

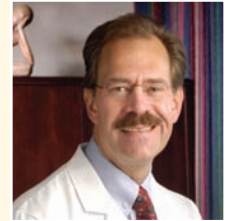
Communication, 'Connectedness' Provide Positive Patient Outcomes

Effective communication goes beyond talking with one another or exchanging information. Good communication means creating a level of "connectedness," which to me means that we, as an academic medical center, are communicating and listening across the entire Ohio State University family: students, patients, families, referring physicians, our community and others.

As dean of Ohio State's College of Medicine, and now in my role as interim CEO of the Medical Center, one of my goals is greater "connectedness." We know communication among our clinicians is important to our patients and their families because they have told us so. Outpatients and discharged inpatients want all the doctors involved in their care to be made aware of the tests and treatments they receive here as well as what medications are prescribed.

Historically, academic medical centers have not done an exemplary job of keeping primary care physicians informed about their patients. Once patients are referred to a special-

ist, and then perhaps to another, the "black hole" syndrome sometimes becomes apparent. Now that Ohio State's electronic medical record is being rolled out, it is easier to keep track of how patients come to us and, in turn, to communicate with you via letters, phone calls and faxes. As technology evolves, we will have a fully connected electronic backbone. In the meantime, I invite you to contact me directly and let me know how we can create "connectedness" with you to improve the care of the most important people we serve - your patients.



Chip Souba, MD, ScD

Chip Souba, MD, ScD

Dean, College of Medicine
Interim Chief Executive Officer
Ohio State University Medical Center
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Maternal Fetal Medicine Addresses Pregnancy Complications

Physicians who care for women of reproductive age should be keenly aware of issues that may arise related to pregnancy planning," says Mark Landon, MD, director of Ohio State University Medical Center's Maternal Fetal Medicine Program.

"In addition to advising all women attempting to conceive not to smoke, not to use illegal drugs or not to consume alcohol, prospective mothers who are diabetic or who suffer from epilepsy or hypertension should be made aware of the risk that some prescribed medications may pose to a developing fetus," Landon adds.

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January 2008

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Landon says primary care and family physicians who have diabetic patients will want to inform them about a relationship between levels of glucose control at and around conception and the risk of malformations. "These women are the types of patients whose pre-pregnancy planning our program can coordinate with their physicians."

Ohio State has long been the only institution in central Ohio with a comprehensive Diabetes and Pregnancy Program. The program, which features diabetes nurse educators and board-certified maternal fetal medicine specialists with expertise in managing diabetes during pregnancy, ranks among the top five nationally in volume of women with insulin-dependent diabetes.

Besides collaborating with primary care physicians and community obstetricians, the Medical Center works with pediatricians, perinatologists and neonatologists to plan a seamless transition of care, recognizing that optimal health care begins long before birth.

"Twenty to 30 years ago, for example, women with diabetes and some other diseases were discouraged from ever becoming pregnant," says Richard O'Shaughnessy, MD, director of the Medical Center's Fetal Treatment Program. "At Ohio State, we take a personalized approach, tailoring care to each patient's circumstances.

tions can threaten the health of the mother, the baby or both."

Physicians in the Fetal Treatment Program specialize in high-risk obstetrics, including providing surgical and other interventions to the developing fetus in utero. "We approach these cases with great humility and don't rush in with every baby that has a problem," O'Shaughnessy says. "Many fetal problems identified before birth can be best addressed after birth; others may require intervention before the baby is born. In situations where the baby cannot survive without in utero treatment, such as severe fetal anemia or twin-to-twin transfusion syndrome, antenatal treatment is needed.

"Advances in technology, such as endoscopic minimally invasive procedures, not only allow problems to be addressed with reduced risk, but also help identify abnormalities."

Landon agrees. "As ultrasound equipment has improved, our ability to screen for structural abnormalities during the first trimester has improved dramatically. For the majority of women at risk for difficult pregnancies or problems with their babies, the results of screening can result in reassurance."

O'Shaughnessy says imaging of the fetus is of great benefit to prenatal care. Knowledge of fetal problems allows him and his colleagues to develop an individualized care plan for mother and baby.

For more information or to contact Drs. Landon and O'Shaughnessy, call (800) 293-5123.



Mark Landon, MD



Richard O'Shaughnessy, MD

"We work hand-in-hand with referring physicians to tailor our involvement to individual aspects of each situation."

