Medical Center Expansion: Creating an experience for healing

The largest development project in Ohio State’s history — a $1.1 billion construction program including a new James Cancer Hospital and Solove Research Institute and Critical Care Tower — broke ground in 2010. In late December 2011, a 31-foot steel beam carrying messages of hope for a cancer-free world from nearly 1,000 James cancer survivors rose to its nest place above the construction. In just two years, the facility will be completed, welcoming staff and patients into its healing environment.

What does a new James Cancer Hospital and Solove Research Institute and Medical Center Expansion mean for people of Ohio and the nation?

The Ohio State facility will provide scientists, researchers and clinicians with a single collaborative environment for research, education and patient care. Linked patient care-research areas will allow investigators to translate their lab work to clinical trials that may help patients heal more quickly. This environment will support experts from areas of study and research, who may not have collaborated before, in developing new preventions, treatments and cures.

Ohio State has a well-established reputation for its national and international leadership in the treatment of patients with kidney-related disease. Faculty offer a comprehensive program of cutting-edge kidney replacement therapies for those patients who have end-stage kidney disease, including in-center hemodialysis, peritoneal dialysis, home hemodialysis, and kidney transplantation, explains Brad Rovin, MD, director of the Division of Nephrology.

Division faculty support dialysis services at University Hospital and University Hospital East as well as several other central Ohio locations, including London and Bellefontaine.

For patients undergoing hemodialysis, a key component of success is the ability to maintain a healthy access site to the body’s circulatory system during extended treatment. Ohio State is a leader in vascular access, having three interventional nephrologists, physicians specializing in the maintenance of vascular access for patients undergoing dialysis. Vascular Access Centers are located at University Hospital and University Hospital East. Ohio State has maintained a decades-long leadership position in kidney transplantation, with one of the nation’s largest programs. The Nephrology Division is an integral part of that success, and has four certified transplant nephrologists, physicians who have done additional training in transplantation medicine after their nephrology training. The Nephrology transplant team works directly in the Ohio State Comprehensive Transplantation Center to co-manage patients pre- and post-transplant.

Faculty are also advancing care standards for a range of kidney-related diseases through the development and testing of innovative pharmaceutical agents and the identification of new, more effective applications for existing drugs. A major research focus for the division is to understand the pathogenesis of glomerular diseases, which are immunologic diseases that affect the filtering units of the kidney. For example, systemic lupus erythematosus (SLE), a chronic, inflammatory autoimmune disorder, often affects kidney health and can result in glomerular injury called lupus nephritis. Through genetic and proteomic studies, Division scientists are seeking to identify proteins in the urine that could serve as biomarkers signaling the onset of SLE or a disease flare.

“By identifying biomarkers related to the onset of lupus and lupus flares, we will be able to diagnose patients sooner and provide treatments that have less toxicity and better outcomes,” Rovin says. To facilitate this research, and to promote the translation of new discoveries directly to our patients, the Nephrology Division, in collaboration with Rheumatology, has created a multidisciplinary Lupus Clinic.

Division faculty also have unique expertise in other areas of kidney disease, and they have or are developing clinics that specialize in kidney stones, hypertension and genetic forms of kidney disease.

Learn more at internalmedicine.osu.edu/nephrology.

The US News & World Report 2011 rankings of “America’s Best Hospitals” included 11 Ohio State University Medical Center services among the nation’s best. These are: Cancer; Cardiology/Heart Surgery; Diabetes/Endocrinology; Ear, Nose and Throat; Gynecology (Women’s Health); Nephrology; Neurology and Neurosurgery; Orthopaedics; Pulmonology; Rehabilitation; and Urology. Seven services ranked in the Top 25 nationally.

Ranked among “America’s Best” for 19 consecutive years, Ohio State was also chosen by US News as the top hospital in the central Ohio metro region.

