Dana Green was an otherwise healthy 31-year-old mother of two when she had her first symptoms of idiopathic subglottic stenosis (ISS), a rare condition of unknown cause in which inflammation below the vocal cords causes a progressive narrowing of the airway, making it extremely difficult to breathe.

At the time, Green thought her breathing problems were caused by a cold. “I would get so out of breath that I couldn’t play with my kids, so my doctor put me on over-the-counter allergy medication and then inhalers,” she recalls. “When that didn’t work, I was sent to an ENT specialist and had surgery on what he thought was a deviated septum.”

But her breathing trouble didn’t subside. After a frustrating year of endless medications and allergy and pulmonology tests, she was referred to Temple where she saw Ahmed M.S. Soliman, MD, Director of Temple’s Voice, Airway and Swallowing Center, and Associate Director of the Temple Head & Neck Institute.

Incredibly, Dr. Soliman was able to preliminarily diagnose Dana with ISS just by hearing her breathing and coughing in the waiting room.

“After examining her throat, I saw that her airway was so narrow that she needed surgery very quickly,” says Dr. Soliman, who has a special interest and expertise in airway stenosis. “If a patient with ISS goes undiagnosed, a simple cold can cause respiratory arrest. And if someone tries to intubate them, they would either not be able to, or they could cause a life-threatening tear in the larynx or trachea.”

Green was in awe of the speed and accuracy of Dr. Soliman’s diagnosis. “I had been going to different doctors for more than a year trying to figure out what the problem was. I was in Dr. Soliman’s office for five minutes and he diagnosed my problem and scheduled me for surgery.”

Five days after Green’s diagnosis, Dr. Soliman performed a minimally invasive surgery.

Dana Green is leading an active life with her children and breathing normally, thanks to Temple.
A Growing ENT Presence at Jeanes Hospital

It’s a mantra the Temple Head & Neck Institute has adopted in recent years: High-quality medical care is useless if patients can’t access it.

To deliver on this mantra, the Institute has taken a two-pronged approach—hire additional faculty members and expand geographically. The geographic expansion has occurred most dramatically at Jeanes Hospital, a community-based hospital in Northeast Philadelphia that is part of the Temple University Health System.

“We began seeing patients at Jeanes in 2012, and it’s been a real success story,” says John H. Krouse, MD, PhD, MBA, Professor and Chair of Otolaryngology—Head and Neck Surgery, and Director of the Temple Head & Neck Institute.

“Today, Jeanes is our fastest growing office and we see almost as many patients there as we do at our main campus location [Temple].”

At Jeanes, ENT patients are seen in a modern, 4,400-square-foot outpatient office that is staffed by at least two full-time physicians every weekday. All subspecialties and ancillary services are represented there, including allergy and sinus services, hearing and balance services with hearing-aid fitting and sales, and a voice and swallowing lab with support from speech and language pathologists. Patients receive the same high level of care that is offered at Temple University Hospital.

The expansion at Jeanes doesn’t stop at outpatient services; Temple ENT surgeons also operate there.

“Our surgical volume has grown steadily, and today we offer a wide range of sinus, nasal and ear surgeries at Jeanes, including cochlear implants, thyroid surgery, voice and laryngeal procedures, endoscopic sinus surgery and more,” says Dr. Krouse. “Head and neck cancer surgery is performed at Fox Chase Cancer Center, which is literally right next door to Jeanes Hospital.”

According to Marc Hurowitz, MD, President and CEO at Jeanes Hospital, the expansion of the Temple Head & Neck Institute at Jeanes builds on the hospital’s strategy of giving local residents easy access to academic-level care in a community setting.

“It’s been a pleasure having them on campus, and it’s been wonderful for area residents who don’t want to travel downtown for advanced ENT services,” Dr. Hurowitz says. “They offer all levels of surgery—from straight-forward ear tubes to advanced laryngeal work and sinus surgery.

“They have also gotten very involved in our hospital’s Community Classroom lecture series, which offers free health lectures to the community,” he adds. “Overall, they have integrated very well with the hospital and its medical staff.”

In addition to meeting the needs of patients, Dr. Krouse comments that the presence of Temple ENT physicians on the Jeanes Hospital campus also benefits area physicians.

