

## Raise Your Voice



*Diane Bless, director of UW Health's Voice and Swallow Clinic, examines stroboscopy skills with speech pathologist Rita Patel.*

*UW Health's Voice and Swallow Clinic helps a wide range of patients conquer vocal problems*

According to researchers, between 10 and 25 percent of school teachers contemplate changing careers—not because of stress, low pay or dissatisfaction, but because of how taxing the job is on their vocal folds.

And it's not just teachers who are struggling to raise their voice. Some 46 million people in America suffer from some kind of vocal problem—singers, motivational speakers, coaches, construction workers, lawyers and corporate executives who rely heavily on their voices in the course of a

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work day. Many endure hoarseness (and much worse) because they don't recognize their situation is treatable.

"Unfortunately, we have too wide an acceptance of what constitutes a healthy voice," says Diane Bless, a UW Health speech pathologist and director of the UW Health Voice and Swallow Clinic. "People think that if they can speak well enough to communicate, then that's okay. When they come in to see us, they often have a major problem because they've waited too long to seek treatment."

The voice problems Bless and her colleagues see range from hoarseness and reduced vocal range (dysphonia) to patients who have no voice at all (aphonia). Some cases can be corrected in as little as an hour. Others may require multiple sessions of behavioral management or, in more serious cases, surgery or some other form of medical management.

Bless says it's common for people to compensate for vocal problems like laryngitis or stiffened vocal cords by shifting their posture. Some patients don't appreciate

that they're using their voice in the wrong way until they begin to do what experts call vocal loading—hitting the larynx with additional force to project the voice further.

Sherri Zelazny, a UW Health speech-language pathologist, oversees several occupational treatment and training programs. She's convinced that the key to raising damaged voices lies in raising awareness—among both patients and primary-care physicians.

"We really want people to understand how important having a good voice is," she says.

Many voice disorders don't have an obvious lesion or pathology. These are classified as muscle tension disorders—situations in which the patient's vocal cord muscles are simply being used incorrectly. In those cases, behavioral management—such as re-posturing the larynx to allow better phonation or a specific neck massage to help loosen larynx tension—can make a significant difference.



*Sherri Zelazny performs a vocal diagnostic on a teacher suffering from a vocal fold lesion.*

Sometimes, fixing a vocal problem can be a matter of changing head position, or changing how, what and when a patient eats (acid reflux is a common cause of vocal problems). Other patients need to be taught specific vocal skills. "Coaches and construction managers have to learn to yell so they don't wound their voice," notes Bless.

Other problems may be more medically serious. These are the patients who have vocal nodules or blisters on their vocal cords. Sometimes the lesions are

congenital, benign, and don't require surgery. More complicated cases can be treated in the operating room, or on an inpatient basis with UW Health's groundbreaking pulsed-dye laser (see accompanying story, page 3).

The bottom line, says Bless, is that help is available.

Bless and her colleagues see patients at several ENT clinics in Madison. To learn more or make a referral, call **(608) 263-6190** or visit **uwhealth.org**.



## MAZE

### *New atrial fibrillation treatment unravels complex patients*

**A**trial fibrillation, a condition that affects more than 2.2 million Americans, is like an electrical storm within the heart. As the heart's upper chambers quiver and send chaotic impulses, patients feel fatigued and find themselves at increased risk for stroke.

In recent years, medication and electrical stimulation have topped the list of standard methods to restore the heart's regular rhythm, and, in difficult cases, to reduce the risk of patient stroke by thinning the blood. Now, cardiovascular surgeons at UW Hospital and

Clinics offer a new minimally invasive surgery that broadens patients' options.

The procedure is called Maze, named for the "maze" of new electrical pathways that are created to carry impulses through the heart. Surgeons can perform the procedure during open heart surgery, or laparoscopically by entering the chest through small holes between the ribs just under a patient's arm. Guided by lighted tubes, they microwave areas of the heart, creating scars that isolate the quivering portions. Over the ensuing six

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## laser precision

*Using pulsed-dye  
technology to help  
voice patients*



Every Tuesday afternoon, Seth Dailey, MD, gets to experience the future of his profession first-hand.

That's the day that Dailey, a UW Health voice surgeon (laryngologist), treats vocal-cord patients with a 585 nm pulsed-dye laser, a tool designed by dermatologists to treat small vascular lesions in infants. Recently, otolaryngologists have begun using the laser to revolutionize the care of patients suffering from conditions such as laryngeal papillomatosis and leukoplakia.

