INSIDE:

2 Study projects shortage of surgeons by 2010

5 Surgeons perform innovative procedure

7 Department of Surgery faculty included on Best Doctors list

9 Comprehensive bariatric surgery services now available at one location

The Department of Surgery chairman’s office and department administrative staff and most of the Division of Critical Care, Trauma, and Burn have moved into a new building, at 395 W. 12th Ave. (pictured above), on the sixth floor. See story on page 9. Photo by Jim Brown.
Study projects shortage of surgeons by 2010

In less than two years, there may not be enough surgeons in U.S. hospitals to treat the critically injured or chronically ill.

A new study suggests that the number of available general surgeons, who often perform lifesaving operations on patients in emergency rooms, will not keep up with public demand. As the population continues to grow, there will be a shortage of 1,300 general surgeons in 2010. That shortage will worsen each decade, reaching a deficit of 6,000 by 2050.

That means people will have to wait longer for emergency treatment and for elective general surgery, says Dr. Thomas E. Williams, Jr., co-author of the study and clinical associate professor emeritus of surgery in the Division of Cardiothoracic Surgery at The Ohio State University Medical Center.

“People may wait hours in an emergency room if there is a shortage of surgeons. But the problem is that if you’re not operated on within a few hours, your disease progresses and that can create more serious problems in other areas of the body. These are problems that you would not have had with prompt surgical attention,” Williams says.

In emergency rooms, general surgeons are called upon to determine whether to operate on a patient. But an increasing number of medical professionals choose to specialize in other fields, such as cardiac or orthopedic surgery. So the shortage of general surgeons will directly affect emergency rooms around the country, which rely on general surgeons.

The study was published in a recent issue of the journal Surgery. Williams conducted the study with Dr. E. Christopher Ellison, the Robert M. Zollinger professor and chairman of surgery, associate vice president for health sciences, and vice dean of clinical affairs at Ohio State’s Medical Center. The pair has co-authored a book with Dr. Bhagwan Satiani, professor of clinical surgery in the Division of Cardiothoracic Surgery. The book is titled “The Coming Surgeon Shortage: Who Will Fix Our Hearts, Your Hip, and Deliver Our Grandchildren?” and is expected to be released late next year.

The projections were made based on data from the U.S. Census Bureau and the American Board of Surgery. The data included population statistics and projections, medical school graduation rates, and information on the number of surgeons currently practicing.
The shortage was calculated by taking the difference between the number of retiring surgeons and those entering the work force. This number was then compared to the expected need for general surgeons. Previous research has shown that 7.53 general surgeons are needed for every 100,000 people to maintain the current level of care. The current study shows this number will not be met as early as 2010.

There are about 21,500 general surgeons practicing in the United States today. Each surgeon practices for an estimated 30 years, and about 705 surgeons die or leave the work force every year for personal reasons or retirement.

Meanwhile, nearly 1,000 new surgeons enter the work force each year. But of that number, only 850 will practice general surgery. After accounting for retiring surgeons, that means only 145 new general surgeons will enter the work force annually, far fewer than needed, given the continuous rise in the population.

But some authorities have suggested that as many as 600 of these 1,000 surgeons are entering other surgical specialties each year, creating an even larger shortage of general surgeons than the current study projects.

"Many doctors today want to specialize in areas such as vascular, colon, or thoracic surgery. They’ll train for one or two more years beyond general surgical residency so they have more professional expertise, and probably won’t take the general surgery calls in emergency rooms," Williams says.

"But if even more surgeons are getting these specialized certificates, the problem will just get worse. We’ll see fewer available doctors for patients in the emergency rooms that depend on these general surgical procedures for their care."

Williams estimates that it will cost $62.5 million per year ($750 million total) to train the additional 1,875 general surgeons needed by 2020. Because training is five years in duration, each year of training costs approximately $80,000, including salary, benefits, and other direct and indirect costs.

Despite recent attempts to increase the number of medical students and establish new medical schools, there are several barriers standing in the way.

