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12 medical areas of excellence

BY RACHEL BRAND AND LEAH KLOCKER Special to the Denver Business Journal

At the heart of the University of Colorado Denver Health system are the hospitals in the United States: the University of Colorado Hospital or UCH (operated by UCHealth) and Children’s Hospital Colorado and their related clinics.

Within the walls of these two institutions is where the expertise is delivered to a diverse population of patients that, increasingly, come from all over the U.S. Here, young and old patients receive the latest in medical treatments and disease prevention, covering a wide range of conditions, often by physicians who jointly work at UCH and Children’s, and who serve as faculty of the University of Colorado School of Medicine.

It is in large measure this synergy of collaborations that makes the University of Colorado Medical Campus unique among health care campuses in the United States. Here are 12 specialties and subspecialties in which UCH and Children’s Hospital Colorado have been recognized nationally for excellence in delivery and outcomes, and where the two institutions are the very best hospitals in the United States.

Nephrology

Kidneys, those two fist-sized organs under the ribs, are enormously important: they clean about 150 quarts of blood a day, providing healthy bones and tissue and keep the body’s electrolytes in balance. When kidneys are damaged, they build up in the blood, leading to complications such as high blood pressure, weak bones, anemia and heart disease. Kidney disease can be hereditary, stem from infection or result from chronic diabetes or high blood pressure. Some 26 million Americans suffer from kidney disease.

University of Colorado Hospital’s nephrologists are sub-specialized in the treatment of chronic kidney disease, diseases of the glomeruli (the tiny clusters of vessels that act as filters in the kidneys), polycystic kidney disease (a genetic disorder) and hypertension as it relates to kidney disease. More than a dozen clinical trials are underway at UCH to find new approaches to prevent, treat and reduce complications of two kidney diseases.

Because managing kidney disease is a daily and lifelong task, UCH has a daily clinic and provides ongoing care for critically ill, hospitalized patients through on-site dialysis, a mechanical means of cleaning the blood.

For patients with stage renal disease, or total failure, home dialysis is an option. Under the care of UCH’s 200-plus UCH patients receive home dialysis. The hospital’s rates of infectious complications and mortality are below the national average.

UCH also boasts the largest kidney transplant program in the region, and in addition to traditional organ transplantation, the hospital has a large lung-donor kidney transplant program.

Neurology

University of Colorado Hospital’s neurology program employs 62 providers and is the largest in the state. Its neurologists for patients with the many disorders of the nervous system, brain and related muscles such as stroke (the most common cause of disability, Alzheimer’s Disease, multiple sclerosis and epilepsy). UCH neurosurgeons use tools highly specialized surgery team, the Gamma Knife and radiosurgery to provide care that surpasses national averages.

Stroke, the No. 1 leading cause of death in the U.S. over the past two decades, or burst vessels blocks the flow of blood to the brain. In the U.S., stroke occurs roughly 188,000 times a year. In 2013, UCH’s stroke team took a big step forward with its place on the American Heart Association’s honor roll as its physicians delivered life-saving medical services within an hour to 86 percent of patients suffering a stroke. To further speed treatment in 2013 UCH launched a mobile stroke treatment unit, one of only three such specially equipped ambulances in the U.S. The unit allows emergency medical technicians to diagnose patients on-board and then administer blood clot-busting medications en route to the hospital, potentially saving brain tissue and reducing patient disability.

For patients with brain tumors, UCH offers surgical resection therapy and chemotherapy. Its median survival rate for some brain cancers is more than twice the national average.

Patients with small or moderate-sized brain tumors may be approved for UCH’s specialized technology. Some 300 patients are treated with a tool called the Gamma Knife, which sends as many as 192 beams of gamma radiation toward a single target.

UCH’s neurosurgeons also collaborate with orthopedic surgeons, physical therapists, and psychologists to provide a comprehensive approach to spine care. Together, physicians and nurses provide the best treatment for chronic back and neck pain as well as spinal disorders, tumors and stenosis.

Neurology and Neurosurgery

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Orthopedics

Hip and knee replacement surgeons are the most common procedures performed by orthopedic surgeons. Patients suffering from sports-related injuries, tennis elbow, dislocated shoulder, trigger finger and work-related issues such as carpal tunnel syndrome also need the help of orthopedists and physical therapists.

