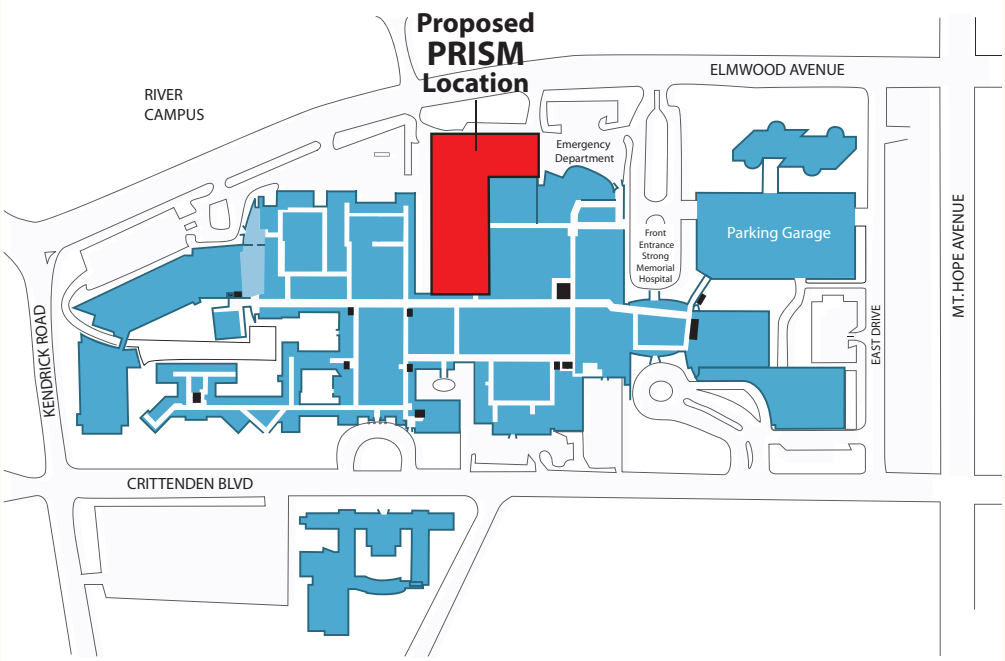
UNIVERSITY OF ROCHESTER MEDICAL CENTER
STRONG HEALTH
FOR PHYSICIANS AND HEALTH PROFESSIONALS
WINTER 2008
CONNECTION

IN THIS ISSUE



UNIVERSITY OF ROCHESTER MEDICAL CENTER
STRONG MEMORIAL HOSPITAL

URMC APPLIES TO STATE FOR MAJOR PATIENT CARE EXPANSION

Project to Ease Overcrowding, Enhance Children's Care and Enable Regional Growth

In response to a need for more patient care space, the University of Rochester Medical Center (URMC) has applied to the New York State Department of Health for the largest clinical expansion in Strong Memorial Hospital's history.

The Medical Center is requesting permission to boost its licensed bed capacity by 123 beds, from 739 to 862 beds, adding a six-story tower adjacent to Strong Memorial Hospital. The 330,000-square-foot addition would house 56 beds for Golisano Children's Hospital, an additional 56 adult beds for Strong Memorial, two floors for imaging sciences including a dedicated area for pediatric patients, plus an expanded pharmacy and other support space. Once the tower is complete, the 48,000-square-foot space currently occupied by the Golisano Children's Hospital would be converted to beds for up to 67 adults.

The proposed expansion, named the PRISM project for Pediatric Replacement and Imaging Sciences Modernization, forms one of the cornerstones of the Medical Center's proposed five-year strategic plan. Because of the severity of Strong Memorial's space needs, URMC leaders have begun the application process for the PRISM while working with the University trustees for final approval of the project and the full strategic plan. Preliminary estimates are that the two-phase project will tally approximately $250 million.

"Increasing demands for beds due to our concentration of high-intensity services such as complex surgical care, transplant and trauma, as well as an aging population, routinely cause us to exceed our current bed capacity," said URMC CEO **Bradford C. Berk, M.D., Ph.D.** "For the last several years we have struggled to make room by renovating small

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numbers of beds. It has not allowed us to provide ready access to the kind of high-quality, private, and respectful care that our patients expect and deserve. Nearly everyone knows someone who has been admitted here who's had to endure long stays in our Emergency Department waiting for an inpatient bed. That's simply not acceptable for our community or region."

URMC has begun planning of the proposed facility as it is reviewed by the New York State Department of Health and the University Trustees. If approval is received, construction will begin around July 2009, with completion of the new building in 2012 and renovation of the space in Strong Memorial Hospital in 2014.

Demand Outstrips Space

Over the last 10 years, Strong Memorial Hospital has witnessed a steady increase in discharges, along with a rise in the number of patients coming from outside of Monroe County. Today, nearly one-third of its patients travel to Rochester from outside of the area as smaller, outlying hospitals have come to rely on Strong, particularly for patients needing complex, intensive care. Strong is the region's sole provider of a variety of advanced services such as solid organ transplant, severe trauma and burn care, cardiac subspecialty care, and more. In addition, it cares for more indigent patients than any other hospital in the region.

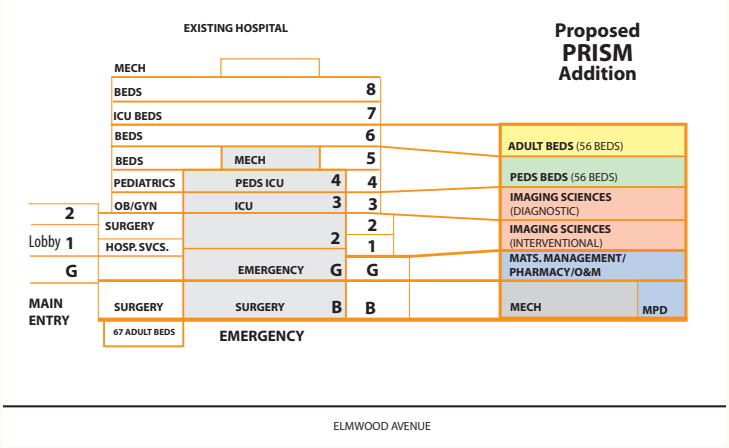
Pediatrics, in particular, has seen real growth, largely in children with complicated health issues who once sought care outside the region. For example, cardiac surgery has grown exponentially, from 103 surgeries in 2000 to more than 300 expected in 2007—an increase of 190 percent. The PRISM creates a contiguous, family-centered space for these very ill children within the hospital, including dedicated imaging space for children only one floor below the new inpatient unit.

While demand for imaging has escalated, space limitations have prevented the hospital from expanding imaging facilities and equipment, creating delays and inefficiencies. Since Strong's original radiology department was built in 1970, the number of imaging procedures has risen from 60,000 to more than 350,000 per year. Incremental renovations and program shifts to Highland Hospital have provided brief periods of relief, yet the problem persists, compounded by the need to accommodate sophisticated new machines.

Patient-Focused Facilities

This expansion addresses what is needed long-term to manage the growing demand for care at Strong and to decompress space that must be renovated to meet current care standards. URMC is proposing that:

- all new rooms created in the new PRISM tower would be private rooms, reflecting new standards for managing contagion and privacy;
- pediatric rooms would be considerably larger than present rooms, enabling families to stay comfortably with their children;
- each floor is designed with higher ceiling-to-floor heights to accommodate high-tech equipment needs;
- two dedicated imaging floors would create areas for imaging and treatment of children that are separate from adults;
- the pediatric floor would connect directly to the Pediatric Intensive Care Unit which opened in January 2005;
- simultaneously, Strong is exploring plans to enlarge and relocate the neonatal intensive care unit which is a cornerstone of the perinatal center serving the Finger Lakes region. This relocation and expansion is being designed to optimize post-natal care for newborns and their mothers and would be separately funded from the PRISM;
- the PRISM's foundation will be constructed to support the possible addition of three more stories, creating the flexibility to renovate other aging patient care areas.