“I think we have done a good job meeting the needs of area physicians and have been very flexible in getting their patients seen quickly,” he says. “Our specialists also provide ENT support for the Jeanes Hospital Emergency Department and attend consults on the inpatient floors.”

Patient Breathing Easier, continued

endoscopic procedure which uses a laser to make small cuts in the inflamed tissue. Those cuts kept the tissue from tearing while Dr. Soliman used a saline-filled balloon to push the tissue back and open the airway. Medications were also injected and applied to decrease the likelihood of recurrence of tissue inflammation.

Green noticed the difference as soon as she woke up from surgery.

“Mommy, you can carry him now!” she recalls.

“After the surgery, I was carrying my then two-year-old son and my four-year-old said, ‘Mommy, you can carry him now!’”

Dr. Soliman notes that some patients, including Green, have recurrences of this condition that require additional procedures, but that overall it is a very effective method to address ISS.

“Though we don’t currently know the cause of ISS, we’re hopeful that research currently taking place will help determine the best therapy for the 1 in 400,000 patients who develop it yearly,” says Dr. Soliman, who is part of a group of researchers that maintain an ISS patient registry. “There are multiple steps to our research, but first we are looking at how these patients are treated, which can vary greatly from institution to institution.”
Weaving Quality and Safety into the Daily Lives of Residents

Discussions about quality and patient safety are no longer confined to hospital administrators and attending physicians. Today, these important concepts are woven into the daily lives of medical residents across the United States, including those within the Temple Head & Neck Institute.

“Educating residents about quality and patient safety is now an ACGME requirement across all fields,” says Nausheen Jamal, MD, Residency Program Director and Assistant Professor in Temple’s Department of Otolaryngology—Head and Neck Surgery. “This came about after the Institute of Medicine released several well-publicized reports on medical errors in the early 2000s.”

In recent years, Dr. Jamal began to think about how the Head & Neck Institute could further incorporate quality and safety into the daily lives of Temple’s ENT residents. She decided to shift the focus of quality analysis from retrospective to prospective.

“One of the ways we did this was to initiate a patient safety and quality improvement (PSQI) curriculum into the standing education our residents receive through our weekly seminar series,” says Dr. Jamal, who already oversaw a wide variety of quality-based activities within the department, including bimonthly peer-review meetings and development of quality-improvement projects.

“We have tried to make this as engaging as possible,” she continues. “One to two times a month the residents complete an interactive online module that introduces them to fundamental concepts of quality and safety. They then get together as a group for lectures or group discussions on those topics. These meetings might include guest speakers from health system leadership, discussions about real-life cases, hospital patient safety data review, and quizzes. The idea is that we talk about quality and safety before something happens instead of only analyzing a problem after it happens.”

One of the newest initiatives in the Head & Neck Institute involves independent group projects that carry forward the concepts taught in the online modules. Temple’s 11 ENT residents have formed themselves into small teams and come up with safety/quality topics that are of interest to them. They are currently about three-fourths of the way through this year-long project, which will conclude in June with group presentations.

“One of the teams noticed there was confusion in the ER about how to care for patients with total laryngectomies, a surgery that involves the removal of the entire voice box but retains an open stoma in the neck, similar to patients with tracheotomies,” Dr. Jamal says. “The ER staff wasn’t always clear about what was going on in these patients’ airways...why some patients have a tube in their stomas and some don’t. Our resident group put together an educational program for the staff and is now collecting data. This project addressed an educational gap and the residents submitted an abstract and will hopefully present their project at a state-wide meeting of the Pennsylvania Academy of Otolaryngology—Head and Neck Surgery later this year.”

Another resident project is addressing an ACGME safety issue—transition of care. Typically, when one resident goes off service and another comes on, the hand-off is largely verbal. The group is now working to create a standardized resident sign-out check-off list. The goal is to eliminate inadvertent “drops” during the transition from one resident to another.

Dr. Jamal says she is pleased with the shift she has seen in how Temple’s ENT residents approach the topics of quality and safety.

“It’s been very heartening to hear the residents using PSQI terminology when they talk amongst themselves,” she says. “It’s entering their mindset and means they are thinking of medical issues from a quality and safety viewpoint. That’s a positive change in culture.”
Alumni Update: Residency Turns into Lifelong Connection to Temple

When he began his otolaryngology residency at Temple in 1994, Farrel Buchinsky, MD, couldn’t have known that some of his attending physicians would become lifelong colleagues and mentors. One of those physicians he continues to collaborate with is Glenn Isaacson, MD, FAAP, FACS, who succeeded the legendary Max Ronis, MD, as Chair of Otolaryngology—Head and Neck Surgery during Dr. Buchinsky’s first year of residency.