"Basically, the laser allows us to treat patients in the office instead of the operating room," explains Dailey. "It allows us better use of resources. There's no need for general anesthesia for adult patients, some of whom may have a risk of heart attack and stroke. There are no chipped teeth from the laryngoscope, no funny feeling in the throat, no time off from work. Typically, patients are in and out within 30 minutes."

The laser passes through a working channel in a slightly larger version of the flexible fiberoptic scope physicians use to diagnose voice disorders. The larynx is first dosed with topical anesthetic to minimize discomfort.

In patients with papilloma, the most common benign tumor of the larynx, the laser targets red blood cells, which absorb the energy and coagulate, cutting off the blood supply to the tumor. Papillomas occur most often on the vocal cords themselves; depending on the location, a mass as small as one millimeter can have a devastating effect on the voice.

"You're essentially photo-embolizing the tumor," explains Dailey. "Because the laser is very delicate, it doesn't induce much scarring. In fact, it may even reduce scarring by reorganizing collagen."

Leukoplakia, the second condition that doctors now treat with the pulsed-dye laser, occurs when changes in the underlying epithelium cause white-colored keratin to build up on the surface of the vocal cord.

"The epithelium often becomes pre-malignant, similar to precancerous cervical cells in women," explains Dailey. "This is a red flag that we need to address that area."

Since the underlying epithelium can't be easily seen, the traditional treatment involves vocal cord stripping, a painful process in which oscillatory tissue is literally stripped away with

a biopsy forceps, creating vocal cord scars. After several biopsies, patients are often rendered irreparably hoarse.

The laser, by contrast, introduces a mild injury to the area, which is then replaced by normal epithelium, the same way a skin abrasion will heal with normal tissue. The regression of white lesions tells doctors that the underlying problem is being treated.

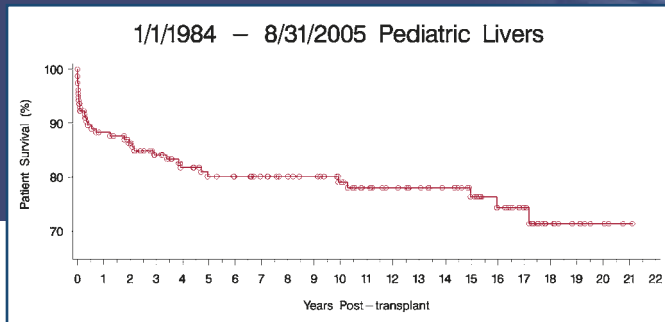
"For people who have already been biopsied and found not to have cancer, this is a great choice," explains Dailey. "You save people the ambulatory surgery, the anesthetics, the discomfort. Basically, they're in and out."

Doctors at UW Hospital and Clinics are also excited about other medical possibilities. The laser may prove useful in treating prominent vessels, polyps and lesions in areas that aren't critical for voice formation, as well as pre-existing vocal cord scars.

"All of this is on the horizon," Dailey says. "We're really on the cutting edge of what's possible."

For more information about the pulsed-dye laser or to make a referral, call **(608) 263-6190** or visit **uwhealth.org**.

# Prolonging life through liver transplant



It's no wonder that Stuart Knechtle, MD, a UW Health transplant surgeon, beams as he breaks out the charts and graphs: A five- and ten-year pediatric patient survival rate that tops 80 percent is a statistic of which any transplant program would be proud.

"We have extensive experience with different techniques of transplantation," says Knechtle. "And we also have a great group of nurses, transplant coordinators and clinic staff." That expertise is making a critical difference for patients as young as eight weeks old—patients who, facing a dire situation, now find themselves contemplating normal, healthy lives.

The liver transplant program at UW Hospital and Clinics began in 1984, when Munci Kalayoglu, MD, began performing pediatric transplants in children with biliary atresia, the most common cause of liver failure in children. In the intervening 21 years, surgeons at UW Hospital and Clinics have performed 194 pediatric liver transplants.

Today, five transplant surgeons—Knechtle, Anthony D'Alessandro,

MD, Luis Fernandez, MD, Thomas Chin, MD and Kalayoglu routinely perform deceased-donor split-liver transplants (in which a piece of a large adult liver is resected and transplanted into a child), as well as living-donor transplants. The surgeons also handle an increasing number of multi-organ transplants, including liver-heart, liver-kidney, liver-intestine and liver-pancreas.