Richard O'Shaughnessy, MD

"We work hand-in-hand with referring physicians to tailor our involvement to individual aspects of each situation," O'Shaughnessy adds. "We're mindful that pregnancy is a natural process, but we know that complica-

just the
FACTS

Physician Co-Edits Obstetrics Textbook

Mark Landon, MD, director of the Maternal Fetal Medicine Program at Ohio State, has co-edited the fifth edition of one of the most popular textbooks in obstetrics. *Obstetrics, Normal and Problem Pregnancies* is a reference for health professionals that offers guidelines for diagnosis, therapy and management of normal and high-risk patients. The book, which also gives access to online content and sophisticated illustrations for use in electronic presentations, was written by leading authorities in the field, including Steven Gabbe, MD, former chair of the Department of Obstetrics and Gynecology at Ohio State and now dean of the Vanderbilt School of Medicine.



From Ohio State University Medical Center

news briefs

Program Enhances Heart Failure Treatment

A national undertaking to improve treatment of congestive heart failure in hospital patients has provided life-saving benefits. The 259 U.S. hospitals that participated in OPTIMIZE-HF (Organized Program to Initiate Lifesaving Treatment in Hospitalized Patients with Heart Failure) demonstrated several practices that benefited patients, including increased use of evidence-based, life-sustaining therapies and providing detailed discharge instructions and counseling, which translated into shorter hospital stays and fewer returns. A report on the initiative was published in the journal *Archives of Internal Medicine*. William Abraham, MD, director of Cardiovascular Medicine at Ohio State University Medical



William Abraham, MD

Center and co-author of the article, says the treatment practices exhibited by participating hospitals extended and improved lives and had a positive impact on the healthcare economy by reducing hospitalizations.

For more information or to contact Dr. Abraham, call (800) 293-5123.

The James Earns 'Leapfrog Top Hospitals' Status

Ohio State's James Cancer Hospital and Solove Research Institute is among the safest and most effective hospitals in the country, according to a national ranking called the Leapfrog List. The James is among 41 hospitals that were named 2007 Leapfrog Top Hospitals based on a rating system that assesses hospital quality and safety. The James is one of only two Ohio hospitals on the list. The Leapfrog Group is a consortium of 150 Fortune 500 companies that pay for healthcare needs of an estimated 34 million Americans. The 2007 Top Hospitals list is based on 1,285 hospitals that responded to the Leapfrog Hospital Quality and Safety Survey as of Aug. 31. Data is collected about hospital practices in four categories: computerized physician order entry; intensive-care unit physician staffing; evidence-based hospital referral; and a Leapfrog safe-practices score.

For more information, call (800) 293-5123.

High-Tech Patient Support: CarePages

Patients may soon be asking physicians about CarePages, a Web-based virtual gathering place where patients can communicate with relatives and friends across the country before, during and after their hospital stay. Ohio State University Medical Center is the first central Ohio hospital to offer CarePages. Patients learn about them through their admission packet and CarePage "champions" on the unit who can explain the tool and help with any issues surrounding it. Patient Relations, while doing Proactive Rounding, can also answer questions. This "Family-Generated Web Page" can be readily set up by family members either by using computers provided in the hospital Atrium or by wireless laptop. Relatives and friends can then send notes of support and encouragement and not worry about phone calls that may disturb a resting patient. The sites are safe because only invited family members and friends can visit them. CarePages cannot be found through Web search engines.

For more information, call (800) 293-5123.

Incisionless Surgery Corrects Acid Reflux Disease

Surgeons at Ohio State University Medical Center have performed the first incisionless operations in the United States to stop gastroesophageal reflux disease (GERD) using a device recently approved by the U.S. Food and Drug Administration. The surgeons treated two patients with an EsophyX, a



Scott Melvin, MD

device that is new in the United States but has been proven safe and effective in patients treated throughout Europe for GERD. "It offers a treatment for patients who suffer from an advanced degree of GERD and who, until now, would have been candidates for surgery," says Scott Melvin, MD, director of the Center for Minimally Invasive Surgery at Ohio State's Medical Center. The new device allows reconstruction of the one-way valve at the top of the stomach when the valve is defective. The tubular device is inserted through the mouth and sent down the esophagus into the stomach. Physicians view the operation through a fiberoptic camera set within the surgical tools.

For more information or to contact Dr. Melvin, call (800) 293-5123.

MedNet 21: Continuing Medical Education in the 21st Century

“Keeping up with the latest breakthroughs in medicine is not only essential for good patient care, but Continuing Medical Education (CME) is also required for a physician to maintain licensure,” says James Allen Jr., MD, a pulmonary and critical care specialist who edits and moderates Ohio State’s MedNet 21 program.