Critical Need

The closings of acute care beds at St. Mary's Hospital and The Genesee Hospital have left Rochester's five remaining acute care hospitals with only 1,805 total beds—or 2.44 beds per one thousand residents. This is considerably fewer beds per population than other communities in New York, which range from 2.8 beds per thousand to 3.4 beds per thousand residents. Most days, Strong Memorial Hospital now averages 103 percent occupancy, meaning that all of its inpatient beds are full and 40 to 60 admitted patients are waiting in its Emergency Department for beds on inpatient units.

Given the severity of Rochester's bed shortage, its hospitals have limited ability to plan for a large-scale calamity. This lack of surge capacity would force hospitals like Strong to care for patients in non-patient-care space, sacrificing safety and privacy.

An analysis completed by market assessment consultants Kurt Salmon Associates documents that, with the aging of the population in Monroe and the surrounding 15 counties served by Strong, the need for hospital beds in the region is projected to increase by 171 beds within 10 years, making the need for more inpatient capacity even more acute. A community-wide effort to examine the issue of bed need, chaired by Monroe County Health Director Andrew Doniger, is currently under way through the Finger Lakes Health Systems Agency. The University of Rochester Medical Center is an active participant in that process.

Smokers' Health Project Recruiting at New Location

The University of Rochester Medical Center's Smokers' Health Project recently moved from the Genesee Hospital to 1655 Elmwood Ave., Suite 125, Brighton, located at the corner of Clinton Avenue, across from McQuaid Jesuit High School.

The project is recruiting 300 smokers, including those who want to quit and those who don't, for the final phase of its studies. Those who want to quit can get counseling and medication to help. Participants are paid up to $100. Please call **(585) 530-2050** for more information.

Jarvik Artificial Heart Pump Helps First Patient in Upstate New York

Newest Generation of Assist Technology Debuts at University of Rochester Medical Center

A Rochester-area resident was the first recipient to receive a Jarvik 2000 artificial heart pump at the University of Rochester Medical Center. The ventricular assist device will help the heart failure patient's native heart pump blood more effectively throughout his body in an effort to keep him as healthy as possible as he waits for a cardiac transplant.

The device was implanted during a six-hour operation on Sept. 24, performed by transplant surgeon **H. Todd Massey, M.D.,** surgical director of the University of Rochester Medical Center's Program in Heart Failure and Transplantation and director of the Artificial Heart Program. Also present in the operating room was Robert Jarvik, M.D., inventor of the Jarvik 2000 and other ventricular assist devices. Jarvik may be best known as developer of the Jarvik-7, the first total artificial heart, which was implanted in patient Barney Clark in 1982 at the University of Utah.

The 52-year-old patient is recovering well and was discharged in mid-October to his home in Hamlin to wait for a donor organ to become available for transplant, Massey said.

The University of Rochester Medical Center and Massey are participants in an FDA-approved clinical investigation of the Jarvik 2000 for bridging patients to transplantation. The device is only available under this clinical study.

"We are pleased to be working with the University of Rochester Medical Center," said Jarvik. "Dr. Massey and the heart failure and transplant team have extensive experience with other artificial heart pumps, and we look forward to collaborating on future cases and making a difference in many more patients' lives."

The Jarvik 2000 is the newest generation of ventricular assist devices, which have progressively become smaller in size and consist of better and longer-lasting technology. The Jarvik 2000 pump is made of titanium and is the size of a C battery, weighing 90 grams. It has a direct-current motor, a rotor supported by two ceramic bearings, and a single moving part: a small, spinning titanium impeller that pumps blood from the heart at up to 7 liters per minute. Rather than take over for the biological heart, as other ventricular assist devices do, the Jarvik 2000 augments the weakened heart's blood output to help restore normal blood flow throughout the body.

The small device is implanted in the heart's left ventricle. For patients who will receive a transplant, the cable that powers the Jarvik 2000 is tunneled through the abdominal wall and is connected to an exterior battery pack. Patients are mobile with the device and, once they have progressed enough in their recovery, can leave the hospital as they wait for a donor organ to become available for transplant.

Ventricular assist devices have become a significant component of the Program in Heart Failure and Transplantation and its Artificial Heart team, which has implanted about 200 VADs. More than 50 percent of VAD patients are bridged with ventricular assist devices while awaiting heart transplantation, with most of the patients being able to wait at home for long periods of time.

"We are grateful to be able to offer another, state-of-the-art device to patients that can keep them alive and as healthy as possible while they wait for their transplant," said **Leway Chen, M.D., M.P.H.,** director of the Program in Heart Failure and Transplantation.

The Program in Heart Failure and Transplantation is the largest program in upstate New York, and the region's only comprehensive heart failure and transplant service. It also is a national leader in research efforts to further the treatment of heart failure and return patients that suffer from heart failure to healthy and productive lives. Since the program was started in 2001, 98 patients have received transplants.

For more information about the Program in Heart Failure and Transplantation, please call **(585) 273-3760.**

Colorectal Surgery Division Brings Advanced Services to Area

The University of Rochester Medical Center's Division of Colorectal Surgery offers the region's most advanced diagnosis and treatment for diseases of the small bowel, colon, rectum, and anus. Previously, colorectal surgery cases were managed by general surgeons at the Medical Center, but that changed when **Jeffrey H. Peters, M.D.,** became chair of the Department of Surgery in 2004.

"There's been an increasing specialization within general surgery, and there is an increasing recognition that sub-specialists provide different—and perhaps better—care," said **Samantha Hendren, M.D.,** assistant professor of Surgery and Oncology, who works with **Rabih Salloum, M.D., F.A.C.S.,** associate professor of Surgery and Oncology, and **Jenny Speranza, M.D.,** assistant professor of Surgery and Oncology. "The department has been restructured along subspecialty lines, and faculty members are encouraged to focus on the latest advances in their respective fields."

New Programs Offer Help

Three initiatives in the Division of Colorectal Surgery are examples of the division's commitment to provide the best modern care. They include ostomy care, pelvic floor problems, and screening for anal cancer.

The Division of Colorectal Surgery has recruited specially trained nurses to help smooth the transition for ostomy patients. "An ostomy is a big change in lifestyle and the expertise of our nurses helps each patient become more comfortable," said Hendren, the division's acting chief. "We now have a full-time nurse certified in wound ostomy and continence (WOCN) taking care of inpatients at Strong Memorial Hospital, and a specialized nurse and nurse practitioner working in the outpatient clinic."

In addition, the Division of Colorectal Surgery is participating in the new Pelvic Health and Continence Specialties practice, located at The Women's Health Pavilion. That practice is focused on helping women who have organ prolapse or bowel and urinary incontinence. The multidisciplinary effort involves colorectal surgeons, urologists, and urogynecologists, the latter specialists having three years of training specific to pelvic floor issues.

"Pelvic floor problems are usually multifactorial," Hendren said. "Each woman is different in terms of where she has weakness and how we go about correcting it. There are several options, including a variety of medical treatments and surgery."

The third new program offered by the Division of Colorectal Surgery puts additional emphasis on colorectal and anal cancers.

"We recently launched a clinic to screen for and treat anal cancer," said Hendren. "This is a hot topic in medicine. Anal cancer is similar to cervical cancer, and the human papilloma virus causes both of them. People at increased risk—those who have other papilloma virus diseases and homosexual men, for example—are more susceptible to anal dysplasia."

Theresa Schwartz, N.P., is trained to provide screening and treatment at the weekly dysplasia clinic. "Most doctors in the region who take care of people at high risk refer patients to the clinic," said Hendren, who serves as collaborating physician. "If abnormalities are found, they can be treated here with infrared coagulation, a minimally invasive treatment that can kill those precancerous cells. Where people have been followed and treated for dysplasia, there have been almost no conversions to cancer. When we monitor it and treat it, we're not seeing it advance to cancer."

Covering All the Bases

While the Division of Colorectal Surgery is developing new programs, its surgeons continue to provide the best in diagnosis and treatment, offering advanced technology for diagnosing colon and rectal disease.

Tools include the latest endo-rectal ultrasound imaging to diagnose sphincter injuries and rectal cancers. In addition, anorectal manometry is available, enabling physicians to assess continence in patients. The team uses PET CT scans to diagnose and assess colorectal cancer, and has access to the region's most powerful MRI, the 3T MRI at University Imaging at Science Park.

The division's surgeons also partner with specialists from the James P. Wilmot Cancer Center, where they also have faculty appointments. This valuable relationship helps provide patients with opportunities for the best outcomes through advanced treatment in multidisciplinary clinics.