Attracting students to the medical field is a growing problem, Williams says. The overwhelming costs of obtaining a medical degree are a large deterrent for many young students, despite scholarships and financial aid. The cost of obtaining a medical degree leaves many students with $125,000 to $150,000 in debt after completing medical school.
In addition, students required to train as residents are often underpaid for their work, Williams says. The average resident earns from $40,000 to $45,000 per year for three to seven years before being board-certified. Compare that to the average salary of a first-year associate at a New York law firm, who will earn $150,000 to $200,000 per year.

The lawyer will typically work on weekdays, with some evening and weekend work when needed. The resident, on the other hand, will work nights, weekends, and uneven hours for up to seven years for lesser pay.

“This life-style can serve as a deterrent for many who might otherwise choose surgery. When you are married and have children, you need a more predictable schedule. Someone has to take the kids to music lessons or football practice. One of the problems in surgery is that it’s often unpredictable, and that makes it hard to lead a scheduled life-style,” he says.

“What we need to do is make this profession more attractive through programs to help reduce costs and arranging the 80-hour workweeks to more manageable schedules. Without these changes, we simply won’t keep up with the increasing demand.”
Surgeons perform innovative procedure to treat pancreatitis, avoid diabetes

Specialists in the Department of Surgery at The Ohio State University Medical Center have performed an innovative two-part procedure designed to alleviate chronic pancreatitis while preserving a patient’s ability to secrete insulin and avoid surgically-induced diabetes.

The procedure, a total pancreatectomy with auto-islet cell transplantation, was performed in November 2008 by Dr. Amer Rajab, assistant professor of surgery and director of pancreas and islet transplantation in the Division of Transplantation, and Dr. W. Scott Melvin, professor of surgery, chief of the Division of General and Gastrointestinal Surgery, and director of the Center for Minimally Invasive Surgery. The operation was the first of its kind at Ohio State’s Medical Center.

In the first part of the procedure, Melvin removed the patient’s pancreas to alleviate chronic pancreatitis, a painful inflammation of the pancreas that changes the organ’s structure and function. Rajab then transported the pancreas to a specialized islet isolation laboratory, where he and his team processed the pancreas to isolate the islets. The islets are the cells that produce insulin, a hormone that helps to control blood sugar levels.

In the second part of the procedure, Rajab took the islet cells to the operating room and infused them into the patient’s liver, where they would graft and mimic the function of the removed pancreas, preserving the patient’s ability to secrete insulin.

After islet cells are infused into a patient’s liver, it takes about a month for them to attach to new blood vessels and begin releasing insulin.

Rajab says the technique offers several advantages. “The procedure utilizes a patient’s own islet cells, which eliminates any threat of rejection and substantially reduces the risk of the patient developing diabetes,” he says. “Chronic pancreatitis is very painful and severely limits a person’s ability to function normally. When removing the pancreas and infusing the islet cells back into the body to reduce the risk of surgically-induced diabetes, the patient has the potential for a much better quality of life.”

Total pancreatectomy, or removal of the pancreas, is sometimes used to treat chronic pancreatitis when other treatments are unsuccessful. However, removal of all the insulin-producing cells of the pancreas induces permanent...
diabetes. In the past, the islet cells from a cadaveric donor were used to avoid this, but a patient had to take immunosuppressive drugs to avoid rejection of the transplanted donor cells.

Auto-islet cell transplantation is becoming more common as a treatment for pancreatitis, but the procedure is currently offered at only a few medical centers. “It’s a complicated procedure,” Rajab says. “However, it offers much promise.”

The pancreas is a gland located deep in the abdomen, between the stomach and the spine. The organ produces enzymes essential for digestion and secretes insulin and other hormones.
CLINICAL CARE

Department of Surgery faculty included on Best Doctors list

Twenty faculty members in the Department of Surgery, about 27 percent of the department’s faculty, have been included on this year’s list compiled by Best Doctors, Inc.

Best Doctors, an independent physician referral service that selects doctors through peer review, asks physicians who they would go to for treatment in their specialty. Only physicians who earn the consensus support of their peers are included on the list.