“Dr. Isaacson is very academic—what he said was always backed up with research and data,” Dr. Buchinsky says. “If I ever challenged a point, he would always quote data from published articles and expect me to be able to do similarly.”

Dr. Isaacson also sparked Dr. Buchinsky’s interest in pediatric otolaryngology, which quickly became his favorite rotation. “Within all the specialties, I felt I could make the biggest difference in pediatrics,” he says.

Dr. Buchinsky remembers his time as a Temple resident as exhausting but exhilarating. He recalls his first month when he was on call with a senior ENT resident.

“I got into bed one night, I was on the top bunk and the senior resident on the bottom. He said, ‘I really hope the pager doesn’t go off.’ And I said, ‘Me too, but what I lose in sleep I gain in experience.’ The senior resident said ‘That may be true for you, but for me what I lose in sleep I lose in sleep,’” Dr. Buchinsky recalls with a laugh.

After leaving Temple in 1999, Dr. Buchinsky completed a pediatric ENT fellowship at University of Washington at Seattle. Today, in addition to directing the Pediatric Otolaryngology Program at Allegheny General Hospital in Pittsburgh, he leads the Allegheny-Singer Research Institute’s Respiratory Papillomatosis Program. He has maintained an international perspective in his research interests. Together with Dr. Isaacson, he has twice traveled to Ethiopia as part of a collaborative NIH-funded project on respiratory papillomatosis.

“Given what I wanted to do with research, there wasn’t a better position for me than where I am now,” says Dr. Buchinsky, who is an adjunct Associate Professor of Otolaryngology at Temple. “I’ve continued to collaborate with Dr. Isaacson, and I’ve been fortunate enough to stay connected to Temple through alumni and research weekends.”

“I’ve been fortunate to stay connected to Temple through alumni and research weekends.”

Dr. Farrel Buchinsky
The medical applications for 3D printing are growing at an extremely rapid pace. One of the latest areas of exploration involves printing the incus—the minute, anvil-shaped structure that is one of three bones in the middle ear.

Pamela Roehm, MD, PhD, Associate Professor of Otolaryngology and Director of Otology and Neurotology for the Temple Head & Neck Institute, is working with researchers in Temple’s Department of Biomedical Engineering to determine whether the use of a prosthesis created by a 3D printer is feasible. Their initial work will be published in an upcoming issue of the journal *Otology & Neurotology*.

“3D printing is increasingly able to produce near perfect replicas of the body’s own structures in a remarkably short amount of time and at a very low cost,” Dr. Roehm says. “Our idea is to give patients something that is customized and recreates the normal anatomy of the middle ear.”

Currently, the most common material used for reconstructing the ossicular chain and restoring sound conduction is the patient’s own incus bone. However, patients with chronic middle ear disease may not have tissue available for use.

The other option is a synthetic, mass-produced ossicular replacement prostheses, which does not take individual patient anatomy into account and is expensive.

“3D printing is very inexpensive, which means it doesn’t cost much more to print 10 than it does one,” Dr. Roehm explains. “This means we could go into the operating room with a range of sizes and get one that is an exact fit.”

“Our biggest challenge right now is the size of the incus…we are currently up against the range of what you can accurately print,” she continues. “But the technology is improving rapidly so we expect to have this ability in the near future.”

Dr. Roehm emphasizes that her work remains in its early stages and is still demonstrating that 3D printing of the ossicular bones is possible.

“The eventual goal, of course, is a more customized prosthesis that will lead to better hearing,” she says.
Geographic variation in clinical practice was first noted nearly a century ago by J. Alison Glover, who reported that a child living in Bexhill, England, was 27 times more likely to undergo a tonsillectomy than a child in a similar town miles away.

Since that time, geographic variations in care—from the types and number of tests ordered to the treatments provided—have been amply documented and associated with differences in costs. This variation in care may be related to different treatment philosophies, medical practice characteristics and patient expectations.