"The days when a cancer patient went to only one doctor have nearly disappeared," Salloum said. "The surgeon, the medical oncologist, and the radiation oncologist, if that is indicated, work together. Everybody is participating in the patient's care. We meet at least twice a week to discuss cases. This teamwork provides a huge advantage to our patients."

Salloum, who is also vice chair for Surgical Quality and Outcomes and director, Adult Nutrition Support Services, trained as a surgical oncologist, has a special interest in caring for those with gastrointestinal cancers, especially colorectal cancer. "Not a lot of centers have a cancer specialist within the division, so we're a step ahead in that regard," he said. "As part of a larger institution, we also have access to the newest treatments that are available through the Wilmot Cancer Center, part of the cooperative group for clinical trials. Our patients have access to new clinical trials that aren't available elsewhere."

Commitment to Surgical Excellence

Physicians in the Division of Colorectal Surgery perform challenging and complex colorectal surgeries regularly and frequently. "Research here and elsewhere demonstrates that the surgeons and centers performing the highest volume of a

Samantha Hendren, M.D., assistant professor of Surgery and Oncology in the Division of Colorectal Surgery.

particular surgery have the best outcomes," Hendren said. "Our center offers clear advantages in that regard."

The division also provides specialized procedures that offer faster recoveries and a greater chance for a positive outcome. These include minimally invasive surgery and colonoscopies. "Whenever possible, we use laparoscopic techniques in the operating room," Salloum said. "My success rate, based on the times I recommend laparoscopic surgery and complete the surgery using that method, is 90 percent to 95 percent. We are comparable to other specialty centers such as the Mayo Clinic and the Cleveland Clinic."

Speranza, whose special interests include inflammatory bowel disease, colon and rectal cancer, fecal incontinence, defecatory disorders, and laparoscopic surgery, previously worked at The Cleveland Clinic Florida. Her research interests are in colon and rectal malignancy, inflammatory bowel disease and fecal incontinence.

As part of her practice, Speranza specializes in reoperative surgery. "Patients who have had multiple previous surgeries are more complicated to operate on because of adhesions. As part of my specialty training, I performed many complex reoperative surgeries, and have expertise in that area."

While in Florida, Speranza had the opportunity to take part in clinical trials of newer technologies for fecal incontinence and colorectal surgeries. "I look forward to being able to bring these new technologies to the Rochester community when they become available," she said.

All three physicians see outpatients at Strong Memorial Hospital and Clinton Crossings, 2400 South Clinton Ave., Rochester. In addition to performing surgeries at Strong, Salloum operates at Highland Hospital and Hendren and Speranza operate at the Lattimore Surgery Center.

To learn more about the Division of Colorectal Surgery, or to make a referral, for Hendren, call **(585) 275-0606,** for Salloum, call **(585) 275-7630,** and for Speranza, call **(585) 276-3370.**

Schneider Steps Down as Emergency Medicine Chair

Emergency Medicine Chair **Sandra Schneider, M.D.,** recently announced that she will step down and **Gregory Conners, M.D., M.P.H.,** professor of Emergency Medicine and Pediatrics, will serve as interim chair.

Sandra Schneider, M.D.

Schneider was named the department's founding chair in 1993 and essentially built the department from scratch, overseeing many significant developments. She was instrumental in the design of the new Emergency Department, which serves as a model for other facilities nationally and internationally.

An active member in national emergency medicine organizations, Schneider has served in leadership positions for many of them including the Society for Academic Emergency Medicine, Association of Academic Chairs of Emergency Medicine, Emergency Medicine Foundation, and the American College of Emergency Physicians. With the prospect of her expanding responsibilities nationally in these organizations, Schneider felt she could not devote her full attention to leading the extremely busy Department of Emergency Medicine. She will stay on at the School of Medicine and Dentistry, working on the advancement of Emergency Medicine nationally, her own research, and increasing her efforts on teaching and patient care.

Conners will head the department while a national search is conducted. He has most recently served as division chief for Pediatric Emergency Medicine and vice chair of the Department of Emergency Medicine. A graduate of Amherst College and SUNY Stony Brook School of Medicine, Conners completed his residency in Pediatrics and fellowship in Pediatric Emergency Medicine, both at Children's National Medical Center in Washington, D.C. He earned his M.P.H. at the University of Rochester School of Medicine and Dentistry and an M.B.A. at the Simon School. He is a fellow of both the American Academy of Pediatrics and the American College of Emergency Physicians.

Cancer Physicians Rank Among Nation's Best

Several University of Rochester Medical Center oncologists and surgeons are included in *America's Top Doctors for Cancer*, the only Rochester-area doctors included in the 650-page book.

The guide, considered an authoritative resource for patients seeking the best cancer care, includes:

- **Richard I. Fisher, M.D.,** an internationally recognized expert in lymphoma care and research. Fisher has led numerous national and international studies in Hodgkin's disease and non-Hodgkin's lymphoma. Patients and physicians throughout the world seek his expertise on lymphoma.
- **Regis O'Keefe, M.D., Ph.D.,** chair of Orthopaedics and Rehabilitation, specializes in cancers of the bone, muscle and soft tissue around the skeleton. He is director of the Center for Musculoskeletal Research, overseeing the research of 16 faculty and two dozen graduate students and post-doctoral fellows. O'Keefe's NIH grant support has consistently placed him among the most highly funded orthopaedic surgeon-clinician scientists in the United States.
- **Louis "Sandy" Constine, M.D.,** professor and vice chair of Radiation Oncology, is internationally recognized for his expertise in acute and chronic effects of chemotherapy and radiation therapy on normal tissues. He specializes in lymphomas, sarcomas, brain tumors and pediatric malignancies.
- **David Korones, M.D.,** associate professor of Pediatrics and Hematology/Oncology, focuses on brain tumor care and research for children and adults. He leads research into new therapies for brain tumors and management of side effects.
- **Kristin Skinner, M.D.,** chief of Surgical Oncology and director of the Multidisciplinary Breast Cancer Program, is an outstanding breast surgeon. She also leads clinical and translational research evaluating biologic markers of breast cancer risk, possible molecular diagnostic markers in breast cancer, the application of intraductal approaches to breast cancer diagnosis and treatments, and the potential for less invasive forms of treatment for ductal carcinoma in situ of the breast.
- **Thomas Watson, M.D.,** associate professor of Surgery and chief of Thoracic Surgery, is an expert in foregut and pulmonary surgery. He has extensive experience in open and minimally invasive procedures, including laparoscopic and thoracoscopic approaches.

The Wilmot Cancer Center is the leader in cancer care and research in the Rochester and Finger Lakes region with a team of 80 doctors specializing in each form of cancer, and more than 300 nurses, staff and volunteers work together to provide outstanding care for people with cancer. For information, please call **(585) 275-5830** or, toll-free, **(866) 4-WILMOT.**

Simulator Uses Real Patient Data, Allows for Pre-Surgery 'Rehearsal'

Surgeons in the Division of Vascular Surgery at the University of Rochester Medical Center believe they are the first in the country to use a simulator program prior to surgery, to allow a physician to "rehearse" the entire procedure before the doctor and patient ever set foot in the operating room.

URMC is the first to repurpose this technology to directly impact patient care for carotid stenting cases. The primary function of the simulator technology is to teach medical students through the use of fictional patient cases pre-loaded into a computer program.

Vascular surgeons capture the patient's own data using a 64-slice CT angiography scanner and transfer it to the simulator, which then allows the surgeon to "operate" on the patient prior to surgery. The experience mirrors the real surgery, with a flat screen displaying the patient's anatomy and a catheter that interacts with the computer as the surgeon manipulates it.

Problems that may arise during surgery are discovered in a safe environment and can be planned for or avoided. Choices about various catheters and other instruments can be made ahead of time, possibly saving time in the OR and saving money as a result of pre-selecting the most beneficial tools for the particular case.

"For years we have trained for procedures in a general sense using simulation technology," said **Karl A. Illig, M.D.,** chief of the Division of Vascular Surgery. "We now are taking the process a step further, using the very latest in simulation programs and combining that with a patient's own medical information. What we get is the truest picture of what their surgery will be like before we ever begin."