“Delivery of our CME programming has morphed several times since 1962, when we started a simple audio telecast delivered via telephone to physicians in Ohio who had pre-ordered a set of 35mm slides and could call in to ask questions,” Allen says.

“What is now the longest-running distance-learning program in the country then morphed in the 1980s into a satellite television program,” he adds. “Known then as OMEN (Ohio Medical Education Network), the change in delivery

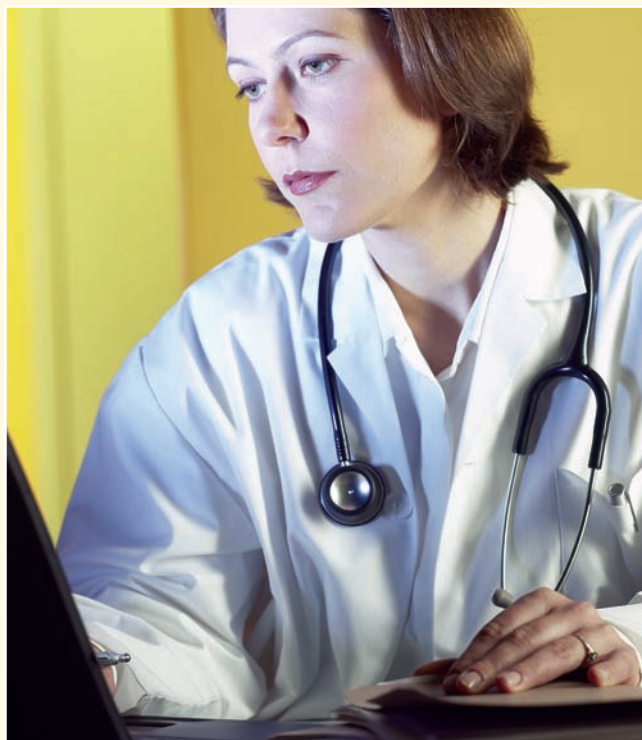
was great because we added moving visuals and real-time question-and-answer ability. The downside was, if you were unable to get to the auditorium at a particular time on a single day, you missed it.”



James Allen Jr., MD

Allen says MedNet 21, the latest metamorphosis of the program, is delivered to physicians in

45 countries and throughout the United States on the Web. “Our core audience is primary care physicians, mostly internists, pediatricians and family-practice doctors,” he notes. “To best meet their needs, we conduct a complex needs-analysis annually, reviewing current medical literature



to glean topics. About 150 hours of programming are available on any given day and, because we are flexible, we can respond to developments. For example, a few years ago during the anthrax scare, we had an update with bioterrorism specialists available within two weeks.”



The Center for Continuing Medical Education at Ohio State offers physicians multiple ways to earn credit online:

Live Webcasts – This Category 1 program allows viewers to communicate electronically with presenters during the presentation.

Video On Demand – Users can view archived webcasts approved for Category 1 credit at any time. Viewers can communicate via e-mail with program presenters.

Internet Point of Care CME – This program offers structured, self-directed, online learning by physicians on topics relevant to their practice.

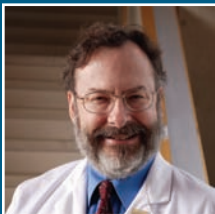
Ohio State University Medical Center is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to sponsor continuing medical education for physicians. To learn more about the OSU Center for Continuing Medical Education, call (614) 293-3576 or visit <http://ccme.osu.edu/about/>.



From Ohio State University Medical Center

research highlights

New Therapy Could Preserve Vessel Function After Heart Attack



Jay Zweier, MD

Researchers have identified the process that causes blood vessels to constrict during and after a heart attack. They also have demonstrated that delivering a vital molecule that is depleted during this process directly to those blood vessels can reverse damage and help restore blood flow.

The scientists say these findings could improve outcomes for patients with acute coronary episodes related to ischemia and ameliorate restriction of blood supply to the heart. "This is a useful therapeutic approach and should be easy to translate," says Jay Zweier, MD, director of Ohio State's Dorothy M. Davis Heart and Lung Research Institute and senior author of the study, which appeared in *Proceedings of the National Academy of Sciences*. Zweier says the time frame for having such a product on the market depends on many factors but could be as short as two to three years. "This should enable improved treatment of patients with unstable coronary syndromes and heart attacks, allowing enhanced restoration of blood flow and preservation of heart muscle at risk."

For more information or to contact Dr. Zweier, call (800) 293-5123.