“For example, our research shows that similar patients with advanced larynx cancer are far more likely to undergo a total laryngectomy rather thanchemoradiation if they live in geographic regions with an academic medical center but not an accredited cancer center,” says Miriam Lango, MD, FACS, Associate Professor in Surgical Oncology and Otolaryngology at Fox Chase Cancer Center and the Lewis Katz School of Medicine at Temple University, whose latest research will be presented at the American Radium Society this year.

“Practice patterns also vary by institution in a single city, suggesting that institutional culture plays a role in healthcare delivery,” she continues. “Patterns of specialty care in otolaryngology may be related to the distribution of otolaryngologists and physician participation in specified healthcare plans.”

Taken together, such data suggests that provider preferences and the availability of services may drive the selection of treatment. She states, “It would be useful to know what practices and treatments result in better outcomes for patients.”

Dr. Lango acknowledges that efficient delivery of complex ENT care—particularly for head and neck cancer—remains a challenge.

“Theoretically, treatment that is tailored to the needs of the patient, rather than practices and preferences of the providers, should be cost effective,” she says. “The goal is to deliver cancer care personalized to patient and tumor factors as efficiently as possible.”

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**Temple ENT through the Eyes of a Resident**

When Gary Linkov, MD, started medical school at Columbia University College of Physicians and Surgeons, he planned to be an ophthalmologist. Today, he is nearing completion of his ENT residency at Temple.

“After finishing my ophthalmology and ENT rotations back-to-back I found that ophthalmology was solely focused on one structure and all the surgeries were microscopic...I liked that ENT offered a larger variety of cases and that the anatomy was so complex,” he says.

At Temple, Dr. Linkov found what he describes as a “very well-balanced program”—one that includes all the subspecialty fields and one in which a wide range of common and complex cases are present. He also received in-depth experience in trauma and plastic surgery, two areas that broadened his understanding of his chosen specialty.

“You have to be ready for anything at any time at Temple, there are highly complex cases here and patients with many co-morbidities,” he says. “You learn to deal with this early in your training, you’re not insulated because you’re a first or second year resident. This made me more confident and comfortable caring for very sick patients toward the beginning of training. It’s been great to handle such a wide variety of cases.”

Upon completion of his Temple residency in June, Dr. Linkov will travel to Washington University in St. Louis for a facial plastic and reconstructive surgery fellowship. He hopes to eventually return to his native New York City to practice as a facial plastic ENT surgeon.

“Everyone at Temple has been very supportive of my career goals. I didn’t know exactly what I wanted to do when I started at Temple, but the attendings, especially Drs. Krouse and Soliman, helped me figure it out. I feel very well prepared for the start of my independent career.”

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**Researcher Explores Geographic Variation in ENT Practice**

**Faculty Updates**

John H. Krouse, MD, PhD, MBA, was appointed as Senior Associate Dean for Clinical Affairs at the Lewis Katz School of Medicine at Temple University and President, Temple University Physicians (TUP)—November 2015. He was also appointed founding Editor-in-Chief of OTOOpen: The Official Open Access Journal of the American Academy of Otolaryngology—Head and Neck Surgery Foundation—September 2016.

John A. "Drew" Ridge, MD, PhD, FACS, was appointed President of the Medical Staff at Fox Chase Cancer Center—November 2015. He was also elected as the new President of the American Radium Society, the oldest academic group devoted to the study and treatment of cancer—May 2016.

Oneida Arosarena, MD, FACS, is the new Associate Dean for Diversity and Inclusion at the Lewis Katz School of Medicine at Temple University—July 2016.

Nausheen Jamal, MD, was appointed Residency Program Director for Otolaryngology—Head and Neck Surgery, Temple University Hospital—February 2016.

Elina Teskala, MD, PhD, MBA, was appointed Division Chief of Otolaryngology—Head and Neck Surgery at Jeanes Hospital—December 2016.

Miriam Lango, MD, FACS, was inducted as a Fellow of the Triological Society, representing membership in one of the most prestigious societies in otolaryngology—April 2017.

Jeffrey C. Liu, MD, FACS, was promoted to Associate Professor of Otolaryngology—Head and Neck Surgery, at the Lewis Katz School of Medicine at Temple University and Fox Chase Cancer Center—July 2016.