Photo, Will Yurman, Democrat and Chronicle

Illig and his team—vascular surgeons **Michael Singh, M.D., Jeffrey M. Rhodes, M.D.,** and **Joseph P. Hart, M.D.,** surgical resident **Sean Hislop M.D.,** and surgical fellow **Joseph Hedrick, M.D.**—are working with simulator company Simbionix to develop a study that considers the impact of the simulator technology on patient care.

For more information about the Division of Vascular Surgery, please call **(585) 279-5100.**

UNIVERSITY OF ROCHESTER MEDICAL CENTER
Golisano Children's Hospital at Strong
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Children's Hospital Adds Hospitalist Service for Patients, Pediatricians

With plenty of tough cases in their own offices already, it has become increasingly difficult for many pediatricians and family practitioners to provide and coordinate care for complex hospitalized children. In response, Golisano Children's Hospital at Strong in September initiated a pediatric academic hospitalist service.

"We want to do what makes the most sense for hospitalized children and their families, and be helpful to community providers at the same time," said **Elise W. van der Jagt, M.D., M.P.H.,** a pediatric critical care physician and the clinical director of the new service.

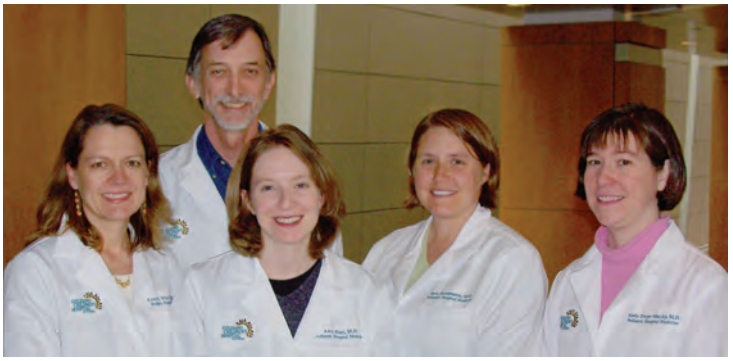
The hospitalist service provides busy pediatricians and family practitioners the option of allowing physicians specializing in the care of hospitalized children to provide care for their patients while they are inpatients. The service is entirely voluntary and excellent communication between the hospitalists and the child's regular physician is key to maintaining continuity of care.

Already, attending physicians at the hospital and pediatricians from the Strong Pediatric Practice see patients whose physicians are either too far away or too busy to visit the hospital every day. The hospitalist program formalizes this service, using physicians whose area of expertise is general pediatric hospital medicine.

"More and more pediatricians in this community—even those closer to the hospital—are asking that their patients be cared for by our faculty," said **Thomas McInerny, M.D.,** associate chair of the Department of Pediatrics. "They are overloaded with complicated outpatients and recognize the expertise of the hospital staff."

Pediatric hospitalists are on site on the inpatient units of the Golisano Children's Hospital at Strong from approximately 8 a.m. to 5 p.m. every day and are available after hours by phone, or on site, if necessary. Since the hospitalists are in the hospital all day, it is possible for them to see their patients two or even three times a day to provide care, enabling them to sometimes shorten the length of stay for patients.

Even when community pediatricians opt to take advantage of the service, their input and visits to the hospital will be welcomed. They are incredibly important to the care of children in the hospital, even if they aren't there to make every medical decision on a daily basis, said **Peter Szilagyi, M.D., M.P.H.,** chief of General Pediatrics.



Hospitalists, from left, are Karen Wilson, M.D., Ted Sigrest, M.D.,Amy Blatt, M.D., Sara Horstmann, M.D., and Keely Dwyer-Matzky, M.D.

"Being in the hospital is a critical time, but the time before and after is just as critical," Szilagyi said.

In addition, even when pediatricians take advantage of the new service, they may want to see their patients and their families, to reassure them and to help families understand that their pediatrician is still involved in their children's care even if they aren't in the hospital every day.

Since this is a new service, van der Jagt is responsible for overseeing the clinical operations of the program, insuring that the hospitalists provide excellent and efficient care with a high level of satisfaction from the patients and families, the community physicians and the hospital staff.

"One of the key skills of the hospitalist is their ability to communicate with multiple providers across disciplines and coordinate care efficiently within the hospital setting. In addition, to provide seamless care between hospital and outpatient care for children, hospitalists have to be very thorough, and constantly be in contact with pediatricians and family care physicians, as well as with families," van der Jagt said. "Not everyone can do this. This is a different skill set than other physicians may have."

In addition to being adept communicators, pediatric hospitalists must be crisis managers, team players, system managers and able to integrate services, van der Jagt said.

Golisano Children's Hospital's first five hospitalists—**Amy Blatt, M.D., Keely Dwyer-Matzky, M.D., Sara Horstmann, M.D., Ted Sigrest, M.D.,** and **Karen Wilson, M.D.**—have been selected for their unique set of skills and their already considerable familiarity with the hospital system. In addition, several have experience with adult medical patients, having trained in a combined med-peds residency program. Others are concurrently enrolled in an academic pediatric fellowship program with a concentration in pediatric hospital medicine.

Besides providing clinical care, the pediatric hospitalists are central to the academic

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Most Comprehensive Study of Mercury in Dental Fillings Begins

The presence of mercury in dental amalgams, or fillings, is relatively common knowledge; however, whether its presence affects the neurological system is a debate that has been ongoing for 150 years. A new Golisano Children's Hospital at Strong study, which began in September, will—for the first time—study whether prenatal exposure to mercury vapor from fillings affects neurological development.

As part of the world's longest-running study of the health effects of low levels of mercury exposure, **Gene Watson, D.D.S, Ph.D.,** an associate professor in the Eastman Department of Dentistry at the University of Rochester Medical Center, will begin an almost $3 million, National Institutes of Health-funded study on prenatal exposure to mercury from dental amalgams. Watson will collect hair samples from children in the Indian Ocean island nation the Seychelles, who were enrolled in a study in 2001 to determine their exposure to methyl mercury from fish and other seafood. He will also record how many fillings the children have and which surfaces of the teeth they cover as an indication of exposure to mercury vapor.

Because these children were enrolled prior to their birth, more information is available than any previous mercury/dental filling study. "This study can go back prenatally because we know what the mother's dental history was prior to and during the pregnancy," said Watson, who is also an associate professor in the Department of Environmental Medicine and the Department of Pharmacology and Physiology. "Little is known about detrimental effects of early exposure, and we need to examine this because studies suggest the developing brain is more susceptible to mercury than the adult brain."

Earlier studies on postnatal mercury vapor from dental fillings showed no significant effect on children's neurological function. While comprehensive, those studies did not examine whether children may have been exposed through their mother's dental work while still in the womb.

"Comprehensive studies like these are impossible without cross-departmental collaboration. Dr. Watson's work will add another important layer to understanding the impact of prenatal exposure to mercury that he and the Eastman Dental Center are uniquely able to provide," said **Cyril Meyerowitz, B.D.S, M.S.,** chair of the Eastman Department of Dentistry.

This study expands on knowledge gathered in the Seychelles on the neurological effects of methyl mercury by a group of Medical Center researchers, including **Philip W. Davidson, Ph.D.,** a senior investigator and professor of Pediatrics, and **Gary Myers, M.D.,** a pediatric neurologist and senior member of the team of researchers studying Seychelles. The team has not found any ill effects of low level mercury exposure. Davidson said this new study is integral to further understanding the potential impact of all environmental exposures of methyl mercury.

"It's the only study ever conceived where we'll be able to look at exposure in the main ways people are exposed to mercury—fish and seafood, and dental amalgams," Davidson said. "No one has ever done this before."

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mission of the Children's Hospital. Being present on the inpatient units will make them a resource and constantly available to pediatric residents and medical students for consultation and supervision. And, by being integrally part of the in-hospital care process, they are in an excellent position to contribute to research in the areas of quality improvement, education, safety, and general pediatric hospital medicine. Szilagyi, who is also a well established pediatric researcher and president of the Ambulatory Pediatric Association, will provide mentorship for each of the hospitalists' research activities as the program develops all of its facets.

Most pediatric hospitalist medicine programs have been established as either an extension of general pediatrics or of pediatric critical care. The pediatric hospitalist movement has been strongly embraced and organized by the Ambulatory Pediatric Association, which represents general academic pediatricians.