In addition, Ohio State’s Medical Center has earned a spot among the Top 10 academic medical centers in the nation for delivering the highest quality of care, based on the results of a study commissioned by the University HealthSystem Consortium (UHC). The UHC’s Quality & Accountability Study ranks Ohio State 9th in its 2011 survey of more than 100 academic medical centers.
Medical Center Expansion

By the numbers

2014 - opening of the new James Cancer Hospital and Solove Research Institute

21 - percent increase in admission for cancer care over the next decade

276 - beds in the new James Cancer Hospital and Solove Research Institute

144 - beds in the Critical Care Tower, which includes the new Intensive Care Unit, operating rooms and Burn Unit

310,000 - patients who will be cared for annually through Medical Center Expansion facilities

6,000 – direct, full-time jobs will be created

4,000 - indirect, full-time jobs will be created

Hospital facts

• The main hospital tower will be 20 stories, rising 293 feet from street level, making it the tallest building on the Ohio State campus. It will be one of the 15 tallest hospitals in the United States and one of the 25 tallest in the world. It will encompass 1.1 million square feet.

• The new James Cancer Hospital and Solove Research Institute will occupy 12 stories. Three stories will comprise the Critical Care Tower. Four floors are reserved for mechanical equipment, and one floor is currently of undetermined usage.

• While the building will be 20 stories tall, the floors will be numbered up to 21. There will not be a 13th floor, as is traditional in most US hospitals that reach this height.

• More than 12,000 tons of structural steel will be used in construction of the new building (equal to the weight of 25 Boeing 747 airplanes). It will also include 1 million pounds of ductwork and more than 90 miles of pipe (enough to stretch from the Medical Center to Kings Island Amusement Park near Cincinnati).

• The Medical Center Expansion project will add a patient-friendly central concourse to the Medical Center’s main campus that links hospitals, clinics, laboratories, classrooms, administrative offices and garages, and also offers patients and family members convenient access to healthcare services and other amenities throughout the Medical Center. An expanded Emergency Department, with new public and ambulance entrances, is also included in this project.

• The new facility will use 20 percent less energy than a comparable existing building and is being constructed under guidelines of the Leadership in Energy and Environmental Design (LEED) Green Building Rating System using sustainable and eco-friendly material, technologies and building practices.

Constructing a new model of patient care

Patients will be admitted to private rooms in the new James Cancer Hospital and Solove Research Institute and Critical Care Tower. These private facilities will allow for more personalized in-room care. Reducing patient transport through the hospital should increase patient comfort, while lowering exposure to infection risks.

Patient rooms will also provide abundant natural light, with visual and physical access to parks and green space, including the new Phyllis Jones Legacy Park and the new Chlois G. Ingram Spirit of Women Park. Additionally, rooftop terraces on the new building will be open to patients and their families during their stay. To facilitate family support in the healing process, every critical care patient room will have adjoining comfort zones where loved ones can stay, sleep and shower.

To support efficient, effective and safe patient care, advancements in information technology will integrate electronic medical records into each patient’s room, putting vital patient information at the fingertips of caregivers.

Full-scale mockups, of patient rooms for cancer and for critical care and of a nursing station, are being constructed at Ackerman Road. Medical personnel, former patients and healthcare experts are evaluating these key hospital areas and making ongoing suggestions for improvement before actual room construction begins.

What’s next?

Spring 2012 –

• The elevator core on the west end of the new hospital will be complete. These elevators will reach the 21st floor of the building.

• The final piece of steel for the framework of the new hospital will be placed.

• The Chlois G. Ingram Spirit of Women Park, located in the green space on the corner of Medical Center Drive and Ninth Avenue, will be complete.

• Restoration work on garages around the Medical Center will begin.

• Construction will begin on the concourse that will connect the new hospital to Rhodes Hall.

Late 2012 –

• Cramblett Hall will be removed to accommodate Medical Center Expansion.

2014 –

• Medical Center Expansion will be completed.

Learn more by visiting the Expansion Blog at projectoneblog.osumc.edu.

Top-to-bottom construction facts

Top: It’s a 30-minute climb to the top of the 14-story tower crane used in Medical Center Expansion construction. The crane can lift 30,000 pounds (the equivalent of three standard-size ambulances) 100 feet into the air.

Bottom: More than 5,600 truckloads of dirt were removed from the construction site to create the basement for the new building, which sits on a “bathtub” foundation. This basement slab was created using 700 loads of concrete. The “bathtub” design was chosen because it is an energy-efficient and fiscally sound way to protect a facility from water damage.
**P4 Medicine: Patients participate in complementary practices**

In fact, the NIH includes among its 27 institutes and centers the National Center for Complementary and Alternative Medicine (NCCAM). This institute sponsors and conducts research to better understand “the usefulness and safety of complementary and alternative medicine interventions and their roles in improving health and health care.”