Surgery faculty members included on the list are:

• Dr. Kenneth A. Andreoni, associate professor of surgery; chief, liver transplantation, Division of Transplantation.
• Dr. Mark W. Arnold, professor of clinical surgery, Division of General and Gastrointestinal Surgery.
• Dr. Gail E. Besner, professor of surgery, Division of Pediatric Surgery.
• Dr. Ginny L. Bumgardner, professor of surgery, Division of Transplantation; associate dean for research education, College of Medicine.
• Dr. Donna A. Caniano, professor of surgery; chief, Division of Pediatric Surgery.
• Dr. William E. Carson, III, associate professor of surgery, Division of Surgical Oncology.
• Dr. E. Christopher Ellison, the Robert M. Zollinger professor of surgery, Division of General and Gastrointestinal Surgery; chairman, Department of Surgery; associate vice president for health sciences and vice dean of clinical affairs, College of Medicine.
• Dr. William B. Farrar, professor of surgery; chief, Division of Surgical Oncology; the Arthur G. and Mildred C. James/Richard J. Solove professor of surgical oncology.
• Dr. Mark Galantowicz, associate professor of clinical surgery, Division of Cardiothoracic Surgery.
• Dr. Mitchell L. Henry, professor of surgery; chief, Division of Transplantation.
• Dr. Denis R. King, clinical associate professor of surgery, Division of Pediatric Surgery.
• Dr. W. Scott Melvin, professor of surgery; chief, Division of General and Gastrointestinal Surgery; director, Center for Minimally Invasive Surgery.
• Dr. Peter Muscarella, II, associate professor of surgery, Division of General and Gastrointestinal Surgery; director, surgical clerkship.
Only physicians who earn the consensus support of their peers are included on the list.

- Dr. Ronald P. Pelletier, associate professor of surgery, Division of Transplantation.
- Dr. Alistair B. M. Phillips, assistant professor of surgery, Division of Cardiothoracic Surgery.
- Dr. Patrick Ross, Jr., associate professor of clinical surgery, Division of Cardiothoracic Surgery.
- Dr. William L. Smead, the Luther M. Keith professor of surgery, Division of Vascular Diseases and Surgery.
- Dr. Wiley W. Souba, Jr., professor of surgery, Division of Surgical Oncology; dean and vice president for health sciences, College of Medicine.
- Dr. Steven M. Steinberg, professor of surgery; chief, Division of Critical Care, Trauma, and Burn; vice chairman for clinical affairs, Department of Surgery.
- Dr. Steven Teich, clinical assistant professor of surgery, Division of Pediatric Surgery.
CLINICAL CARE

Comprehensive bariatric surgery services now available at one location

In October 2008, metabolic and bariatric surgery services at The Ohio State University Medical Center were consolidated at the Martha Morehouse Medical Plaza, 2050 Kenny Rd.

“Ohio State’s Medical Center and the Department of Surgery have partnered to offer patients a convenient and comprehensive program location,” says Dr. Bradley J. Needleman, assistant professor of surgery and medical director of the bariatric surgery program. “This allows patients to make fewer hospital and clinic visits, which helps expedite patients’ journey to weight loss surgery.”

Comprehensive bariatric surgery program services are offered on the fourth floor of the medical tower at the Morehouse Medical Plaza. These services include:

- Patient appointments with Needleman and Dr. Dean J. Mikami, assistant professor of surgery.
- Patient appointments with the bariatric nurse practitioner.
- Dietetic evaluation and counseling.
- Pre-operative testing.
- All information sessions.
- All dietary program requirements.
- Exercise program offerings.

“We are hoping to continue expanding our partnerships to possibly collaborate with plastic surgery, endocrinology, gastroenterology, and sleep medicine,” Needleman says.

For more information, call (614) 293-2888.

Other Relocations

The early stages of a massive expansion project expected to position Ohio State’s Medical Center as a top-20 academic medical center have brought other relocations and important changes to portions of the Department of Surgery:

- The Department of Surgery chairman’s office and department administrative staff in July 2008 moved out of the third floor of Means Hall, 1654 Upham Dr., and into a new building at 395 W. 12th Ave., on the sixth floor.
• Most of the department’s Division of Critical Care, Division, and Burn, previously located on the seventh floor of Doan Hall, 410 W. 10th Ave., has moved to the sixth floor of the new building at 395 W. 12th Ave.