"It's the fastest growing field in pediatrics," Szilagyi said. "It appears to be doubling every year." In 2005, there were 1,000 pediatric hospitalists; now there are 2,000—with most leading children's hospitals around the country having an active pediatric hospital medicine service."

In fact, the Children's Hospital has had a newborn hospitalist since 1995, and she has been completely embraced by the pediatric community. **Sema Hart, M.D.,** provides care to about 60 percent of the 1,500 full-term babies born at Strong Memorial Hospital every year. She said some of the babies she sees don't have pediatricians and for many who do, their pediatricians either don't have hospital privileges or practice too far away for them to make the trip in to see a newborn baby.

Hart said the fact that she works on site makes it easier for her to spend more time with a mother and new baby. "If Mom is breastfeeding when I stop by, I can just come back later." And she does so often, especially if the family does not yet have all the supports, such as a visiting nurse service, that they may need. "It is my life, and these are my babies," she said.

To reach the Pediatric Hospitalist Program, call **(585) 276-4113** weekdays. All other times and for patient issues, call the Pediatric Hospitalist on call at **(585) 275-2222.**

Katelyn's Connection: Girl's Hope for Greater Connection Takes Shape

The idea of cancer seemed so wrong because Katelyn Pasley so loved life. The youngest of four children in her family, the athletic and talented third-grader's trademark, her parents say, was drawing rainbows.

Which is why it's not surprising that, when she was diagnosed with leukemia and cooped up in the hospital for intensive chemotherapy treatments, Katie, social butterfly that she was, naturally wanted a rainbow of her own—some big, beautiful bridge that would connect her to the outside world; some sunshine to help chase off the storm.

Her school, together with a local community pediatrician, Ali Loveys, M.D., worked together to find an answer: providing Katie a laptop, both to help her keep in touch with her friends and stay current with her schoolwork.

"We were grateful that she had it, but part of us felt a bit disappointed, too, that every other kid couldn't enjoy the same," said Katie's dad, Brian.

To everyone's surprise, after only five weeks in the hospital, Katie passed away suddenly; she was 8 and a half years old.

Little did anyone know that a girl so small was about to leave a mark so big. Katie's spirit lived on. Friends became motivated to help the hospital that helped her, as well as other kids and families.

The First Rainbow Classic, a fundraising basketball game between two Pittsford high school varsity teams, raised funds to support an initiative to provide laptops to other hospitalized children, connecting them to their friends back home much in the same way that had brightened Katie's own brief stay.

But the plan proved riddled with problems; computers kept breaking down, disappearing. The funds raised were put into an account for use toward a better solution.

In the meantime, future Rainbow Classic dollars would support a room in the hospital's newly constructed Pediatric Intensive Care Unit.

The search continued for Katelyn's Connection.

"For years, since Katie's dream was first born, we've been on the lookout for the ideal, connective system—not to mention, the additional funding that would make it available to every bedside," said **Elizabeth Lattimore,** administrative director for clinical services at Golisano Children's Hospital at Strong. "We're proud to say, we've finally found that and more in a new system—GetWellNetwork. Of course, we're naming it in honor of Katie."

Katelyn's Connection was installed in August, thanks to community generosity—continued support from the Rainbow Classic annual tournament, a $100,000 gift from the Ford Foundation, a $50,000 gift from a friend of the Pasley family, and a handful of $2,500 sponsorships from the annual hospital Gala.

Patients, using a keyboard or corded remote, can toggle their way through a purple-colored menu to find games, movies on demand, internet access, e-mail (meanwhile, parents can stay in touch with work, link to conduct online banking, etc., all through the Internet).

"It's their portal to the outside world," Lattimore said. "But that's just the start."

The so-called "edutainment" system goes beyond mere diversion, connectivity; it's hailed for its educational aptitude, as well.

Immediately upon being admitted to their room, the screen welcomes patients, blinking a cheery "Hello, X," and listing an assigned nurse's name. Orientation videos have already been "served up" to the room, ready to be watched and impart basic instructions about hospital safety and amenities available.

"We are on the cusp of something new," Lattimore said. "These all came to parents as a sea of paper, a sign on a door. Now, it's all in one spot, at an arm's length. We can track what's getting read, watched or accessed. For the first time ever, we can gauge what instructions parents are absorbing, what information they're most seeking."

Terri Scharfe-Pretino, senior clinical nurse specialist who has spent 10 years tending patients at the Children's Hospital, is thrilled about another educational element the system offers—the chance for parents to be briefed on diseases, medicines or care instructions on their own emotional timetables.

"So often these important discussions—perhaps about what a new diagnosis means, or how to clean a catheter, or what to expect of a new prescription—don't happen when parents are best ready to learn," Scharfe-Pretino said. "Maybe a diagnosis is too upsetting, too raw to be explored just then; maybe the day has been max-stress; maybe they're not morning people, and we're scheduled to teach and field questions at 8 a.m. This system changes that."

Doctors and nurses can "prescribe" informational videos that parents can watch—and be quizzed on—at their leisure.

"In no way does this replace the important educational talks we will have with a parent," Scharfe-Pretino said. "But, this certainly allows them to acclimate themselves to the battery of new knowledge. That way, when we do arrive to talk and educate, they've had a safe space and the luxury of time to become somewhat familiar with the ideas. They can have good questions ready. Our time can be more meaningful." The more parents know, the better their sense of control, the more they can play their role as a key part of their child's care team.

Parents' Perceptions Can Hamper Kids' Asthma Care, Study Finds

The next battle in the war on asthma symptom control could be a psychological one, a new study finds.

It turns out that parents' leeriness towards their children's asthma medications—simply thinking they're not essential, or believing they pose health risks that outweigh the benefits—might explain to some extent why so many of the 10 million U.S. children with asthma do not take their prescriptions regularly and wind up suffering avoidable symptoms.

"Children today can be virtually symptom-free, thanks to modern preventive medications," said **Kelly Conn, M.P.H.,** a senior research coordinator at the University of Rochester Medical Center and lead author of the study that published in August's edition of *Pediatrics*. "But kids rely on their parents to make health decisions for them."

Only about half of all prescribed preventive asthma medications are actually taken daily as directed.

To see if parents' beliefs about their children's medicines might be influencing how dependably they administered them, the Rochester team analyzed data from parents of 622 children in Southeast Michigan who reported use of at least one preventive asthma medication. Parents completed a Beliefs About Medications Questionnaire, which measures two often-conflicting realms of parents' perceptions of their children's medications—the necessity, or the extent to which they believed a child's sickness necessitated taking it, versus the concern, or the extent to which a parent worried about possible risks associated with the drugs, such as side effects and potential for dependency.

Not unlike a cost-benefit analysis, the difference, calculated by subtracting the concern score from the necessity score, served as a weighed appraisal of each parent's beliefs.

The survey showed that, for 77 percent of parents, their perceived need for their child's medication outweighed concerns about any possible risks. However, 17 percent composed the opposite camp. The remaining 6 percent were equally torn between both beliefs of need and concern.

To see how these leanings might impact behavior, parents were also asked to complete the 4-item Medication Adherence Scale, which gauges how strictly they helped kids stick to their assigned prevention regimens.

The study confirmed that, indeed, parents' beliefs played a hand in their kids' receiving medicines consistently; a stronger belief of necessity, as compared to concern, was significantly linked with better adherence scores even after controlling for all other potentially confounding variables.

Still, only 14 percent of parents reported being perfectly adherent to their children's medicine regimen.

"These findings suggest a great deal of promise for improving symptom control just by addressing parents' worries and providing accurate information about medication side effects," Conn said. She suggests that pediatricians, pharmacists and other healthcare providers begin integrating small changes, such as taking an extra moment to reiterate that these are preventive, not rescue, medicines; children should take them consistently, whether they feel symptomatic or not.

When speaking with parents who grew up with asthma themselves, healthcare providers should stress that advances made in medicines over the last decade offer today's kids a nearly symptom-free life, with good adherence. Suffering need no longer be part of the schema, Conn said.

Health care providers must also make a point to alleviate common parental fears.

