval.

Following your evaluation, Reverend Smith inquires about his prognosis for the future. You indicate that you obtained AI-generated statistics on his particular cancer and proceed to relate the evidence-based prognosis to him and Mrs. Smith. When he questions how those statistics apply specifically to him and his disease, and what would be his remaining longevity of life, you laughingly indicate that you are "not God," so you cannot give more information than the population evidence you retrieved. As an early-career otolaryngologist, you personally believe that evidence is the most important factor in patient care.

Reverend Smith then indicates to you that Mrs. Smith was just diagnosed with stage III breast cancer, and their individual cancer outcomes will be very impactful for them and their family. You briefly extend your condolences to Mrs. Smith, followed by an indication that your schedule is very busy today, and you will now need to schedule the next appointment for Reverend Smith. You inform the Smiths that while the use of the virtual scribe has saved time for you, you have instructed the schedulers to fill the saved time with more patients, and you must stay on schedule.

Reverend and Mrs. Smith glance at each other, and with a sad gravity, Reverend Smith says, "Too bad you aren't using this extra time to spend talking with your patients, Doctor." This statement lingers expectantly in the air, awaiting a sincere response.

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Discussion

Perhaps the state of AI's influence on the practice of medicine in general, and otolaryngology specifically, is currently at a seminal point of inflection. As AI becomes increasingly embedded in the everyday practice of patient care, the enduring human elements of medicine (the "fine art") remain faithful reminders for us. Empathy, understanding, compassion, and our therapeutic presence enhance our altruistic approach to patient care. These fundamental virtues, however, face unprecedented challenges in the milieu of AI integration into nearly every facet of our specialty. This recognition raises the question of whether the use of innovative technology and the duty to provide compassionate patient care can effectively coexist. For otolaryngologists who practice relational medicine, the answer to this question is at once existential and an ethical imperative.

An over-dependence on AI-enabled clinical tools can result in a shifting of a physician's attention away from the patient, who may be anxious, hopeful, or vulnerable. While AI clinical tools may have the capability to supplement evidence gathering, they should not replace a physician's capability for discernment regarding their patient's holistic being. At the center of this evolving technologically-rich environment remains the fundamental tool that otolaryngologists must possess—a meaningful connection with the patient in the context of professional concern.

AI may augment diagnostic accuracy, but it cannot replace the physician's internal moral compass, empathy, integrity, or professional judgment. Ethical practice requires an otolaryngologist to consciously cultivate the "fine art" of medicine, a complex blend of clinical knowledge, emotional intelligence, humility, and respect for a patient's humanism. In the face of increasing reliance on AI tools, the otolaryngologist must explain the uncertainties of disease honestly, invite questions, acknowledge a patient's deep concern, communicate warmth during encounters, and actively listen to the patient, particularly when serious illnesses are at stake. These actions are not a drop-down menu, but are, rather, central to trust and honesty. AI findings and application to the patient's disease must be interpreted through the lens of individualized patient care. Patients are more likely to follow recommendations, accept their own role in their healthcare, and trust the physician when they feel heard and seen as full human beings.

Otolaryngologists benefit as well as patients, as empathetic engagement may improve diagnostic accuracy through active narrative listening, and reaffirms the purpose of the medical profession. In the world of otolaryngology, where patient stories often involve chronic symptoms, anxiety, communication challenges, fear of the unknown, and life-altering surgeries, empathy and understanding are fundamental to the therapeutic mission.

Within otolaryngology, AI is providing advancements that promise efficiency, standardization, early detection, and possibly improved diagnostic accuracy. They also introduce questions about privacy, explainability, bias, and too much reliance on their interpretations. The otolaryngologist must now negotiate an exam room where digital systems are active observers and contributors. Framed in that perspective, transparency must be discussed, and patient concerns addressed with respect to the otolaryngologist's role. The ethical implications are clear and significant.

For one, clinicians must ensure that AI does not become a barrier to human presence and understanding. When an ambient scribe transcribes every utterance

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The Path to Department Chair: Arriving and Thriving (Part 2)

You're the chair, now what?

We must understand the dynamics between health systems and academic departments, and how to strategize to maximize our clinical mission. We must consider the importance of building a widely diverse workforce. And finally, we must deal with a lot of pressure related to research and research dollars—especially recently."

—Sandra Lin, MD

By **Linda Kossoff**

In the January issue of *ENTtoday*, ENT department chairs shared stories of how they rose to their esteemed positions. This month in Part 2, chairs talk about what it has been like to serve in these roles and offer their advice to otolaryngologists who wish to follow in their footsteps.