Paige M. Pastalove, AuD, CCC-A, FAAA, was promoted to Assistant Professor of Otolaryngology—Head and Neck Surgery, at the Lewis Katz School of Medicine at Temple University—July 2016.
Specialization Leads to Thriving Thyroid Practice

Since arriving at Temple Health from Vanderbilt University Medical Center three years ago, Christopher Fundakowski, MD, has established a thriving practice that is largely focused on endocrine surgery, specifically thyroid and parathyroid surgery.

“The majority of my practice is limited to this specific area, which has always been an interest of mine,” says Dr. Fundakowski, who is an Assistant Professor of Otolaryngology—Head & Neck Surgery at Temple and an attending surgeon in the Department of Surgical Oncology at Fox Chase Cancer Center.

Operating at both Temple and Fox Chase, Dr. Fundakowski specializes in tumors of the head and neck. He performs minimally invasive thyroid and parathyroid operations, but also major surgeries for patients with advanced-stage thyroid cancer.

“Really any kind of complication related to the thyroid or parathyroid, including invasion of the nerves, wind pipe, or lymph nodes in the neck. Some tumors we can remove from incisions smaller than one inch,” he says.

Many of the patients Dr. Fundakowski sees have overgrown or compressive goiters. One patient, with a seemingly natural large inch, “he says.

“Taking a minimally invasive approach through the patient’s neck, Dr. Fundakowski removed the tumor and avoided an open-chest operation. The patient is now back at work and doing well.

In other situations, thyroid surgery can be used to cure conditions such as Graves Disease, an autoimmune disorder that may produce many effects on the body, such as hair loss, itching, heat-intolerance, memory issues and palpitations. This was the case for a young patient whom Dr. Fundakowski recently treated.

The patient was concerned about the side effects of medical treatment, which may affect the bone marrow or liver and aren’t intended to be used long-term, as well as the effects of radioactive iodine, which is not desirable with those planning for children or with children at home. Dr. Fundakowski cured the patient immediately and permanently by removing the diseased thyroid.

According to Dr. Fundakowski, “the SEER database has reported the incidence of thyroid cancer to be rising at nearly 5% per year while the overall survival rate has remained fairly stable with death rates increasing less than 1% per year.” At the same time, “new guidelines for working up thyroid nodules have become somewhat more relaxed as we understand lower risk lesions,” he says.

“With 98% of patients surviving five years, we’re not performing as many biopsies on smaller nodules, and we are performing more conservative operations without sacrificing outcomes,” he says.

“Along those same lines, within the last year, a variant of papillary thyroid cancer has been reclassified as actually being benign. This has had significant implications in terms of clinical and psychological consequences for this specific set of patients. It’s rewarding to now tell these patients that they don’t have cancer and alleviate the stress that comes along with that diagnosis.”

“This is an exciting time to specialize in thyroid/parathyroid disorders,” he concludes. “There are dramatic advances taking place in imaging, genetic diagnosis, and surgical approaches, all of which benefit the patient greatly by providing a more tailored approach to their care.”

Dr. Christopher Fundakowski
Former Resident Helps Current Residents

When M. Masood Akbar, MD, reminisces about his time as a Temple Otolaryngology—Head and Neck Surgery resident in the mid-1970s, the first thing he mentions is his teachers. Max Ronis, Charlie Norris, and Emil Liebman spring immediately to mind.

“They were the pillars of my training,” says Dr. Akbar, who is now in private practice in Pottsville, Pa. “I feel that I owe a lot of my present-day success—both professionally and personally—to the great teachers and training I received.”

Dr. Akbar has never forgotten his experience at Temple. It’s why he continues to support the next generation of physicians through the department’s Resident Fund.

“My contributions to this fund enable Temple’s current otolaryngology residents to enhance their skills by attending courses, labs and conferences that fall outside the program,” Dr. Akbar says. “It adds another facet to their training and makes them more well-rounded.”

In addition to being a donor, Dr. Akbar regularly returns to Temple for the residents’ graduation and other meetings. He marvels at the growth of the Health Sciences Campus, the Department of Otolaryngology—Head and Neck Surgery, and the residency program.

“I enjoy meeting the young physicians and seeing how smart and energetic they are,” he says. “I feel it is my obligation to give back and support today’s residents. It gives me a great feeling of satisfaction.”

Dr. M. Masood Akbar