"Some parents hear or read the word steroid, and at once start worrying about long-term effects on their child. This is an opportunity for explanation," Conn said. "Physicians regard these medicines as quite safe, when used properly."

Research for this study was funded by a grant from the National Heart, Lung and Blood Institute and the Halcyon Hill Foundation.

Ear Infection Superbug Resistant to All Pediatric Antibiotics

Researchers at the University of Rochester Medical Center have discovered a strain of bacteria resistant to all approved drugs used to fight ear infections in children, according to an article published in the Oct. 17 edition of the *Journal of the American Medical Association*. Pediatrician-researchers **Michael Pichichero, M.D.,** and **Janet Casey, M.D.,** discovered the strain because of their standard practice to perform tympanocentesis on children when several antibiotics fail to clear up their ear infections. Analyzing fluid drained from the ear is the only way to determine the bacterial strain causing the infection.

Even after the ear tap and additional rounds of antibiotics, infections persisted in a small group of children in the researchers' practice, leading to ear tube surgery and, in one case, to permanent hearing loss. The physicians realized they may be dealing with a "superbug" and tested the children's ear-tap fluid at the Medical Center. The tests showed that the superbug, called the 19A strain, could be killed only by levofloxacin (Levaquin), an antibiotic approved for adults that had a warning in its label against use in children. With no other choice, they treated the children with crushed, adult-approved pills, and it worked.

The 19A strain was most likely created by a combination of the speed of bacterial evolution and the overprescribing of antibiotics, the authors said. They warn that, while it may very well never happen, the medical profession must now at least consider the prospect of a worst-case scenario: this multi-drug-resistant bacterial ear infection spreads to other communities, or invades the lungs and bloodstream, where it leads to resistant cases of pneumonia or meningitis.

Experts have proposed for years that pediatricians should determine the type of bacteria causing an ear infection before prescribing an antibiotic. The study authors recommend more frequent use of tympanocentesis, which makes that determination possible, and encourage physicians to be trained in the technique to accomplish that.

Partnership Creates Palliative Center for Caring

The Palliative Center for Caring, a partnership between Visiting Nurse Service of Rochester and Monroe County, Inc. (VNS) and St. Ann's Community, recently welcomed its first patients to the five-bed inpatient care center created for those needing short-term hospice and palliative care.

The Center is the first of its kind in Rochester, located in a skilled nursing facility and meeting a vital community need for inpatient hospice and palliative care in Monroe County. Located on a private floor in The Heritage on St. Ann's Irondequoit campus, the Center provides a full range of physical, emotional and spiritual support from highly trained VNS and St. Ann's Community medical personnel, therapists, social workers and pastoral care staff, along with pharmacy services.

In addition to caring for patients coming from their homes or the hospital, the Center also supports family members and loved ones who provide care during this difficult time.

St. Ann's Community was awarded a $210,000 Opportunity Grant by the Greater Rochester Health Foundation to further its efforts with VNS to offer patient care that enhances quality of life by providing symptom management and comfort-focused care. The Center serves as a model for future partnerships with the intent of strengthening and expanding hospice care in our community.

"Our partnership with St. Ann's Community allows us the opportunity to offer patients and their families needed expert care and services in a place that is warm, comforting and peaceful," said **Vicky Hines,** VNS president and CEO. "We especially appreciate and thank those individuals who have supported this idea and made the Center possible through their gifts of time, energy and donations."

"VNS in collaboration with St. Ann's Community currently provides palliative/hospice care to a number of our residents, so this opportunity was the perfect extension to an already successful partnership," said Betty Mullin DiProsa, president and CEO of St. Ann's. "We are pleased to be able to offer this special level of care to the Rochester community."

For more information, please call **(585) 787-2233.**

Committee Offers Guidelines for Primary Care Providers to Protect Patients' Oral Health

Experts from the Eastman Department of Dentistry were part of a New York State Department of Health 15-member committee of obstetricians, pediatricians, pediatric dentists, periodontists and public health dentists that recently released guidelines for prenatal care, oral health and child health care professionals.

"As our understanding increases about the effects of good and bad oral health, it becomes increasingly clear how important it is for health care providers across all disciplines to work together," said **Robert Berkowitz, D.D.S.,** chair of the Department's Pediatric Dentistry Division who served on the committee with **Ronald Billings, D.D.S., M.S.D.,** professor and former director of the Eastman Dental Center.

"Scientific evidence clearly shows a relationship between periodontal disease and premature delivery and low birth weight. In addition, tooth decay—the most common chronic childhood disease—is a transmissible infectious disease, spreading through saliva from mother or other caretaker to child," Berkowitz said.

The New York State guidelines advise that dental care is safe and effective during pregnancy and that oral health care should be coordinated among prenatal and oral health care providers. First trimester diagnosis and treatment, including needed dental x-rays, can be undertaken safely to diagnose disease processes that need immediate treatment. Needed treatment can be provided throughout the remainder of the pregnancy, but between the 14th and 20th weeks is ideal. Elective treatment can be deferred until after delivery. However, delay in necessary treatment could result in significant risk to the mother and indirectly to the fetus.

For pregnant women who experience frequent nausea and vomiting, it's suggested they eat small amounts of nutritious foods through the day; use a teaspoon of baking soda in a cup of water as a rinse after vomiting to neutralize acid; chew sugarless gum after eating; and use gentle tooth brushing with fluoridated toothpaste.

Health care professionals should assess problems with teeth and gums and make appropriate referrals to an oral health care provider.

To view the full report and all the recommendations, visit **http://www.health.state.ny.us/publications/0824.pdf.**

URMC, RGH are Partners in Neuromedicine

The University of Rochester Medical Center and Rochester General Hospital formed a partnership that makes RGH an affiliate of URMC's Neuromedicine program. The affiliation is expected to improve access and quality of care for individuals with neurological disorders.

"This agreement is not only good for patients, it's a victory for Rochester," said **Bradford C. Berk, M.D., Ph.D.,** Medical Center CEO. "The affiliation enhances the delivery of care for the area's residents, and I see this as the first step in an effort to discover new ways to collaborate on care and research. It's part of URMC's overall regional strategy to partner with others in leveraging our Centers of Excellence to draw more patients to our community's hospitals."

URMC neurologists are located on-site at RGH to staff the hospital's Stroke Center and provide general neurological care. URMC will recruit eight new faculty neurologists to serve at Rochester General. In addition, the two health systems will collaborate on community and professional education as well as neurological research projects.

The partnership creates the opportunity to develop a regional approach to neurological care. For example, the joint stroke program—one of the largest in the country—will work to establish best practices, track and improve medical outcomes, and conduct coordinated public education campaigns.

This agreement builds upon an existing community-wide clinical alliance in neurosurgery. Since 2003, Rochester Neurosurgery Partners (RNP), spearheaded by the Department of Neurosurgery, has been providing neurosurgical care at Rochester's four acute-care hospitals, including RGH. The group includes 25 physicians and support staff who provide a wide range of neurosurgical procedures. RNP recently received a grant from Excellus BlueCross BlueShield to begin tracking neurosurgical outcomes and is working to reduce costs and drive improvements in care.

"The experience with the Rochester Neurosurgery Partners has demonstrated the enormous potential of community-wide collaboration in this field," said **Webster H. Pilcher, M.D., Ph.D.,** chair of the Department of Neurosurgery. "Our partnership has been a model of cost-effective and cooperative health care delivery and is indicative of what could be achieved on a larger scale."

Both health systems expect that the neurology component, when added to the surgical partnership, will yield opportunities to create nationally recognized Centers of Excellence in the field and make Rochester a preferred destination for neurological care.

While the partnership between URMC and RGH will initially be limited to stroke and general neurological care, both sides envision expanding to other joint clinical, research and educational programs in the future, such as neuromuscular diseases, epilepsy, and movement disorders.

"The goal is to build an environment in which both health systems can work collaboratively to advance our knowledge of these diseases and provide the highest level of neurological care," said **Robert C. Griggs, M.D.,** chair of the Department of Neurology. "This agreement will enable us to create a city-wide program that expands services within a community that is dramatically underserved in terms of practicing neurologists and neurosurgeons and, in doing so, we will be able to offer more patients access to cutting-edge therapies."