• The Division of Plastic Surgery is planning a move to a new building at 915 Olentangy River Rd.

• The Division of Transplantation is planning a move from the third floor of Means Hall to the first floor of 395 W. 12th Ave.

The moves are part of University Medical Center’s $1 billion, 10-year facilities construction and expansion program, which includes the construction of a new cancer hospital, a critical care tower, and supporting structures. The project, the largest in the University’s history, is expected to be completed by 2016.
RECOGNITIONS

Besner awarded endowed chair

Dr. Gail E. Besner, professor of surgery in the Division of Pediatric Surgery at The Ohio State University Medical Center, has been awarded the John E. Fisher Endowed Chair in Neonatal Research at Nationwide Children’s Hospital. For clinicians and researchers working in academic medical institutions like Nationwide Children’s, endowed chairs represent the most prestigious and significant recognition of their work.

Dr. Besner, who joined the Department of Surgery at Ohio State and Nationwide Children’s Hospital in 1991, serves as director of the Burn Program and associate program director of the Pediatric Surgery Residency Training Program at Nationwide Children’s. In her first year at Nationwide Children’s, Dr. Besner established a basic science research laboratory in pediatric surgery, and since then she has served as director of Pediatric Surgical Research at Children’s. Dr. Besner’s research has received continuous funding from the National Institutes of Health for the past 15 years. Her research focuses on a growth factor known as heparin-binding EGF growth factor (HB-EGF), which she discovered in 1990.

The translational component of Dr. Besner’s research involves a disease process known as neonatal necrotizing enterocolitis (NEC), which results in severe intestinal injury in newborns, especially those born prematurely, and often leads to death or severe disability. Her goal is to develop therapeutic regimens for high-risk newborns, using HB-EGF to prevent and treat this devastating disease. Dr. Besner currently holds three separate million-dollar NIH grants to fund her research. In addition, she has formed a collaboration with the pharmaceutical industry to produce HB-EGF suitable for human clinical trials, which are slated to begin next year.

The late John E. Fisher served as president, general manager, general chairman, and CEO of Nationwide Insurance Companies, and as chairman of the board of trustees of Nationwide Children’s Hospital. ✷
MASTER OF MEDICAL SCIENCE PROGRAM

Haubert, Thomas receive research award

The Department of Surgery has selected two residents in general surgery to receive a grant to support their research projects.

Dr. Lisa M. Haubert, a general surgery resident pursuing a master of anatomy degree, and Dr. Alicia C. Thomas, a general surgery resident pursuing a master of medical science degree, will share the James D. King Award, an endowed surgical research grant, for the 2008–2009 academic year.

Haubert was selected based on her presentation of her research project, “Surgical Clinical Correlates in Anatomy: Implementation of a First-Year Medical School Program.”

Thomas was selected based on her presentation of her research project, “Monitoring CMV Reactivation Using an In Vitro Imaging System, Tetramers, and Flow Cytometry.”

The residents will split the $2,500 award, which can be used for travel to a scientific meeting to present research results, or for other research needs.

The award honors the memory of Dr. James D. King, a surgeon-scientist who trained at Ohio State and received the first doctoral degree in surgical research ever presented by the University. A gift from King’s son, Dr. Richard King, established the endowed fund.

IN BRIEF

Research Grants


Educational Grants


Publications


Chapters


Presentations


Figura L, Miller SF, Beers E, Coffey R. Nutritional goal delivery assessment in acute burn patients (poster presentation). International Society for Burn Injuries, 14th Annual Congress, Montreal, Quebec, Canada, Sept. 7–11, 2008.

Francis S, Miller SF, Coffey R, Pace R. Esophageal stricture following toxic epidermal necrolysis: a case report. International Society for Burn Injuries, 14th Annual Congress, Montreal, Quebec, Canada, Sept. 9, 2008.

Fries RB. Calf vein thrombosis: natural history and role of ultrasound. The Ohio State University Medical Center, Non-Invasive Testing Symposium, Columbus, Ohio, Nov. 1, 2008.