Liver transplantation remains a fairly young specialty—the first successful liver transplant was performed in 1960. On the national level, the longest liver-transplant survival is 34 years; at UW Hospital and Clinics, the oldest surviving patient received her liver transplant 22 years ago.

"I don't think many physicians realize how effective pediatric liver transplants are," says D'Alessandro, who directs both the UW Hospital pediatric liver transplantation program and the UW Hospital Organ Procurement Organization. "Early on, people were often not referred for transplant early enough. However, that has improved over the years."

So has the recovery process. While pediatric liver transplant patients

must remain on immuno-suppressant medications following surgery, most return to school and normal social interaction within a month or two. Using advanced immunosuppressant drugs—many of which were discovered and developed through clinical trials at UW Hospital and Clinics—Knechtle and his colleagues have been able to reduce reliance on steroids, which carry the risk of stunting growth and delaying normal physical development.

Knechtle and D'Alessandro agree that as physicians become more proactive in recognizing symptoms earlier, long-term survival rates will continue to improve.

"A physician typically thinks of liver transplant as a last resort—they're likely to wait until the patient has serious complications," explains Knechtle. "Liver failure is such that you can do pretty well with only 10 percent of organ function. But when you lose that last 10 percent, you fall off the cliff pretty fast. It's safer for the patient to be referred before they get to that point."

To learn more about the pediatric liver transplantation program at UW Hospital and Clinics, or make a patient referral, contact **(608) 263-1384** or visit **[uwhealth.org/transplant](http://uwhealth.org/transplant)**.



Stuart Knechtle, MD



Anthony D'Alessandro, MD

The number of children who experience renal failure and require a kidney transplant represents only 1.3 percent of the total number of kidney transplants performed in the United States each year.

But when your child or your patient is the one who needs the new kidney, that numerical perspective changes dramatically. You need top-notch expertise—the kind found in the transplant program at UW Hospital and Clinics, one of the nation’s leaders in performing pediatric renal transplants.

“With regard to pediatric patient volume, we are in the top 15-20 percent in the country,” says Sharon Bartosh, MD, a UW Health pediatric nephrologist and professor of pediatrics at UW School of Medicine and Public Health, who directs the pediatric kidney transplant program at UW Hospital and Clinics. Hans Sollinger, MD, chief of transplantation at UW Hospital and Clinics, along with the other transplant surgeons, perform 10-14 pediatric kidney transplants each year, and their volume is matched only by their level of success.

“Our one-year graft survival over the past seven years is more than 95 percent,” says Bartosh.

A team of multidisciplinary specialists works together to seamlessly transition a renal failure patient to a thriving, healthy life. Pediatric transplant nephrologists work closely with Beth Spaith, RN, the program’s transplant coordinator, to meticulously monitor the patient’s post-transplant care and immunosuppression.



## On the cutting edge

### *Kidney transplant program excels in immunosuppression techniques*

The majority of pediatric kidney transplants at UW Hospital and Clinics are living-donor transplants, with the child’s parents or a relative providing the organ. Expertise in laparoscopic donor nephrectomy, a relatively new surgical technique which is both less painful and less invasive, has allowed for fewer complications and a speedier recovery for the donor. Immediate post-transplant care is provided in the hospital’s state-of-the-art Pediatric Intensive Care Unit, although the majority of children are discharged from the hospital within one week.

“Because of the extremely large volume of adult kidney transplants performed at UW

and extensive participation in clinical trials of new medications in adults, our center is able to gain substantial experience quickly with new drugs. A surprisingly large amount of that knowledge transfers well to the pediatric population.”

The University of Wisconsin Children’s Hospital is part of the National Institutes of Health-sponsored consortium of Cooperative Clinical Trials in Pediatric Transplantation. In addition to participation in national multicenter trials sponsored through the consortium, Bartosh presides over several investigator-initiated studies, including a pilot trial of a steroid-

free immunosuppression protocol in children.

“Although steroids are a very useful immunosuppression agent, they come with a host of undesirable side effects, particularly for children,” says Bartosh. “They can retard normal growth, have detrimental effects on bone, increase the risk of cardiovascular disease, and cause cataracts.”

Following an extensive, successful experience in adults, UW Hospital and Clinics was the first transplant center to use Campath-1H in pediatric kidney transplant patients. Drawing from that experience, Bartosh and her colleagues are currently testing whether the relatively new immunosuppressive drug Campath will allow physicians to avoid using corticosteroids to help children avoid organ rejection—much as they have in adults.