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Most otolaryngologists do not launch their medical careers with the clear intention to become a department chair in an academic setting. More often, the ascent to the role occurs organically as their professional achievements accumulate and their experience broadens. Even so, the transition to the job can be an eye opener.

An Evolving Role

With nearly 20 years of experience as a department chair of otolaryngology–head and neck surgery, Mark Varvares, MD, is exceedingly familiar with the job. He held the position at the St. Louis University School of Medicine from 2003 to 2015. Then, in 2020, he became interim chair at Harvard Medical School, Massachusetts Eye and Ear, and Massachusetts General Brigham in Boston. One year later, after a nationwide search, the arrangement became permanent.

Dr. Varvares emphasized the all-consuming nature of the job, and the personal commitment required to make it work. "The scope of the department chair role encompasses oversight of all aspects of the department," he said. "This takes priority over all other professional interests that I have."

While the broad scope of the job is a given, some of its unique challenges tend to morph with the times. Over the years, advancements in science and technology, as well as ongoing changes in the structural framework of the healthcare system, public attitudes toward health, and governmental policy, have all had an influence on the nature of the job.

Sandra Lin, MD, who took over as chair of head and neck surgery at the University of Wisconsin School of Medicine and Public Health in Madison in the summer of 2025, underscores the impact of such changes on the role of department chair over the past several decades. "Of course, [department chairs] have always needed to be leaders," she acknowledged, "but now, we must understand chain management. We must understand the dynamics between health systems and academic departments, and how to strategize to maximize our clinical mission. We must consider the importance of building a widely diverse workforce. And finally, we must deal with a lot of pressure related to research and research dollars—especially recently."

This last point cannot be overstressed. It has been widely reported that the current administration's recent funding cuts to the National Institutes of Health (NIH) have directly affected the ability of medical institutions to conduct potentially life-saving research (*J Adv Pract Oncol*. doi: 10.6004/jadpro.2025.16.4.1). As of November 2025, the proposed federal budget for 2026 included a 40% cut in the NIH research budget (American Medical Association. https://tinyurl.com/53wv3fdh). Although universities are fighting back in the courts, academic leaders still face difficult resource challenges resulting from these devastating cuts.

The Challenge of Leadership

"Leadership is hard if you're doing it right," said William O. Collins, MD, who has served as chair of otolaryngology–head and neck surgery at the University of Florida College of Medicine in Gainesville since February 2022. "There is often a need to step in and be the 'bad guy,' to have hard conversations, to deliver bad news, and in some cases, to set boundaries."

No matter the decade (or decades) in which a chair serves, leading an academic department is essentially a people-based, relationship-driven venture. For new chairs, just the prospect of learning who everyone is and how they function in their roles can be daunting. However, building relationships with those individuals is a key aspect of the job, stresses Yuri Agrawal, MD, MPH, chair of the otolaryngology department at the University of Colorado Anschutz School of Medicine in Denver since 2023. "It is hard for a single individual to attain and sustain the required depth of connection with everyone, so [as a chair] I have to be very intentional about that," she said. "I also try to be a team player, not only departmentally but institutionally, supporting our dean and our chancellor—to be a partner in that regard."

The role is complex and multilayered, agreed Dr. Lin. "You can't just be a thought leader nowadays; you also must understand how to effectively implement and execute your ideas. You must know how to inspire people and create a cohesive and effective team," she explained. "In some ways, it reminds me of being a mother or a teacher or coach, especially for the younger faculty—you're always trying to help them develop within the overall

academic mission. Knowing that you're developing future leaders is a big 'pro' of the job."

One of the most challenging aspects of department leadership, said Dr. Agrawal, is having to make decisions for the greater good that are not necessarily in everyone's best interests, and then handling the communications around that. These are skills that aren't taught," said Dr. Agrawal. "I've noticed that leaders develop different ways in which to handle this."

Indeed, leadership styles do vary with the individual, and it is up to each chair to determine what works best for them. The keyword here is "authenticity." "People know when you're trying to take on a persona that is not native to who you are," Dr. Lin said. "If someone determines that you're not 'for real,' then they can't connect to you. I've had to figure out what works for me as a person, and to pay attention to what resonated with my team and what didn't."