Melvin WS (Visiting Professor). Changing paradigms in the treatment of Barrett’s esophagus. McGill University, Ninth Annual Steinberg-Bernstein Visiting Professorship, Montreal, Quebec, Canada, Nov. 6, 2008.


Melvin WS (Invited Lecturer). Microbiology in human NOTES. University of Texas Southwestern Medical Center, Dallas, Texas, Sept. 11, 2008.

Melvin WS. Natural orifice translumenal endoscopic surgery. Toledo Surgical Society, Toledo, Ohio, Sept. 18, 2008.


Miller MJ. Midface reconstruction; Bone tissue engineering: the state of the science; Total esophageal reconstruction with supercharged segments of jejunum; Salvaging the unfavorable result in breast reconstruction; Decision-making and surgical planning for breast reconstruction. Australian Society of Plastic Surgeons, Queensland, Australia, Oct. 2–5, 2008.


Miller SF, Brandeberry A, Coffey R. C reactive protein as an early indicator of septicemia in acute burn patients (poster presentation). International Society for Burn Injuries, 14th Annual Congress, Montreal, Quebec, Canada, Sept. 7–11, 2008.

Miller SF, Chaudhry Z, Coffey R, Crockett A, Sammet S, Yuh W. Assessing the safety of silver-based wound dressings in a magnetic resonance environment. International Society for Burn Injuries, 14th Annual Congress, Montreal, Quebec, Canada, Sept. 7–11, 2008.

Miller SF, Shapiro M, Bailey K, Waltman M. A prospective trial of a new oat glucan product (GlucanII) for elective donor sites. International Society for Burn Injuries, 14th Annual Congress, Montreal, Quebec, Canada, Sept. 7–11, 2008.


Satiani B. Portable ultrasound: indications, appropriateness, and economic implications. The Ohio State University Medical Center, Non-Invasive Testing Symposium, Columbus, Ohio, Nov. 1, 2008.

Satiani B, Shobo A. Vascular ultrasound. The Ohio State University Medical Center, Clinical Skills Educational and Assessment Center, Ultrasound Course for Fourth-Year Honors Medical Students, Columbus, Ohio, Sept. 3, 2008.

Starr JE. Carotid stents: update on results and ultrasound criteria. The Ohio State University Medical Center, Non-Invasive Testing Symposium, Columbus, Ohio, Nov. 1, 2008.


Recognitions

Dr. Mark W. Arnold, professor of clinical surgery in the Division of General and Gastrointestinal Surgery, and vice chairman for surgical education and director of the surgical clerkship in the Department of Surgery, has received a Distinguished Educator Award from The Ohio State University College of Medicine. The awards are given to physicians who have shown extraordinary commitment to teaching and the promotion of outstanding patient care.

Dr. Gail E. Besner, professor of surgery in the Division of Pediatric Surgery, has been appointed to the Executive Committee of the Surgical Research Committee of the American College of Surgeons.

Sabyasachi Biswas, Ph.D., Syed-Rehan A. Hussain, Ph.D., Savita Khanna, Ph.D., and Cameron L. Rink, Ph.D., received awards Oct. 28, 2008, at the Davis Heart and Lung Research Institute’s annual research retreat and abstract competition. Biswas, research associate in surgery, won the award for best oral presentation by a research staff member. Hussain, senior research associate in surgery, received the third-place award for a presentation by a research staff member. Khanna, research scientist in surgery, won the second-place award for a poster presentation by a research scientist. Rink, postdoctoral researcher in nutrition, received the second-place award for a presentation by a postdoctoral researcher. The researchers work in the labs of Chandan K. Sen, Ph.D., professor of surgery in the Division of General and Gastrointestinal Surgery and vice chairman for research in the Department of Surgery, and Sashwati Roy, Ph.D., assistant professor of surgery in the Division of General and Gastrointestinal Surgery.

David R. Brigstock, Ph.D., of the Division of Pediatric Surgery, was promoted to professor of surgery in October 2008.

Dr. Charles H. Cook, associate professor of surgery in the Division of Critical Care, Trauma, and Burn and medical director of surgical critical care at The Ohio State University Medical Center, recently became a member of the American Association for the Surgery of Trauma.