Rosier Tapped to Head Clinical Research

Randy Rosier, M.D., Ph.D., professor of Orthopaedics at the University of Rochester School of Medicine and Dentistry, will serve as interim senior associate dean for Clinical Research. Rosier is filling in for **Thomas Pearson, M.D., M.P.H., Ph.D.,** who is taking a year-long sabbatical and will return to his role as senior associate dean in July 2008.

Rosier is nationally recognized as an outstanding clinical and translational investigator, underscored by his recently securing a $7.8 million NIH grant to establish a Center for Research Translation in musculoskeletal disease, putting him at the forefront of his field.

A long-time faculty member, Rosier has earned the reputation of being a highly collaborative researcher. These credentials, coupled with his most recent role as chair of the Department of Orthopaedics for the past seven years, gives Rosier broad familiarity with faculty members who are involved in clinical and translational research, and with the infrastructure that supports this work.

In December 2006, Rosier announced that he would step down as chair of Orthopaedics to focus on his expanding portfolio of research. His tenure as chair produced some remarkable milestones: establishing the Center for Musculoskeletal Research; achieving the top ranking spot among all orthopaedic departments based on NIH funding; relocating all orthopaedic and rehabilitation clinical services into one location at Clinton Crossings in 2001, which resulted in a doubling of patient visits; and increasing full-time clinical and research faculty.

Aab Cardiovascular Research Institute Opens in Henrietta

The University of Rochester Medical Center in August celebrated the opening of the Aab Cardiovascular Research Institute (CVRI) in Henrietta, which unites more than 100 scientists, students and technicians—previously housed across the Medical Center's campus—under one roof. CVRI includes 15 cardiovascular research laboratories that currently conduct more than 50 research projects with the goal of furthering the understanding of heart disease. The newly renovated facility also houses 15 researchers from Functional Genomics, a core facility that services researchers throughout the University and Medical Center, providing analysis of genetic material using state-of-the-art techniques. The launch of the Aab CVRI will also bring new synergies between cardiovascular research and programs in clinical cardiology, cardiac surgery, and vascular surgery to provide novel diagnostic and treatment approaches. Taken together, these initiatives position the city of Rochester as a leading center nationally for the treatment of cardiovascular disease, a place where basic research contributes to new treatments and clinical work suggests avenues for new research.

"A main focus within the CVRI is the near-future launch of expanded research programs, and new research programs require a specially designed space," said **Mark Taubman, M.D.,** director of the Aab Cardiovascular Research Institute. "Whether we are talking about areas where we currently excel, like vascular biology and thrombosis, or areas where we want to grow, like stem cell and obesity research, the newly unified CVRI will position us to be among the leading cardiovascular research programs in the nation."

The building and institute are named in honor of Richard T. Aab, a long-time supporter of the University of Rochester Medical Center, in appreciation of his $5 million gift.

APPOINTMENTS

Anesthesiology
Allison Fegley, M.D.
James Houck, M.D.
Krystof Neumann, M.D.
Robert Ramsdell, M.D.

Cardiology
Michael Fong, M.D.
Theckedath Mathew, M.D.
Albert Tricomi, M.D.

Dentistry
Edward Sommers, D.M.D.

Emergency Medicine
David Baum, M.D.
Christopher Gee, M.D.
Christine Miyake, M.D.
Paul Patrick, M.D.

Geriatrics
Murli Raghaven, M.D.

Hospital Medicine
Aran Laing, M.B.B.S.
Leah Samson, M.D.

Hospital Medicine & Pediatrics
Elizabeth Brown, M.D.
Kim Bruce Abell, M.D.
Vidush Athyal, M.D., M.P.H.
Rebecca Dwyer, M.D.
Kate Ackerman, M.D.
Sarah Horstmann, M.D.
Lenore Novotny, M.D.
Laura Price, M.D.
Karen Wilson, M.D., M.P.H.

Imaging Science
Keith Dockery, M.D.
Farhad Farzanigan, M.D.
Sudhir Kathuria, M.D.
Robert Poster, M.D.
Kristina Siddall, M.D.
Ian Jermaine Wilson, M.D.

Internal Medicine
Meredith Cricco, M.D.
Suzanne I. Lasek-Nesselquist, M.D.
Andrew Wolff, M.D.

Neurology
Jebin Chacko, M.D.
Adam Kelly, M.D.
Anthony Maroldo, M.D.
Nimish Mohile, M.D.
Olga Selioutski, D.O.
David Shprecher, D.O.
Joohee Sul, M.D.
Philip Vitticore, M.D.
Tiffini Voss, M.D.

Neurosurgery
Pierre Girgis, M.D.

Obstetrics/Gynecology
Jennifer Droz, M.D.
Cole Greves, M.D.
Pamela Jurich-Wright, C.N.M.
Lyndsay Willmott, M.D.

Oncology
Supriya Mohile, M.D.

Ophthalmology
Holly Hindman, M.D.
Michele Lagana, O.D.
Rajeev Ramchandran, M.D.

Orthopaedics
Daniel Brandenstein, D.O.

Pathology/Laboratory Medicine
Richard Burack, M.D., Ph.D.
Archibald Perkins, M.D., Ph.D.
Rana Shafiq-Hoda, M.D.
JulieAnn Warner, M.D.

Pediatrics
Rita Dadiz, D.O.
Erik Thingvoll, M.D.
Eric Wilcox, D.O.

Physical Medicine & Rehabilitation
Catherine Humphrey, M.D.
Aaron Levine, M.D.

Psychiatry
Christopher Clancy, M.D.
Wendy Wang-Rosen, M.D.

Pulmonary
Robert M. Kottman, M.D.

Radiation Oncology
Bingren Liu, M.D.

Surgery-Burn/Trauma
Ayodele Sangosanya, M.D.

Urology
Tricia Greene, M.D.

Vascular Surgery
Mona Li, M.D.

Researchers Believe Smurfs Can Predict Who Will Get Arthritis

A new clinical trial seeks to predict who is most likely to experience osteoarthritis, and to test whether an experimental treatment can prevent it altogether. Physicians are setting their sights on people who sustain a knee injury, seeking to understand why a high percentage of them will later go on to develop osteoarthritis, a debilitating condition that causes pain and disability in more than 20 million Americans each year.

The work is funded by a special class of National Institutes of Health grants awarded to research programs that show promise of quickly translating basic science discoveries into patient treatments. In this case, initial research has shown that an enzyme that controls the response of cells to growth factors may in fact be a major cause of osteoarthritis. The enzymes are called smad ubiquitination regulatory factors, or smurfs, but unlike the small, blue cartoon characters, researchers believe that a particular form of these regulatory enzymes, smurf2, might be responsible for America's leading cause of disability.

"We believe that smurf2 controls whether or not a cartilage cell matures and calcifies into hard bone, which is a very good thing when 'turned on' in those areas of the body where we are supposed to have hard bone," said **Randy Rosier, M.D., Ph.D.,** professor of Orthopaedics and director of Research Translation in Orthopaedics at the University of Rochester Medical Center. "But when smurf2 is active in joint cartilage, it may set off a chain reaction that leads to the steady deterioration of the smooth gliding surface tissue, or cartilage, which comprises the joint surface. When this occurs, the cartilage breaks down and severely damages the weight-bearing surface of a joint. Or, put another way, activation of smurf2 in the joint cartilage appears to significantly contribute to the onset of osteoarthritis."

Over the past decade, smurfs have begun to capture the attention of scientists, after a research team led by Gerald H. Thomsen, Ph.D., at Stony Brook University, identified the enzymes' critical role in regulating levels of important molecules that help determine which genes are turned on or off in a variety of cells throughout the body. In fact, Rosier first became intrigued with smurfs after reading about how they helped cell differentiation in frog embryos.

"I got to wondering what, if any, control smurfs might have on cartilage cell development and maturation," he said.

Over the course of several years, Rosier and his research team conducted a series of experiments that not only identified the role of smurf2 in bone cell and cartilage signaling, but also uncovered its vital link to osteoarthritis.

First, the team compared healthy and diseased cartilage and discovered that smurf2 was only present in osteoarthritic cartilage. They next demonstrated that smurf2s are stimulated by inflammation, and are expressed in cartilage within a few months following an injury.