University of Colorado Hospital’s 32 providers perform more than 1,000 hip and knee surgeries each year, out of 4,000 orthopedic surgeries total.

The team’s designation with the JCAHO School of Medicine’s ‘facility patients’ access to invasive devices and minimally invasive techniques, such as stem cell therapy and joint resurfacing to avoid more extensive surgery. Five orthopedic clinical trials are currently underway. UCH’s is the only spine surgery program in Colorado to earn a top ranking from Anthem Blue Cross Blue Shield for patient safety and outcomes. Surgical navigation and computer- and arthroscopic-assisted techniques, for example, allow UCH patients to receive minimally invasive surgeries, which gets patients back to their lives as quickly as possible.

UCH’s orthopedic team also provides specialized care for those patients with hemophilia and bloodless surgery for patients who are Jehovah’s Witnesses. In addition, it partners with CU’s Sports Medicine clinic to provide care for recreational and professional athletes.

Last year, U.S. News & World Report ranked UCH as one of the nation’s top hospitals in its national rankings of specific practice areas, and UCH was named a ‘Top Performer’ in quality care on the JCAHO hospital survey. Patients can now access Children’s Hospital Colorado No. 7 in the nation among pediatric hospitals for its orthopedics program.

Children’s Center for Gait and Motion Analysis has been especially recognized for its essential role in the treatment of gait disorders caused by a variety of conditions and also treats adult patients in its one-of-a-kind facility.

Cardiology and Vascular Medicine

Heart disease — specifically coronary artery disease — is the leading cause of death in the U.S. for both men and women. Other heart-related diseases include heart failure, when the heart doesn’t pump enough blood to meet the body’s needs; arrhythmia or an irregular heart rate; heart attack, or sudden death of heart tissue; and other major arteries and hereditary heart disease.

Given the prevalence of heart disease, the University of Colorado Hospital’s Cardiology and Vascular Center has nearly 100 providers, each of whom specializes in different aspects of care.

These physicians, who are also CU faculty members, have held many prestigious national positions such as president of the American Heart Association, president of the Society of Thoracic Surgeons and president of the Association of University Cardiologists.

The blend of research, national acclaim and subspecialization allows providers give access patients to the latest technologies, clinical trials and medical treatments available.

To wit: the Cardiac and Vascular Center participates in 22 clinical trials related to the heart and circulatory system. Pediatric heart problems pose special challenges in this area. Children’s Hospital Colorado is nationally ranked for cardiology and vascular medicine. U.S. News and World Report gave it superior ratings in eight categories of pediatric cardiology and cardiology surgery.

UCH offers the only heart transplant program in the region and has performed more than 500 such transplants since 1998. Its patient survival rates surpass national average. Ninety-five percent of UCH patients survive through their first year and 85 percent survive for three years, compared to 91 percent and 84 percent respectively, on average, across the nation.

Likewise, UCH is one of only a handful of hospitals in the U.S. approved to conduct transcatheter aortic valve replacement, an alternative to open heart surgery that employs minimally invasive surgery to place a new valve within diseased valve.

UCH also offers the only therapeutic option for patients with heart failure who are not surgical candidates. UCH participates in a clinical trial for patients with heart failure who might benefit from a mechanical pump to assist with blood flow. This pump is called a ‘batteries during the day. Patient devices can run on ventricular assist devices (LVAD), a type of artificial heart pump for patients with severe heart failure. Patient devices can run on home electrical current right replacing batteries during the day.

The Cardiac and Vascular Center also has won plaudits from the Joint Commission and the American Heart Association.

NATIONAL RECOGNITION

A special to the Denver Business Journal

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GASTROENTEROLOGY

Children’s Hospital Colorado is dedicated to the care of children and their families. Our team of experts includes physicians, nurses and other healthcare professionals dedicated to providing the highest level of care. We are committed to conducting research to improve the care we provide and are leading the way in new procedures and treatments.

PULMONOLOGY

At University of Colorado Hospital, we have a team of experts who specialize in the care of patients with lung and chest disorders. Our team is dedicated to providing the highest level of care, including lung and chest cancer screening, bronchoscopy, endobronchial ultrasound and chest x-rays.