For more information on the pediatric kidney transplant program at UW Hospital and Clinics, call **(608) 263-1384** or visit **[uwhealth.org](http://uwhealth.org)**.

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# Replace or repair?

*A shift in thinking on Mitral Valve Regurgitation suggests early intervention is key*



**R**eplace or repair? Wait, or intervene surgically? How soon is too soon?

These are the questions surgeons have grappled with when deciding how to correct mitral valve regurgitation, the condition in which a damaged heart valve leaks blood back into the area around the lungs. While conventional wisdom has suggested waiting is the better choice, Niloo Edwards, MD, UW Health cardiothoracic surgeon and chair of cardiothoracic surgery at UW Hospital and Clinics, says that recent studies—and his own extensive experience—now suggest otherwise.

“Traditional timing has suggested that we wait until the heart is showing signs that it’s not working well,” says Edwards. “More recent studies suggest that even before the patient starts having symptoms, damage is being done to the heart. If the valve is repairable and the patient is leaking a severe amount, we should go ahead and repair the valve.”

The longer a patient waits to receive treatment after showing symptoms (including shortness of breath, swelling of the legs, easy fatigue) the poorer his or her outcome is likely to be, even if valve repair is successful.

Edwards explains that when repair is possible, it’s also preferable to valve replacement,

because it preserves the heart’s natural geometry and is often a more permanent solution.

Replacement involves removing the natural valve and replacing it with a valve from a pig or with a mechanical one, a treatment that comes with significant drawbacks. Pig valves last only 10-12 years, often requiring a second replacement surgery. Patients who choose mechanical valves, meanwhile, must often use blood thinners, a poor option for patients with bleeding ulcers or patients who hope to stay active or travel frequently.

Edwards, an international expert, has successfully repaired 87.5 percent of the damaged valves that have come his way—more than twice the national average of 40 percent.

“We’re certainly not advocating that everyone who has a leaky valve needs to have it fixed right away,” says Edwards. “But it’s essential for patients to see a physician who has experience with leaking valves who can assess it appropriately.”

To learn more about mitral valve repair or to schedule a consultation, call **(608) 263-0439** or visit **uwhealth.org**.

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months, the scarred areas permanently block the irregular electrical impulses.

About 80-85 percent of patients with atrial fibrillation are cured after having the Maze procedure. That rate climbs to almost 95 percent when Maze is combined with a catheter-based or medical treatment.

“Anybody who has atrial fibrillation owes it to themselves to see whether this is an option for their condition,” says Niloo Edwards, MD, a UW Health cardiothoracic surgeon who leads UW Health’s cardiothoracic surgery program.

“There are a lot of people out there who have been told that nothing can be done for them. This is an excellent option for the right patient.”

Patients appropriate for the Maze procedure include those who can’t tolerate drugs, whose life is limited by drugs that help control the irregular current in the heart, or whose hearts continue to slip back into an irregular rhythm.

The atrial arrhythmia program at UW Health is an integrated medical-surgical program. Patients are evaluated by an electrophysiologist and a cardiac surgeon who work together to

recommend the best blend of medical, catheter-based, pacemaker and surgical options.

Physicians interested in learning more about the Maze procedure can visit **uwhealth.org/heartandvascular** or call **(608) 263-0439** to schedule a consultation.



# A New Option for Cancer Care

The UW regional cancer center network expanded in October with the opening of UW Cancer Center - Johnson Creek, a 14,300-square foot, state-of-the-art cancer treatment facility located between Madison and Milwaukee, just south of Interstate 94 and Highway 26.

UW Cancer Center-Johnson Creek is a community partnership among Fort HealthCare, Watertown Memorial Hospital and UW Health, intended to give area patients and families convenient access to current research and treatment protocols in a nurturing environment.

The new UW cancer center will offer cutting-edge treatment and help patients navigate the complicated process of receiving quality cancer care. The center's specific services will include chemotherapy, radiation therapy and access to clinical trials, as well as on-site intensity modulated radiation therapy (IMRT) and treatments that combine medical imaging, 3-D simulation, treatment beam shaping and respiratory monitoring. The center will include support groups, educational programs, complementary medicine and a comfortable décor.

Michael (Eli) Eastman, MD will serve as the center's medical oncologist and medical director, and Deepak Khuntia, MD will be the center's radiation oncologist.

To learn more about UW Cancer Center-Johnson Creek, visit [www.uwjohansoncreek.org](http://www.uwjohansoncreek.org).