Further experiments showed that smurf2 was present in the joints of patients in early-stage arthritis, when patients might begin to experience mild discomfort, but long before other well-known molecular markers of osteoarthritis began to emerge.

"It was at this point that we knew smurf2s are not just a casual bystander in arthritis, but rather, the catalyst that sets off the chain reaction that leads to osteoarthritis," Rosier said.

Rosier is now teaming with sports medicine surgeon **Michael Maloney, M.D.,** to conduct the clinical trial. The team will examine tissue samples from healthy, non-arthritic patients who have sustained an injury to the meniscus to determine the level of smurf2 expression in their cartilage at the beginning of the trial. In addition, a baseline MRI will measure the cartilage at the point of injury, and three years later. If results confirm the team's earlier findings, the MRIs of patients with high smurf2 expression will show the beginning signs of osteoarthritis as measured by hardening of the cartilage and bone loss.

"Our ultimate goal is to create a simple diagnostic test to determine whether a person with a knee injury has a high level of smurf2s in their cartilage," Rosier said. "In these cases, physicians can advise the patient to stop high-intensity wear-and-tear activity, slowing the onset of arthritis and lessening its severity. Eventually, we hope to create an injection that will stop smurf2s' ability to turn on the calcification and degeneration process in cartilage that leads to osteoarthritis."

While Rosier admits the development of an injection is a long time off, he believes that physician counseling will do a world of good.

"Think of a 25-year male old who tears his meniscus. Today, after successfully removing the torn meniscus fragment and physical therapy, in most cases, he's right back to his regular activity level," Rosier said. "But if his physician can tell him with certainty that he will develop osteoarthritis, he has the opportunity to change his activity level, reducing his risk and severity of osteoarthritis."

University of Rochester Names Otolaryngology Chair

A national search has led to the appointment of **Shawn D. Newlands, M.D., Ph.D.,** as chair of the Department of Otolaryngology at the University of Rochester School of Medicine and Dentistry, effective Jan. 1.

An expert in head and neck oncologic surgery and an accomplished neuroscientist, Newlands succeeds **Arthur S. Hengerer, M.D.,** who has led Otolaryngology at the University of Rochester since 1981, through a period of tremendous growth.

"We are thrilled to welcome Dr. Newlands to Rochester to lead the Department of Otolaryngology," said **David S. Guzick, M.D., Ph.D.,** dean of the School of Medicine and Dentistry. "He combines a national reputation in the clinical practice of head and neck surgery, a record of substantial NIH funding and scientific contributions to our understanding of vestibular function and spatial orientation, and extensive administrative experience as a chair of otolaryngology. He will bring tremendous experience to our educational programs in otolaryngology, link well with the James P. Wilmot Cancer Center, and establish immediate collaborations with our faculty in neurobiology. We couldn't ask for a better fit, and we look forward to welcoming Shawn and his family to our community."

Shawn D. Newlands, M.D., Ph.D.

Newlands comes to Rochester from the University of Texas Medical Branch, Galveston, where he has served as Harry Carothers Wiess Professor and Chairman of the Department of Otolaryngology since 2003.

"We are very fortunate at the University of Rochester Medical Center to have recruited someone with the capabilities and academic stature of Dr. Shawn Newlands," said Search Committee Chair **Steven E. Feldon, M.D.,** chair of the Department of Ophthalmology and director of the University of Rochester Eye Institute. "He comes to us with a unique combination of research acumen, highly valued surgical and clinical skills, as well as outstanding administrative experience. His capabilities meld perfectly with the multidisciplinary focus of our clinical and research programs."

With his focus on head and neck cancer care, Newlands anticipates the otolaryngology department's presence in the new Wilmot Cancer Center when it opens in 2008. He also looks forward to expanding collaboration between otolaryngology and the neurosciences at the University.

Newlands earned his bachelor's and master's degrees from the University of California in Santa Barbara and was among the first graduates of the combined M.D.-Ph.D. program at the University of Texas Medical Branch, earning a Ph.D. in neuroscience along with his medical degree. He completed an internship in general surgery at Virginia-Mason Medical Center in Seattle, followed by a residency in otolaryngology at the University of Washington in Seattle. Newlands also earned a master's in business administration from the University of Texas in Austin in 2002.

Following a year at the University of Washington, Newlands served on the faculty of the Division of Otolaryngology at the University of Mississippi Medical Center for three years. He joined the University of Texas in 1999.

"I am eager to contribute to medical knowledge at the University of Rochester while building research, patient care and education all to a level that allows the department to stand among the best in the country," Newlands said. "I welcome this opportunity to build to national prominence a department that suits this institution's strength and stature."

After 27 years, Hengerer will step down as chair but will continue his practice specializing in pediatric otolaryngology. During his tenure at the University of Rochester Medical Center, the department grew from a division in the Department of Surgery with a handful of faculty members, to a full department with fellowship-trained faculty in all otolaryngology subspecialties. These include otology and neurotology, head and neck surgery, laryngology, nasal and sinus care, facial trauma including plastic and reconstructive surgery, as well as pediatric ENT care.

Hengerer was instrumental in the expansion of University Otolaryngology Associates to a new clinical facility, which opened in 2004 to accommodate the department's growth and better serve its patients.

"We have built a strong clinical ENT department with a very capable research unit which, at present, is the 20th best funded otolaryngology research program in the country," said Hengerer.

"Dr. Newlands is a renowned researcher who can build on this foundation and take it to the next level, adding research faculty and new dimensions to the hearing research we have done here at the bench. His vestibular function research will add immensely to what has been in Rochester, and his experience in head and neck surgery adds new dimension that will help the university continue to recruit the best faculty and grow in national prominence in otolaryngology," Hengerer added.

For Your CME Calendar

All programs are held at the University of Rochester Medical Center unless otherwise noted.

Mindfulness-Based Stress Reduction for Health Care Providers
January 9 to February 13
Rochester Academy of Medicine
Activity Director: Michael S. Krasner, M.D.
For information call (585) 341-7230

Latino Health Care Symposium
January 17
RIT Inn & Conference Center
Activity Director: Gladys Velarde, M.D.

Women's Imaging 2008
February 3 to 6
The Westin La Cantera Resort, San Antonio, Texas
Activity Director: Edward Smith, Sc.D., F.A.C.N.P.
For information call Susan Nielsen (585) 273-2557

Advanced Cardiac Life Support/Renewal
February 13
Activity Director: Carol Diachun, M.D.

Pediatric Advanced Life Support/Provider
February 27 and 28
Activity Director: Carol Diachun, M.D.

53rd Annual Ophthalmology Conference
March 14 and 15
Activity Director: Steven E. Feldon, M.D., M.B.A. and James Aquavella, M.D.

Annual Ophthalmology Technician Conference
March 14
Activity Director: Rebecca Nally, O.D.

Pediatric Advanced Life Support/Renewal
March 14
Activity Director: Elise van der Jagt, M.D.

Digital Healthcare Imaging Management Systems 2008
March 25 to 29
The Westin La Cantera Resort, San Antonio, Texas
Activity Director: Edward Smith, Sc.D., F.A.C.N.P.
For information call Susan Nielsen (585) 273-2557

For further information:
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Courses offered by the University of Rochester School of Medicine and Dentistry are held at the following locations. For an update on specific topics and speakers, visit our website at www.urmc.rochester.edu/cpe

DANSVILLE
Nicholas H. Noyes Memorial Hospital
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Personal Renewal in the Practice of Medicine
February 7, 8 a.m.
Michael Krasner, M.D.
Assistant Professor of Medicine
University of Rochester School of Medicine and Dentistry

Preoperative Medical Evaluation
March 6, 8 a.m.
Raymond A. Zollo, M.D.
Assistant Professor of Anesthesiology
University of Rochester School of Medicine and Dentistry

ITHACA
Cayuga Medical Center
Call (607) 274-4225

Fetal Alcohol Syndrome
January 18, 7:30 a.m.
Erik S. Thingvoll, M.D.
Senior Instructor, Pediatrics/Neonatology
University of Rochester School of Medicine and Dentistry

Arthritis (Psoriatic, Rheumatoid, Gouty)
January 25, 7:30 a.m.
Andreea Coca, M.D.
Fellow in Medicine, Immunology/Rheumatology
University of Rochester School of Medicine and Dentistry

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