Despite their best efforts and intentions, a department chair will inevitably and repeatedly encounter pushback. "I always prided myself on getting along with everybody, and in the past usually avoided conflict," Dr. Collins said. "In leadership, however, I have realized that you will often get challenged. Those challenges may come from within the department, but they also come from other departments, the hospital, or external competitors. It took me a while to realize that my job is to advocate for the department, and that might mean standing up to others. There have been a few instances in which another department chair or institutional leadership tried to 'slip one past us,' and I had to push back, which is historically not my nature."

Whether a leader can calmly navigate such curveballs is a key prerequisite for the job. Still, Dr. Varvares expressed a positive point of view. "In the end, the most challenging aspect of the position is also the most rewarding: to manage and solve issues that arise—even when you think you have seen it all—while at the same time trying to guess where the puck is going to go next," he said. "What has surprised me is just how enjoyable it is. I knew it would be a lot of work, but I didn't realize just how much the job, the department, and its people give back in return."

Parting Advice

Serving as department chair is not a part-time venture, and ENTs who are interested in assuming the position should be prepared to sacrifice their time and other professional pursuits while holding the reins. For all intents and purposes, the chair is the department, and vice versa. One cannot thrive without the other.

"As academic otolaryngologists, we all develop personal metrics of success. In my opinion, however, once one becomes chair, the marker of success is the success of the department," Dr. Varvares said. "One's own clinical and research interests take a back seat to this priority."

Regardless of previous experience, department chairs who are new to their role will likely be faced with some unfamiliar challenges, noted Dr. Agrawal. "There are decisions made by the department chair that someone new has never had to make before. That person doesn't yet have that necessary and vast playbook. They may have an instinctive, gut response but they can't just go by what they think," she said. "This is why it is essential to carefully and intentionally cultivate a network of people within the institution who can help."

Dr. Varvares' circumstances were unique in that his very first leadership role was also his first experience as a chair. "I had to learn on the job, and I made many mistakes," he recalled. "My advice for young faculty members interested in pursuing leadership is to begin early, start small, and build incrementally with larger leadership roles. Consider engaging a coach." He also recommended reading as much as possible about great leadership and looking out for examples of inspiring leadership in everyday life.

It is important to try out different roles early in one's career, agreed Dr. Collins. "Some of these roles might be unfunded, but the result of doing good work is the opportunity to do more," he said. "Ultimately, the goal of leadership is to have a great impact and leave things better than you found them. That is what led many of us into medicine. Whether working as a clinician or as a leader, that goal does not change." ▲

Linda Kossoff is a medical journalist based in Los Angeles.

"In the end, the most challenging aspect of the position is also the most rewarding: to manage and solve issues that arise—even when you think you have seen it all—while at the same time trying to guess where the puck is going to go next."

—Mark Varvares, MD

EVERYDAY ETHICS

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during the encounter, or when a treatment plan produced by AI is used to direct a patient's care without experienced clinical insights applied, the opportunity for shared decision making and professional judgment may be affected. When a patient receives an end-of-visit copy of a virtually scribed encounter, the language of a concerned and caring otolaryngologist will likely not be embedded in the report. Professional observations, such as patient demeanor, facial and body language, and furtive glances at a partner, may all be lost in the scribed report. As AI-generated language becomes increasingly sophisticated, the distinction between simulated empathy and authentic human understanding becomes critical. The virtual scribe will likely not be able to entertain the importance of the tone and meter of a clinician's explanation of the impact a cancer diagnosis may have on the patient, or the understanding of how patients respond to bad news.

Patients may have internal concerns about the encounter being recorded, particularly with respect to machine language output, privacy of information, and accuracy of the report, which may be mixed with a loss of personal connection with the otolaryngologist. Understanding these potential concerns can proactively lead to a discussion with the patient regarding the otolaryngologist's ultimate responsibility to review, revise, and improve the scribed report.

The same technology that risks eroding compassion, empathy, and understanding, however, can also support them if deliberately guided by otolaryngologists who understand the importance of relationship-centered care. If virtual scribed reports improve efficiency without diminishing the accuracy of the encounter, and if the otolaryngologist's time availability for patients is increased, then the effect can be positive. The main concern is that additional patients will be inserted into the daily schedule, missing the vital opportunity to spend more time with each patient in their encounter, which could improve communication and strengthen the patient–physician relationship.