The Center for Integrative Medicine (CIM) at Ohio State has a similar mission — to advance complementary practices and to provide an evidence-based, patient-centered approach to holistic health care. Ohio State’s CIM is one of the nation’s most active integrative medicine centers, averaging more than 2,000 visits per month. Many patients who come to the CIM are undergoing traditional treatment for complex conditions, such as cancer.

“Complementary medicine is a diverse group of medical and healthcare systems, practices and products, including natural products, mind-body medicine, and manipulative and body-based practices. Complementary medicine is informed by evidence but is not generally considered part of conventional medicine. It is used in conjunction with conventional therapies.”

Anup Kanodia, MD, MPH

Often, these patients seek the synergistic effect that can occur when the best of traditional medicine is integrated with the best of complementary practices. Here’s one example of how a patient, whose high blood pressure was not well controlled despite compliance with his blood pressure medication, benefited by visiting Hari Sharma, MD, at the CIM.

Sharma practices Ayurveda, a comprehensive system of natural medicine that promotes wellness and helps prevent a wide range of illnesses. Sharma helped the patient complement his blood pressure medication regimen with Ayurveda therapies.

“Ayurveda is a comprehensive program to restore wholeness,” explains Sharma. “Treatments are based on an individual’s constitution (or physical and psychologi- cal characteristics) to address disorders present in the physiology.”

Ayurveda treatments can include:
- Dietary recommendations to enhance digestion and elimination
- Herbal products to balance physiology
- Meditation to create peace of mind and release stress
- Breathing exercises to balance the nervous system
- Self-massage for detoxification and relaxation

The patient had reported that his blood pressure went up each afternoon, even with blood pressure medication. “So I taught him meditation, breathing exercises and self-massage, and recommended herbal mixtures. Now, his blood pressure is normal,” Sharma explains.

The positive results with Ayurveda had a positive effect on another member of the patient’s family. “Both my wife and I started meditation together, and we continue practicing it. That has helped tremendously. With minimal meds, my blood pressure has normalized, and I credit it to the CIM and their total protocol. Everything is managed quite beautifully,” the patient reports.

**Faces**

Emile G. Daoud, MD, FACC
Director, Electrophysiology Section, Division of Cardiovascular Medicine
Professor of Internal Medicine

What do you like best about practicing medicine at Ohio State’s Medical Center?
What I love about being a physician at Ohio State is that everyone is committed to superb patient care, from the technicians in the lab to the nurses on the floor to the pharmacists and physicians. For the entire cardiovascular team, good is never good enough — it has to be outstanding.

What excites you most about the future of medicine?
When I was a med student 20 years ago, we learned about the importance of a thorough history to create a patient-spe- cific plan. I am excited about the day we can truly design a patient-specific plan based on genetic analysis of a drop of blood.

How do you think P4 Medicine will change your specialty over the next 10 years?
One of the most important aspects of P4 Medicine is that it will facilitate clinical research through open sharing of informa- tion and outcomes. Some of the best translational research comes from multicenter studies, and P4 Medicine will help us create new knowledge through greater synergies, facilitated by simplified sharing across a common platform.

Name one of your medical career mentors and tell us what you learned from him or her.
William Abraham, MD, has been my leadership mentor. My administrative experience is limited, and he has helped me understand how to navigate a myriad of differing, passionate opinions while honoring and valuing each member of the enterprise.

What advice do you have for young physicians early in their careers?
This advice sounds trite, but it’s true: you must love your work and, as a clinician, keep your focus on the patient. Medicine, from the science and research to the practice, is complicated, and so you must keep at the forefront of your mind that, at the end of the day, your focus is to make each patient’s life better.

Who in history would you most like to meet and why?
I would have loved to spend time talking with the late Senator Edward Kennedy. I think Ted could reveal the answers to so many questions about the assassinations of his brothers and the secrets of his family.

What are your hobbies or volunteer activities?
In the past few years, through help from my family and friends, I have further developed my faith. At a time in my life when I was searching, I was invited to join a Christian men’s weekly Bible study group. This invitation came at a time when I was thinking, “Why doesn’t my fantastic life feel complete?” I have a wonderful wife who volunteers her time in a number of causes and three great kids who have opened my eyes in so many ways. My learning more about Christ has enriched all of our lives — individually and as a family.