Mark Dickman, director of surgery information systems, was pictured in the 2008–2009 onCampus Guide with other top performers in The Ohio State University Medical Center’s Bravo Recognition Program.

General surgery residents Dr. Mary Dillhoff and Dr. Stacey Francis completed the Columbus Marathon, which was held Oct. 18, 2008.
Dr. Elmahdi A. Elkhammas, of the Division of Transplantation, was promoted to professor of clinical surgery in October 2008. On November 26, 2008, Dr. Elkhammas was awarded the 2008 Achievement Award of the Libyan Doctors Society, at the society’s fourth annual meeting. The award recognized Dr. Elkhammas for his work as a transplant surgeon and as founder and editor of the Libyan Journal of Medicine, his support of Libyan and non-Libyan patients and colleagues, and his publications in international medical journals.

Five Department of Surgery faculty members served as faculty for Advanced Concepts in Surgery, a course sponsored by the Center for Minimally Invasive Surgery and held Nov. 21, 2008, at The Ohio State University Medical Center. They were: Dr. E. Christopher Ellison, the Robert M. Zollinger professor and chairman of surgery, associate vice president for health sciences, and vice dean of clinical affairs; Dr. Jeffrey W. Hazey, assistant professor of surgery in the Division of General and Gastrointestinal Surgery; Dr. Mitchell L. Henry, professor of surgery and chief of the Division of Transplantation; Dr. W. Scott Melvin, professor of surgery, chief of the Division of General and Gastrointestinal Surgery, director of the Center for Minimally Invasive Surgery, and senior vice chairman for academic and administrative affairs in the Department of Surgery; and Dr. Steven M. Steinberg, professor of surgery, chief of the Division of Critical Care, Trauma, and Burn, and vice chairman for clinical affairs in the Department of Surgery.

Four faculty members in the Division of Critical Care, Trauma, and Burn recently passed the surgical critical care certifying examination of the American Board of Surgery. They were: Dr. David E. Lindsey, assistant professor of clinical surgery, Dr. Stanislaw P. Stawicki, assistant professor of surgery, Dr. Yalaunda M. Thomas, assistant professor of surgery, and Dr. Melissa L. Whitmill, assistant professor of clinical surgery.

Dr. Marc P. Michalsky, assistant professor of clinical surgery in the Division of Pediatric Surgery, has been appointed co-chair of the pediatric committee of the American Society for Metabolic and Bariatric Surgery. Also, he was recently appointed to the childhood obesity focus group of the National Association of Children’s Hospitals and Related Institutions.

Dr. Patrick Ross, Jr., of the Division of Cardiothoracic Surgery, was promoted to professor of clinical surgery in October 2008.
Dr. Robert L. Ruberg, professor of surgery in the Division of Plastic Surgery, has been named director of the Learning Communities Project in The Ohio State University College of Medicine. Learning communities are faculty-led groups of 12 students who meet monthly over the four years of medical school to discuss issues in learning, leadership, and life as a physician. The program, which began in the 2007–2008 academic year, is designed to foster close relationships between students and faculty and to help students make the transition from an identity as a student to that of a professional. Dr. Ruberg remains the chair of the Academic Review Board.

Dr. Bhagwan Satiani, professor of clinical surgery in the Division of Vascular Diseases and Surgery and health system director of non-invasive vascular services at The Ohio State University Medical Center, served as course co-director and planner for the Non-Invasive Vascular Testing Symposium, held Nov. 1, 2008, at The Ohio State University Medical Center. The course was attended by 55 doctors, nurses, and technicians.

Dr. Benjamin C. Sun, associate professor of surgery and chief of the Division of Cardiothoracic Surgery, was granted tenure in October 2008.

Dr. Patrick S. Vaccaro, professor of surgery and chief of the Division of Vascular Diseases and Surgery, has been appointed chairman of the Ohio District 3 Committee on Applicants of the American College of Surgeons.

Dr. Michael J. Walker, the late associate professor of surgery in the Division of Surgical Oncology, was remembered during a memorial service Sept. 22 at The Ohio State University Medical Center. Walker died Sept. 1, 2008, in Chicago. ✤