In this scenario, the otolaryngologist (aka Dr. Jones) has missed several opportunities to better understand and explore the impact of the disease on both Reverend and Mrs. Smith and to provide important empathy and understanding to them. As an early-career otolaryngologist, Dr. Jones is still acquiring the clinical skills to provide excellent evidence-based care within the overarching context of humanism. Dr. Jones' undergraduate and graduate medical education heavily emphasized evidence-based practice and a growing reliance on AI-supported clinical care. Unfortunately, Dr. Jones was not particularly supported in developing the "fine art of medicine" during residency training and thus may seem distant and technical in dealing with patients. All is not lost, however, as Dr. Jones has acquired a senior otolaryngologist mentor in his new practice setting, who is respected for her physician personhood and known to be very focused on virtues and ethics in patient care.

In the first missed opportunity, Dr. Jones was very technical in his explanation of potential outcomes when asked by Reverend Smith. In general, we use population-based data to practice sound evidence-based medicine. But it should not be the only factor in discussing outcomes with a concerned cancer patient. The question was a perfect opportunity for Dr. Jones to further explore Reverend Smith's views on quality of life, personal visions for his future, and perhaps how his wife's cancer impacts his own sense of family and their life moving ahead. Second, Dr. Jones appeared inconsiderate or clueless when he tried to joke about not being "God" when discussing outcomes with Reverend Smith—the wrong statement to the wrong patient at the wrong time.

The third missed opportunity was in Dr. Jones' response to learning of Mrs. Smith's cancer diagnosis. What a perfect moment for Dr. Jones to display compassion, empathy, and understanding, yet it went unfulfilled. These moments are exactly the best way to spend the extra saved minutes gained from the efficiency of the virtual scribe. The Smiths, into their special twilight of life, are facing double jeopardy from cancer, and if Dr. Jones had spent five additional minutes inquiring about their concerns and fears as they moved toward difficult times, so many important insights might have been gained. Additionally, the diagnosis of cancer, particularly breast cancer, is very worrisome owing to the extent of the treatment and the outcomes in an older female. Although an otolaryngologist, Dr. Jones should be capable of sufficient professional concern to demonstrate empathy and understanding. If AI is to improve healthcare for the patient, it should not dehumanize a clinician's duty to care and be supportive. This is indeed the "fine art of medicine." ▲

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Laryngeal Mask Airway Use in Tonsillectomy

Advice for trainees from pediatric otolaryngologists internationally

By **Gina M. Spencer, Vikash Nanthakumar, BHSc, Claire A. Wilson, PhD, Jacob Davidson, MSc, Julie E. Strychowsky, MD, MAS, FRCSC, Claire M. Lawlor, MD, Hannah Burns, MBBS, BSc, FRACS, Eishaan K. Bhargava, MBBS, MS, James Fowler, MD, FRCSC,** and **M. Elise Graham, MD, FRCSC**

As one of the most common pediatric procedures performed in the U.S., tonsillectomy is typically among the first operations that junior otolaryngology residents learn (*Int J Pediatr Otorhinolaryngol*. doi: 10.1016/j.ijporl.2021.110691). Most of these cases rely on endotracheal intubation (ETT) for airway management, the longtime workhorse of the operating room. The laryngeal mask airway (LMA) is becoming more popular across different surgical applications, including tonsillectomy.

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Some reported advantages of the reinforced LMA include reduced muscle relaxant use, laryngeal and vocal cord stimulation, and laryngoscopy need (*The Laryngoscope*. doi: 10.1002/lary.22458.). Post-operative outcomes, including bronchospasm, sore throat, and stridor, are decreased (*Arch Otolaryngol Head Neck Surg*. doi: 10.1001/archoto.2010.230) alongside decreased intra-operative fentanyl use, costs, and anesthetic requirements (*Anesth Analg*. doi: 10.1097/00000539-199709000-00016). Patients using an LMA experience significantly shorter extubation times (*Arch Otolaryngol Head Neck Surg*. doi: 10.1001/archoto.2010.230). The LMA can impede oral surgical field visualization, however, and cause ventilation and oxygenation problems from leaking or kinking (*Eur J Anaesthesiol*. doi: 10.1097/EJA.0b013e32833d69c6). Consequently, ETT remains widely used. There is increasing use of LMA for tonsillectomy in the literature; however, approximately 8.0% of cases convert to ETT intra-operatively, mainly for surgical access and positioning (*J Otolaryngol Head Neck Surg*. doi: 10.1177/19160216241263851). This report highlights tips from pediatric otolaryngologists worldwide, with the common goal of providing practical guidance to junior residents to enhance confidence in using this technology.