Ajit Chaudhari, PhD

Scientists Seek Clues to Causes of ACL Tears in Women

Striving to learn why women are at greater risk of tearing knee ligaments than men, scientists have ruled out the influence of female hormones on movement patterns that might lead

to injury. However, the search for reasons behind the disparity in anterior cruciate ligament tears between men and women is complicated by factors beyond hormonal differences. A recent study published in the *American Journal of Sports Medicine* determined that neither the menstrual cycle nor the use of oral contraceptives affected the impact

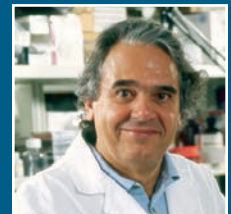
on knee and hip joints during high-risk jumping and landing. "We were getting a sense that the menstrual cycle is not an important factor, but we needed to know for sure," says Ajit Chaudhari, PhD, lead author. "Overall, the differences between males and females still probably play a part. The problem is that there are lots of factors that go into these different risks."

For more information or to contact Dr. Chaudhari, call (800) 293-5123.

Obscure RNA May Be Important in Cancer

Research at Ohio State's Comprehensive Cancer Center shows that an obscure form of RNA might play an important role in human cancer. These ultraconserved noncoding RNAs (UCRs) have been considered biological "junk" by some researchers, but a report in the September 2007 issue of the journal *Cancer Cell* suggests this may not be the case. The study, led by Carlo Croce, MD, who directs the Human Cancer Genetics Program at Ohio State, found that UCRs, like classic oncogenes, can contribute to cancer development. It also showed that the type and amount of UCRs are different in cancer cells for each of three cancer types, suggesting that these molecules might prove useful in diagnosing the disease and determining prognosis and treatment. "Along with oncogenes, tumor-suppressor genes and microRNA, this seems to be another family of genes that plays an important role in cancer," Croce says.

For more information or to contact Dr. Croce, call (800) 293-5066.



Carlo Croce, MD

Innovations Driving Improvements in Cardiovascular Care

Technological innovations designed to improve cardiovascular and cardiothoracic care are being studied at Ohio State University Medical Center. Here's a look at three of them:

CardioMEMS Wireless Pressure Sensor for Heart Failure

The EndoSure® Wireless AAA Pressure Measurement System was first used to monitor pressure during endovascular repair of abdominal aortic aneurysms. As part of a large study sponsored by CardioMEMS, Ohio State researchers will implant a similar wireless hemodynamic monitor in the distal pulmonary artery of patients with heart failure to measure changes in parameters such as pulmonary arterial pressure and volume.

Because symptoms of pulmonary hypertension don't appear until pulmonary vascular disease is advanced, small changes in arterial pressure can reflect ventricular damage. But monitoring hemodynamic parameters allows physicians to quickly determine proper treatment.

This device is also "easy to deploy, and patients have only small risks of pulmonary embolisms, blood clots and infection" because it's made of biocompatible materials, says Ohio State principal investigator (PI) Ayesha Hasan, MD.

William Abraham, MD, director of Cardiovascular Medicine at Ohio State, is national PI for this study, which could lead to improved quality of life and functional capacity while decreasing hospitalizations.



EndoSure® wireless AAA pressure sensor

Rheos Baroreflex Hypertension Therapy System

A *European Respiratory Journal* report claimed that up to 18 percent of hypertensive patients are refractory to multiple drug therapies despite adherence to their regimens. And an article in *Journal of Hypertension* recently reported that spontaneous baroreflex sensitivity, a physiological mechanism of blood pressure control, is often impaired in hypertensive patients.

Baroreceptors on the aortic arch and in the carotid sinus were first targeted by electrical stimulation for hypertensive therapy in the 1950s; the first implantable devices appeared in the '60s and '70s. These bulky devices yielded favorable clinical outcomes, but they weren't fully implantable, they lacked external control and their electrodes leaked. However, a report in the *European Journal of Vascular and Endovascular*

Surgery says the new Rheos™ Baroreflex Hypertension Therapy System addresses these challenges through a fully implantable pulse generator, carotid sinus leads and a programmer system.

The pulse generator activates baroreceptors through perivascular electrodes connected to the carotid sinus wall, causing the parasympathetic nervous system to reduce blood pressure. Physicians can control dosing through the external programmer system. Ohio State's Medical Center is participating in the Rheos Pivotal Trial to evaluate the efficacy and safety of the Rheos system over 24 months. Jean Starr, MD, director of Endovascular Services, is the PI at Ohio State.