DIABETES AND ENDOCRINOLOGY

Nearly one in 10 Americans has diabetes, and the disease's incidence is rising. The bodies of patients with type 1 diabetes do not produce insulin, a hormone needed to break down sugars and store energy. Patients with the far more common type 2 diabetes suffer because their bodies make too little insulin properly. Unmanaged, diabetes can lead to high blood pressure and high cholesterol, which are risk factors for heart disease and stroke.

U.S. News & World Report has ranked UCH as one of the nation’s best hospitals for diabetes and endocrinology each year since 2008. Our team includes endocrinologists, diabetes educators, nurse practitioners and dietitians who work together to manage your diabetes. We offer a variety of programs and services, including diabetes education classes, nutrition counseling and annual physicals.

OBSTETRICS AND GYNECOLOGY

When most people think of obstetrics and gynecology, they see a pregnant woman and a healthy baby. But today’s gynecologists also care for much more complex patients: mothers of triplets, IIs, fetuses with anomalies, very young women, teens, women with depression or anxiety in pregnancy and family planning. Women also visit our gynecologists for help understanding abnormal bleeding, pain, abnormal Pap smears and irregular bleeding and in the care of gynecologic cancers.

To meet this need, UCH’s obstetrics and gynecology department – and its more than 50 providers – are specialized in oncology, reproductive endocrinology (the care of infertility), family planning, maternal fetal medicine and urology. The hospital provides one-of-a-kind programs for mental health in pregnancy, robotic surgery and pelvic pain. UCH’s maternal-fetal medicine program is the go-to place for high-risk pregnancies, a label that applies to mothers with diabetes or hypertension, a history of complications or higher order multiples, birth such as triplets. In these cases, patients receive care from specialists who offer state-of-the-art diagnostics, perinatal infection management, nutritional counseling, emergency transportation and home health care.

UCU’s Dr. Thomas Stacul performed the first liver transplant in the world in 1963. Since then, UCH surgeons have performed thousands of liver transplants in children and adults. Patients’ three-year survival rate is 85 percent. High-volume centers are a last resort for patients with severe liver disease. UCH’s division of transplant surgery is ranked in the top 10 for National Institutes of Health grant funding for research and is currently in the midst of more than two dozen health-related clinical trials.

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CANCER

Cancer is the No. 2 cause of death in the U.S., after heart disease. One in three women and one in two men will be diagnosed with cancer in their lifetimes.

The more than 9,000 new patients treated at the University of Colorado Hospital’s Cancer Pavilion each year achieve better outcomes than state and national averages for some of the most common cancers. That’s due, in part, because of the hospital’s combination of specialized physicians, innovative surgeries and life-extending medical research.

UCH’s 85 medical, surgical and radiation oncologists specialize in breast, prostate or lung cancers, stay up to date on the latest therapies, and can advise patients on the options to participate in potentially life-lengthening clinical trials.

In pediatric cancer, Children’s Hospital Colorado ranks ninth in the nation in U.S. News and World Report’s most recent ranking of hospitals nationwide, scoring 85.9 out of 100 in 22 evaluation criteria.

The hospital’s Center for Cancer and Blood Disorders has been recognized as being among the best hematology, oncology and bone marrow transplant programs in the nation.

Access to clinical trials is available due to UCH’s status as a National Cancer Institute (NCI)-Designated Cancer Center, one of 69 nationwide. UCH is part of a national network of Comprehensive Cancer Centers, and within them, hundreds of research studies are underway. Some experiments focus on basic research, others assess new treatments.

At the affiliated CU Cancer Center, for example, 99 cancer-related clinical trials are underway.

Today, 706 UCH cancer patients are enrolled in nearly 300 cancer treatment trials.

Surgery to remove the cancerous tissue is frequently part of cancer treatment. Patients with pancreatic cancer, for example, may be candidates to have just part of their pancreas removed. At UCH, this procedure offered as laparoscopic surgery, which means it is performed through a small incision and with the use of a camera as a guide. Less-invasive treatments such as this help patients recover more quickly with fewer complications.

UCH’s health outcomes are better than the national and state averages for lung, prostate, brain and liver cancer as are survival rates for patients at Children’s Hospital with acute lymphoblastic leukemia, acute myeloid leukemia and neuroblastoma.

Preparing chemotherapy for cancer treatment at UCH.