## No Sweat

*Surgical technique provides relief to those with overactive sweat glands.*

*Surgeons expose the sympathetic chain by removing the overlying pleura.*

Patients suffering from hyperhidrosis, the condition in which overactive sweat glands can interfere significantly with everyday life, are discovering thoracic sympathectomy, a surgical method available at UW Hospital and Clinics to correct the problem.

Surgeons make a pair of five-millimeter incisions on each side of the patient's body, one under the pectoral muscle and one in the armpit. Using a telescopic camera, they locate and remove a two-inch piece of the sympathetic chain, the part of the body that controls the distribution of sweat to the hands and feet, literally cutting off the supply of sweat.

Following the procedure, patients no longer sweat on their hands or armpits. The rest of the body continues to sweat normally, so there is no added risk of overheating during strenuous activity. Although the procedure requires a general anesthetic, patients often go home the same day.

"Patients with hyperhidrosis can sit still and literally drip," explains Tracey Weigel, MD, a UW Health thoracic surgeon who performs the surgery several times each month. "Some patients can't write their paperwork because they smear it, or can't pick things up because they get so slippery. Others have to change their clothes multiple times a day. It's not just a little sweating—it's an amount that makes routine activities very difficult."

According to Weigel, thoracic sympathectomy is 95 percent effective—in fact, some patients' hands become so dry that a little hand lotion often helps to keep skin from cracking.

About a half to a third of patients may experience a small increase in sweat elsewhere on their bodies, usually on the torso, back or legs. "Most patients find that sweat in those areas of the body is more socially acceptable than on the hands or face," says Dr. Weigel.

Hyperhidrosis often affects individuals in their 20s and 30s, although Weigel has operated on a patient as young as 11. Interestingly, Weigel has noticed an increase in patients requesting the surgery who have tried to manage their hyperhidrosis with Botox, the toxin popularly used to relax muscles and erase facial wrinkles. While Botox is effective in controlling hyperhidrosis, patients must come in every 4-6 months for another round of often uncomfortable injections.

"When Botox came out, a lot of people came out of the woodwork, saying, 'I've had this problem, help me,'" says Weigel. "When they find out what Botox entails, or decide they don't want to go through it again, they come to us."

To learn more about thoracic sympathectomy, call **(608) 263-7502** or **265-0499** or visit [uwhealth.org](http://uwhealth.org).



**UW Hospital and Clinics** has been named the top-performing academic hospital in the United States, based on a national benchmarking study by the **University HealthSystem Consortium**, an alliance of the top academic health centers in the United States and their affiliated hospitals.

The 92 UHC member organizations were rated in four key areas:

- Safety – based on 15 nationally recognized patient safety indicators and procedures;
- Mortality – comparing the actual rate to the rate that would be expected based on severity of patient illness;
- Effectiveness – performance on JCAHO core measures and other indicators such as surgical readmission rates; and
- Equity – based on disparities in outcomes related to race, gender or ability to pay.

UW Hospital and Clinics ranked well in each of the areas examined, and outperformed all other UHC organizations in the category of patient mortality. UW Hospital and Clinics also received the top composite score.

Four other academic centers—the Mayo Clinic, Brigham and Women’s Hospital in Boston, Rush University Medical Center in Chicago, and Truman Medical Centers in Kansas City—were also in the top-performing group.

**Med Flight**, UW Hospital and Clinics emergency helicopter service, has a new rooftop home.

In late October, a new helipad and hangar opened on the roof of UW Hospital and Clinics, creating space for a total of four emergency helicopters and relocating the critical care transport service out of the way of vehicular traffic near the entrance to the emergency department.

Side-by-side helipads will allow for faster and more efficient response to major accidents, as



each aircraft can now take off and land simultaneously. Upon landing, Med Flight patients will be transported down a dedicated elevator to their destinations.



*Dr. Ellen Wald, MD*

**Ellen Wald, MD**, has been named chair of pediatrics at the University of Wisconsin School of Medicine and Public Health and chief of pediatrics at the UW Children’s

Hospital. Wald, who comes to Madison from Children’s Hospital of Pittsburgh, assumes her duties in January 2006.

The **Heart and Vascular Care** program at UW Hospital and Clinics has been honored in **Solucient’s 100 Top Hospitals: Cardiovascular Benchmarks for Success Study** for 2005.

The top 100 programs were chosen from 900 hospital cardiovascular programs nationwide, ranked on 10 separate weighted measures of heart and vascular care.



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