A music teacher finds her voice again

JoAnn Shook was struggling to make it through her busy days as an elementary music teacher, thanks to a major case of laryngitis and vocal weakness. She kept thinking that if she pushed through to winter break, she would get some rest and be able to return to teaching and singing with her students.

But after winter break in early 2014, her voice was no better. Shook really started worrying about her ability to do the things she loves: teach and sing.

“I was singing with such fear,” says Shook, who teaches kindergarten through sixth grade music in Burnsville-Eagan-Savage District 191. “Every time I opened my mouth, I thought, ‘I can’t sing like this.’ Singing had always been such a joy, and now it was a fearful experience. I couldn’t trust my voice.”

A friend suggested that she visit the Lions Voice Clinic at the University of Minnesota. With much trepidation, Shook made an appointment with Stephanie Misono, MD, MPH, an otolaryngologist who specializes in treating people with voice problems, and Deirdre (D.D.) Michael, a speech-language pathologist with a PhD in voice science. The clinic takes a multidisciplinary, team approach to treating patients with voice issues.

Michael and Misono assessed Shook’s vocal folds with video stroboscopy and discovered that her right fold had a severe hemorrhage. Misono prescribed steroids and a week of complete vocal rest to see if Shook’s body would heal on its own. She started therapy with Michael and took the rest of the spring off from teaching in hopes of returning to school healthy that fall.

By the summer, Shook felt much better. By the summer, the hemorrhage had disappeared and Shook was in much better shape vocally. When she went for a follow-up visit after returning to teaching in the fall, she learned that her vocal fold still had a small bleed. Shook could have opted to continue down a non-surgical path. But after Misono said she would be at high risk for another vocal hemorrhage—which could ultimately take away her ability to sing—Shook chose surgery. Misono performed laser surgery in late 2014 and successfully repaired Shook’s injured vocal fold. Soon after, Shook started speech therapy with Michael to promote healing and learn how to prevent future injuries. Shook believes this team approach to her care made all the difference.

“I learned to speak differently, I learned to sing differently, and I learned that trying to push through when I have laryngitis is absolutely the worst thing I can do,” Shook says. “You need someone to walk you through this and teach you the right way to use your voice and give you the confidence you’re doing that.”

Shook made a full recovery and returned to teaching after spring break this year. She made some changes to her teaching style, including using a microphone and speaker system with her students, and she benefitted from a school renovation that made her classroom soundproof. Now she sings in her church choir, directs her school’s choir, and enjoys teaching and singing without fear.

“It’s hard to find someone who understands singing and understand what you do as a teacher and how much you use your voice. That’s why I went to the Lions clinic,” Shook says. “I’ve had such a wonderful outcome. They saved my career and they saved my love of singing. That’s huge for me.”
William Merrick, MD
Opening doors for residents to train with leading physicians

Otolaryngologist William Merrick, MD, had the opportunity of a lifetime when he was a resident at the University of Minnesota in the 1960s. The department paid his way to travel to New York and study with some of the most preeminent surgeons in the field.

They were formative weeks where Merrick and other residents learned from the best of the best without having to worry about expenses. They delved into rhinoplasty with one of the pioneers of the procedure, Dr. Irving Goldman, and studied with Dr. John Conley, an innovator in head and neck cancer surgery and reconstruction.

Now retired from his otolaryngology practice in Duluth, Merrick wanted to give back to the program that trained him. He recently donated funds to the Department of Otolaryngology–Head and Neck Surgery at the University of Minnesota so that current residents could travel to train with outside experts.

“[I] just wanted to give something back to the University,” says Merrick. “It was a great residency program. The years I was there, it was probably the best residency program in the country.”

Merrick appreciated the multifaceted training he received during his residency. That included repairing head and neck trauma at Anchor Hospital in St. Paul, treating cancer patients at the VA Hospital in Minneapolis, and working with Jerome Hill, MD, at his otolaryngology practice in St. Paul.

“They were awful good to me, and because of them I had a really successful practice in Duluth,” Merrick says.

The University prepared him well to start his own practice in Duluth fresh out of residency in 1963. Offering a full range of otolaryngology services and head and neck surgery, Merrick grew the practice to include four physicians.

The early 1960s was an excellent time to start a practice, as many specialists then offered ophthalmology in addition to ear, nose, and throat services. Many physicians started focusing on the eyes, leaving plenty of ENT patients for Merrick. A native of Winnipeg who graduated from University of Manitoba College of Medicine, Merrick also enjoyed having access to the great outdoors and copious hunting and fishing in the Northland.