Rising star: Mahmoud Houmsse, MD, clinical assistant professor of Cardiovascu- lar Medicine, started his career in the Middle East and came to this country only 15 years ago as an internist. He has embraced every opportunity for learning and today is among the most technically proficient electrophysiology practitioners I know. His patients love his thoughtful, relaxed rapport, and he continues to capitalize on every opportunity available at an academic medical center to expand his training and to help support a variety of initiatives.

Read about those who are creating the future of medicine to improve people’s lives at osuworks.wordpress.com/faces-of-osu-medical-center.
Time and Change: Laser surgery

LASIK (an acronym for Laser-Assisted In Situ Keratomileusis) is the most common corrective eye surgery performed in the United States today. Patients visiting the OSU Havener Eye Institute benefit from state-of-the-art technology (wavefront-optimized, all-laser LASIK surgery) that allows for individual measurements of the entire eye and customized corneal reshaping, giving each patient personalized, high precision results from the 15-20 minute outpatient procedure.

For decades, Ohio State ophthalmologists have been pioneers and leaders, locally and nationally, in the use of laser-assisted eye surgery. William H. Havener, MD, namesake of Ohio State’s Eye Institute, was the university’s first full-time ophthalmologist. He served as chair of the Department of Ophthalmology from 1959-61 and again from 1972-88.

Havener and Ohio State ophthalmologists created central Ohio’s first Laser Center for the treatment of eyes. Here, he and national leaders such as Richard Keates, MD, pioneered some of the world’s first “cold” (excimer) lasers, used in the treatment of cataracts and also to correct vision. Development of the excimer laser advanced eye surgery because it allowed for smaller, more precise incisions and faster healing.

A California newspaper article in 1993 reported on Keates’ use of a “new excimer cold laser” to correct vision: “The prospect of a glassless future is no longer a dream. It is a probability, eye doctors say.”

LAperm, the new excimer cold laser” to correct vision: “The prospect of a glassless future is no longer a dream. It is a probability, eye doctors say.”

Experts generally agree that if stroke patients don’t recover the use of their affected limbs within three to six months after a stroke, the chance that the arm or leg will become functional is minimal. With the help of a special device, Pridham hopes to be one of the first patients in the country to show that improvement is possible, perhaps even as long as 12 years later.

Pridham is involved in an Ohio State study testing a robotic arm brace to determine if that brace can help repair nerve damage by “waking up” unused neurological pathways or possibly use alternate pathways to take control of her arm movement.

The device, when strapped to one affected left arm, senses Pridham’s own remaining muscle signals and provides motorized assistance to force completion of the arm movement. For Pridham, the device makes possible everyday tasks such as flipping on a light switch or reaching for a cup from the kitchen cabinet. “I was very surprised at how easy it is to use,” says Pridham. “Simply because all it needs is a small message from the brain, and it immediately responds.”

Stephen Page, PhD, FAHA, the study’s principal investigator, thinks the one-pound robotic device may lead to measured improvement months, or perhaps years, after the window of time when arm movement is expected to respond best to therapy. “We believe that the repetition may turn on the brain,” says Page, an associate professor of Occupational Therapy in Ohio State’s School of Health and Rehabilitation Sciences. “If we can restore even partial arm movement in patients who have spasticity, we will have helped them move a step closer toward greater independence.”

Earlier studies by Page and his team have shown preliminary success with the device.

But for Ohio State...

Device may aid spasticity

David Crawford | The Ohio State University Medical Center

Ohio State is home to internationally renowned experts in ear, nose and throat care and are consistently ranked among the country’s finest by U.S.News & World Report.

Hearing Aids
Hearing loss
Nasal obstruction
Recurrent ear infections
Salivary gland disorders
Sinus infections
Snoring and sleep apnea
Taste and smell disorders
Thyroid disorders
Tonsil and adenoid disorders
Voice disorders

Schedule a visit with our experts at any of our convenient Columbus-area locations.

Dublin
Eye and Ear Institute
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University Hospital East

Ohio State offers convenience without compromise.

To schedule an appointment, call 614-293-1692 or 614-366-ENTS.