Materials and Methods

This report was part of a larger survey study assessing global tonsillectomy practice patterns. Our previous article, "Resident Pearls: Pediatric Otolaryngologists Share Tips for Safer, Smarter Tonsillectomies" (*ENTtoday*. https://tinyurl.com/55hd3x9d), offers candid advice for resident trainees who are just beginning to perform tonsillectomies.

Our words of wisdom come from pediatric otolaryngologists who responded to a global survey conducted from April 4 to May 16, 2024. It was designed by five fellowship-trained pediatric otolaryngologists from Canada, the U.S., Australia, and England. The survey was conducted via a secure online platform hosted by Lawson Health Research Institute (*J Biomed Inform*. doi: 10.1016/j.jbi.2019.103208), and participation was voluntary, uncompensated, and anonymous. Two hundred ninety-three pediatric otolaryngologists proficient in reading and writing English were recruited through an international WhatsApp group, where identities were confirmed by group administrators. The final sample of participants was deemed representative of the target study population because it included a diverse range of countries of origin. Qualitative responses were collated into codes and themes through six systematic stages of thematic data analysis, as per Braun and Clarke (*Qual Quant*. doi:10.1007/s11135-021-01182-y), by two of the authors (G.S. and V.N.). Survey results were double coded and reviewed, and inconsistencies were discussed to increase intercoder reliability.

Of the 132 total participants (45.1% response rate), 19 respondents (14.4% of respondents) signified that they prefer to use LMA, and answered the open-ended question, "If you use LMA during tonsillectomy, please describe situations where you would convert to endotracheal intubation/start with endotracheal intubation?" Sixteen respondents answered, "If you use LMA during tonsillectomy, please share any tips/tricks/pearls," and 1.5% of respondents preferred another airway management method, with the remaining majority using ETT.

With the aim of offering practical, conversational guidance to junior residents, while reflecting the evolving landscape of ENT surgery and fostering lifelong learning, four central themes emerged: choosing the right patient for an LMA, navigating airway pitfalls with LMAs, technical aspects of LMA use, and building LMA confidence.

Choosing the Right Patient

When it comes to LMAs in pediatric tonsillectomy, the first decision is not how to place one, but whether you should use one at all. Seasoned surgeons repeatedly flagged red-flag scenarios in which an LMA can quickly become the wrong choice: "less than two-year age; microstomic syndromes; chronic lung disease," one surgeon cautioned. Another emphasized avoiding LMAs in children "under two years; respiratory disease; recent viral URTI; reflux," while others pointed to "very small kids; craniofacial anomalies; severe obesity" as situations that tip the balance toward an endotracheal tube instead. Age and experience matter too; one respondent noted that in "age less than three, syndromic" patients, especially

when "a junior resident [is] just learning tonsillectomy," an ETT offers more reliable exposure and control. It is always important to consider the preference and familiarity of the anesthesiologist as well.

Navigating Airway Pitfalls with an LMA

Navigating airway pitfalls with an LMA means knowing exactly when to change course. Seasoned surgeons stressed that failure to "seat or ventilate appropriately" should never be ignored; it is the cue to reassess rather than push ahead. Their advice was clear: "Switch to endotracheal intubation if you encounter ventilation issues. Otherwise, continue with LMA." Another pearl was to let the anesthesiologist's comfort guide your next move: "If [the] anesthetist is not happy with ventilation or if the gag is obstructing [the] LMA," it is time to abandon the device and secure the airway with an ETT. Ventilation issues addressed were commonly attributed to technological challenges of the LMA itself, such as mechanical compression of the device or epiglottic displacement, as reflected in the literature (*Arch Otolaryngol Head Neck Surg*. doi: 10.1001/archoto.2010.230; *J Otolaryngol Head Neck Surg*. doi: 10.1177/19160216241263851). Anesthetic techniques, including inadequate depth of anesthesia, may contribute by causing reflex laryngeal closure upon mouth gag opening (*Can J Anaesth*. doi: 10.1007/BF03009607).