When Merrick made his donation to the U, he made a similar gift to his medical school alma mater. At University of Manitoba, the funds from Merrick will go toward updating the college’s dissection labs, which Merrick says have barely changed since he was a student.

Merrick intends that his gift to the U will finance short-term training for residents with renowned specialists in otolaryngology and/or head and neck surgery. When he studied with Goldman, Merrick learned some of his rhinoplasty techniques and applied them in his own practice, where he did the procedure frequently.

“You’re dealing with the dean or the most eminent person in the field and getting to do some training with that person. They are quite knowledgeable and experienced,” says Merrick. “The University didn’t have these training programs for a long time, so I thought this would be a good thing to seed funds for.”

Merrick knows from first-hand experience how valuable such training can be for developing physicians—and their patients.
Peter Santi, PhD
Guided by inquiry and discovery

Forty years into researching the anatomy of the ear, Peter Santi, PhD, still gets a kick out of making discoveries. He has racked up numerous findings about the inner ear, especially related to the cochlea, and he enjoys finding new ways to uncover the mysteries of the inner ear and learning new things about this hard-to-access organ.

If you’re adaptable, you can use different methods that show you different ways of looking at something, and then you can discover new things. It’s a challenge.

Santi, a professor of otolaryngology whose doctorate is in biological sciences, serves as director of the Cochlear Anatomy Laboratory. He has made many discoveries over the years by focusing on the relationship between cochlear damage and hearing loss. Much of Santi’s early work centered around determining safe levels of sound exposure for the ear, finding that it’s not just sound intensity but frequency and duration that can be dangerous.

One of Santi’s projects found that a lack of collagen in the cochlea causes sensory hearing loss in people with Alport syndrome, a kidney disease. Another important discovery related to ototoxicity in patients with kidney infections. Many people suffered damage to their ears after taking antibiotics and diuretics at the same. Santi’s studies with chinchillas contributed to a body of work finding that giving these medications simultaneously causes permanent hearing loss; taking the medications six to eight hours apart protects hearing.

“I like being on the cutting edge of research methods and I like finding new things,” Santi says. “If you’re adaptable, you can use different methods that show you different ways of looking at something, and then you can discover new things. It’s a challenge.”

More recently, Santi teamed with German engineering students to develop a thin‐sheet laser imaging microscope. It visually captures whole cochleas from animals as small as mice to as large as humans. Past devices might image 20 separate sections. But Santi’s microscope takes hundreds or thousands of serial images of an entire cochlea, providing fundamental information about its structure and anatomy.

“There are a couple other light‐sheet microscopes in the world, but ours is unique,” Santi says. “Most are designed for imaging very small, live specimens, like embryos or cells. Ours is designed to image very large specimens.”

The images captured by this microscope are so striking, they have appeared on the covers of five scientific journals and in museums. Unlike other organs, which can be biopsied, transplanted, and explored in multiple fashions, the inner ear is highly inaccessible and still open for navigation. That’s why Santi is so excited about his lab’s light‐sheet imaging, noting that understanding of the ear “has always been behind the eye and other structures because it’s harder to get to.”

Santi also is investigating human temporal bones in the ear by removing all of their cells. This work prompted new discoveries about its anatomy, including detailing the basilar membrane and its function. Next, he plans to explore whether it’s possible to take that decellularized tissue and grow stem cells on it, in hopes that they would develop into auditory cells. Those cells then would be transplanted into the ear to see if hearing gets restored. Santi is pursuing grant funding to do more research on stem cell therapy for the ear.

Santi thrives off of working with students and making discoveries. “I like seeing things in different ways and learning new things about the ear,” he says. “That keeps me going.”

Image from Dr. Santi’s thin‐sheet laser imaging microscope.
Rick Odland, MD, PhD
The new chief at Hennepin County Medical Center

When Rick Odland, MD, PhD, took over as chief of otolaryngology at Hennepin County Medical Center, he vowed to make the hospital’s ENT division the most innovative in the country. That mission has a broad reach—including research, innovation in care, and hiring new staff. Odland is at the helm, guiding all of these efforts.

He stepped into the role after serving as assistant chief for two years, providing a continuity of leadership as Hennepin goes through significant changes. The multispecialty group that employed the hospital’s physicians, Hennepin Faculty Associates, merged three years ago with HCMC. In addition, the hospital is currently constructing its new Ambulatory Outpatient Specialty Center. When it opens in 2018, the center will consolidate 40 specialty clinics under one roof in downtown Minneapolis.