Rheos Baroreflex Hypertension Therapy System

HeartMate II Trials

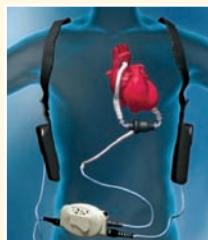
According to a report in the journal *Cardiology*, approximately 15,000 patients become eligible for heart transplantation each year, but nearly one third die before finding a match. During end-stage heart failure, these patients experience hemodynamic decline that hinders survival.

Ohio State's Medical Center is participating in two clinical trials evaluating the safety and efficacy of the HeartMate II left ventricular assist system (LVAS) in patients with end-stage heart failure who are waiting for transplantation (bridge to transplant) or are ineligible for transplantation but require mechanical circulatory support (destination therapy).

This fully transportable, continuous-flow pump is smaller (400 gm), faster (pumping blood at up to 10L/minute) and has a broader therapeutic range than its predecessors. Sherri Wissman, RN, a research nurse at Ohio State's Heart Center, says researchers are examining its durability. Heart Center research nurse Tammy Yanssens, RN,

says Ohio State is one of the highest recruiters for both trials. The principal investigator at Ohio State is Benjamin Sun, MD, director of Cardiothoracic Surgery.

To contact any of these researchers, call (800) 293-5123.



HeartMate II LVAS

(Adapted text and images for this story were printed with permission from Updates in Cardiovascular Medicine & Surgery at Ohio State University Medical Center.)

new faces



Thomas Ellis, MD

Specialty:

Orthopedic Surgery

Clinical Interests:

Hip arthroscopy; pelvic osteotomy; hip replacement; hip resurfacing; pelvis and lower extremity orthopedic trauma

Residency:

Scott and White Memorial Hospital

Fellowships:

Anderson Orthopaedic Research Institute; Hennepin County Medical Center



Laxmi Mehta, MD

Specialty:

Cardiovascular Medicine

Clinical Interests:

Cardiovascular women's health; cardiovascular MRI/CT

Residency:

William Beaumont Hospital

Fellowship:

William Beaumont Hospital

To contact either of these physicians, please call OSU Care Connection at 1-800-293-5123.

Signature Program Update: Neurosciences

In Neurosciences, a Signature Program at Ohio State University Medical Center, basic and clinical scientists collaborate in translating cellular and molecular neurology into clinical therapies for neurological disorders.

"Neurosciences is a very broad term, encompassing clinical diseases of the brain, spinal cord and nerves," says E. Antonio Chiocca, MD, PhD, a physician-scientist who leads the multidisciplinary effort.

"When a primary care physician identifies a neurological problem in a patient, the issue sometimes arises about which neuroscience physician to consult," says Chiocca, who chairs the Department of Neurological Surgery. "My colleagues and I are always available for telephone consultations with doctors who want to talk through a diagnosis."

The Neurosciences Signature Program covers a number of conditions, including nervous system injuries or abnormalities, degenerative diseases, spinal trauma and tumors, cerebrovascular diseases, arteriovenous malformations, angiomas, peripheral nerve tumors, epilepsy, Parkinson's disease and more. Services range from spine and skull-base surgery to gamma-knife radiosurgery, interventional catheter embolizations and deep-brain stimulation.

Dr. Chiocca and other neurological surgeons can be reached at (614) 293-8714.

New 'Hybrid Imaging': PET/CT Advances Cancer Care

"Imaging traditionally has been used to look at structures, to detect broken bones or to gain a morphological impression of, for instance, a nodule in the lung," says Michael Knopp, MD, PhD, an internationally known researcher in medical imaging.

"But today we have PET/CT (positron emission tomography/computed tomography), which provides a novel way for physicians to determine if a patient's cancer is responding to therapy or if the disease remains in remission," adds Knopp, who directs Ohio State's Wright Center for Innovation in Biomedical Imaging and chairs the Department of Radiology.

"With PET/CT, we combine two technologies to create a new or 'hybrid' technology for the quantifiable, noninvasive assessment of tumor characteristics, biological activity and how these may change during therapy," he explains. "We are also using PET/CT to guide surgical resection. A patient is imaged presurgically to assess and locate tumors. Specimens are imaged during surgery to check for resection completeness. And the patient is imaged postsurgically to monitor for recurrence."

PET creates images of glucose metabolism, which is elevated in malignancies. When coupled with CT, which acquires information about structure and morphology, the result - PET/CT - allows physicians to map active tumor areas as well as metastatic lymph nodes.

"This is exciting because PET/CT is a step further in the evolution of imaging, allowing us to use it in the sense of a biomarker," Knopp adds.

To refer a patient for PET/CT, call (614) 293-6920.