Technical Aspects of LMA Use

Technical complications with LMAs in pediatric tonsillectomy often stem from how the device interacts with the mouth gag and other hardware rather than from the LMA itself. Surgeons stressed the importance of allowing independent movement of the gag and LMA: "Do not move the LMA when inserting the gag. Make sure the two can move independently before opening that gag. Try a different-sized blade (usually smaller) for the gag. Try a half-size larger LMA." Others recommended modifying the setup to prevent unintended advancement of the device: "Go a size smaller on your tongue blade than you would with a right-angle tube. The material on the [flexible] LMA tubing is quite soft and binds on the tongue blade as you insert it—you can end up pushing the LMA further in than you want. Insert the gag, then tug gently on the tubing to reseat the LMA before ratcheting open the gag. Use an endoscope for the adenoidectomy: The extra space occupied in the pharynx by the LMA can mean that you need to retract the palate tighter to get an adequate view with a mirror. Another win for endoscopes." A further pearl was to minimize fixation-related displacement: "Use a flexible LMA and don't tape it in place. Pull back on it gently so it doesn't get pushed in when the mouth gag goes in."

Building LMA Confidence

Just as competence in tonsillectomy comes only with repetition, comfort with LMAs is built the same way. One surgeon's advice was simple: "Just do it—you'll get used to it! It improves theatre utilization. Switch to ETT if any issues to avoid wasting time—this is around 1%." Another emphasized the learning curve: "Need to have done about 10 to get comfortable with LMA positioning and Boyle Davis positioning. Don't give up immediately on the first few attempts." And in a nod to the team nature of airway management, one respondent added, "Wish my anesthetist could answer this."

Discussion

Beyond learning tonsillectomy, residents must learn to adapt to the evolving landscape of ENT surgery, embracing new techniques and approaches that can improve outcomes for both patients and institutions. Despite the introduction of the LMA in adenotonsillectomy in 1998, use remains limited due to concerns over limited surgical access and ventilation challenges with mechanical components (*Anesthesiol Clin*. doi: 10.1016/j.anclin.2010.07.005). These issues were reflected in our study, where only 14.4% of respondents expressed a preference for LMA over ETT in tonsillectomy. Otolaryngologists who use it regularly shared favorable experiences with the LMA, however, particularly with continued practice, and provided practical recommendations for trainees to effectively incorporate this tool.

The American Academy of Otolaryngology–Head and Neck Surgery 2019 Clinical Practice Guideline for Tonsillectomy in Children highlights the morbidity of tonsillectomy, including risks with anesthesia, prolonged throat pain, and financial costs (*Otolaryngol Head Neck Surg*. doi: 10.1177/0194599818801757). These factors are often at least partially attributed to ETT use, as studies have shown advantages with LMA, such as shorter induction and recovery times, along with reduced intraoperative airway pressure (*Acta Clin Croat*. doi: 10.20471/acc.2022.61.04.07). Our respondents identified that being under two years old is a predictive factor for LMA conversion to ETT. This is consistent with the literature, which suggests younger age is associated with increased odds of LMA failure, likely due to the smaller oropharynx size relative to the LMA, increasing malposition risk (*Int J Pediatr Otorhinolaryngol*. doi: 10.1016/j.ijporl.2012.09.021). This is consistent with other patient-related factors, including craniofacial abnormalities and overall smaller body size. Potential risks must be assessed on a case-by-case basis and thoroughly discussed with anesthesiology. This cooperation is crucial for successful LMA use during tonsillectomy (*Aust J Otolaryngol*. doi: 10.21037/ajo-20-77), as reflected in our responses, where numerous participants emphasized collaboration with anesthesia across multiple themes.

The Takeaway

- Choose the right patient: LMAs are not one-size-fits-all.
- Prioritize ventilation; convert promptly to ETT if there are concerns.
- Refine your setup: Gag, blade, and LMA positioning all matter.
- Practice intentionally: Treat LMA skills as integral to learning tonsillectomy.

Our study highlighted a series of concrete technical tips and a clear message for junior otolaryngology residents: Stick with LMAs long enough to get past the early learning curve. Respondents emphasized that the advantages of LMA use become increasingly apparent with growing familiarity and experience. As with any procedural skill, longitudinal practice and deliberate application of LMA techniques are likely to improve outcomes in carefully selected patients. The mechanical challenges that currently temper enthusiasm for LMAs may well diminish, both clinically and in the literature, as the approach becomes more widely adopted. With time, surgeons worldwide are likely to grow more comfortable with LMAs and their impact on surgical field visualization, provided that patient selection and indications remain thoughtful and evidence-informed. Further research is crucial to accurately assess the benefit–risk ratio of LMA compared to ETT, which is essential for incorporation into future guidelines, ensuring tonsillectomy remains safe and beneficial for pediatric patients. This piece is adapted from a larger survey study approved by the Western University Health Sciences Research Ethics Board. For more on the study's methodology or to request supplementary data, contact the corresponding author. ▲

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