In Odland, HCMC has a 20-year veteran of the hospital. He specializes in facial plastic and reconstructive surgery, especially trauma. And with the hospital serving as a Level One trauma center, Odland operates regularly on a multitude of patients with significant facial injuries. He also does general otolaryngology.

But trauma remains his first love. “I really enjoy it,” Odland says. “Often with other medical conditions like cancer, there are controversies about the best treatment for a particular case. Do you do surgery or radiation? With facial trauma, there is one way to put it back the way it was. All you have to do is figure out how to get it there.”

We want to make sure residents have a good experience here. I think otolaryngology is a good model for how to get along.

Odland is no stranger to leadership and innovation. He has served as medical director of HCMC’s Ear Nose and Throat Clinic since 1997 and has been a Minnesota Academy of Otolaryngology board member since 2005. In addition, Odland always puts a strong emphasis on research.

Building off his interest in wound healing, Odland investigated microporous catheters and their ability to reduce edema and improve tissue after cancer or trauma surgery. Some of his findings led to the development of hollow fiber catheter technology. They served as the underpinning for a company, Twin Star Medical, which Odland co-founded and where he continues to serve as medical director.

Odland currently is involved with research at HCMC about fluid pressures in the ear when people rotate their heads and another regarding the effect of low-frequency pulsations on inner-ear fluids. A third initiative uses a 3-D printer to create models for repair of fractured facial bones, which eventually will help surgeons use sterilized pre-fit plates to save time and improve outcomes.

As chief of otolaryngology, Odland is focusing on empowering all staff to get involved with improving patient care, processes, and efficiency. He also devotes time to recruiting new providers to build an even more robust department and maintaining strong relations with the University of Minnesota Department of Otolaryngology–Head and Neck Surgery, where he is a professor.

“We want to make sure residents have a good experience here,” says Odland, who completed his residency at the U. “Hennepin in general is a major teaching hospital for the U, and Hennepin would like to maintain good relationships with their other University departments. I think otolaryngology is a good model for how to get along.”

An Innovative Space for Patient Care

Patients can expect a more personalized experience when the 342,000-square-foot University of Minnesota Health Clinics and Surgery Center opens in late February.

With a wide range of specialists located in one, easy-to-access location, the center is designed for collaboration and will allow providers to work together seamlessly to meet each patient’s unique needs.

Most of the outpatient clinics now located in the Phillips-Wangensteen Building on the University’s East Bank campus will move to the new facility, which is just blocks away from I-94. It will house adult outpatient clinics, diagnostic and treatment services, and a same-day surgery and procedure center.

Patients will find the same innovative care from U specialists and will still have access to the latest treatments, technologies, and clinical studies at the new Clinics and Surgery Center—as well as extended clinic hours, more convenient scheduling, and easier parking.

Research and education at the University of Minnesota fuel the breakthroughs that make care with University of Minnesota Health exceptional. Visitors to the center will be able to see how academic medicine is changing the face of health care, now and in the future. They’ll also learn about biomedical research and clinical studies at the U from digital displays incorporated throughout the building.

2015 Clinical Teacher of the Year—Sam Levine

October 12th celebrated Dr. Sam Levine’s richly deserved award as he was recognized as clinical teacher of the year by the University of Minnesota Medical Center. Dr. Levine has been a favorite of residents and medical students for many years for his teaching style, humor and enthralling stories. Congratulations to Dr. Levine!

Philanthropy Corner

As the year closes, many of us give thought to the various charitable priorities that we value. As you and your families make your annual decisions, please consider the department in your giving priorities.

Your support helps us to develop an internationally prominent faculty, deliver leading-edge clinical care, train residents and fellows, and continue to make the discoveries that will change the future of otolaryngology—and, especially, the lives of people that turn to our talented clinical team for answers to what are often the most complicated, challenging medical problems imaginable.

If you have any questions about how to make a difference with your money that is meaningful to you in ENT research, education and care, please do not hesitate to contact me directly at: 612-282-7785 (cell) or at csemrow@umn.edu.

Also, if you are in the process of making your estate plans, I would welcome an opportunity to visit with you about how you can make an enduring impact and establish a lasting legacy with a bequest, gift of life insurance or income generating planned gifts such as charitable gift annuities.

Happy Holidays and all the best for a healthy and prosperous New Year.
—Chuck Semrow, Director of Development for Otolaryngology