Pediatric Heart Care

The new University of Chicago Comer Children's Hospital is a state-of-the-art medical center with a kid-friendly, family focus. Our teams of pediatric heart experts develop individualized treatment plans for each child. They also successfully treat complex conditions.

In addition to advanced technology, our hospital offers comforts such as private rooms and in-room sleeping accommodations for parents, as well as group play areas for kids. Our pediatric care is ranked among the best in the country by U.S. News & World Report.

WHY CHOOSE US FOR PEDIATRIC HEART CARE?

Doctors at Chicago Comer Children's Hospital are advancing heart care for children. These internationally renowned specialists are pioneers in the treatment and research of pediatric and congenital heart disease. They use new treatment methods that offer several advantages, such as a shorter hospital stay, faster recovery, and less pain and scarring.

In addition, our pediatric heart surgery program is one of the largest in the greater Chicago area. Our surgeons perform about 400 procedures a year and maintain a success rate well above the national average. They perform the full range of surgeries, including the arterial switch procedure, transplantation, and "redo" reconstructive procedures in patients who have had previous heart surgeries.

To further enhance our heart care services, the new children’s hospital is equipped with the latest heart care technology, including high-definition imaging machines, precise patient monitoring equipment, and advanced robotic operating tools. This technology helps make treatment safer, less invasive, and easier for our patients.

The new hospital also includes fully equipped cardiac catheterization labs and a separate 10-bed pediatric cardiac intensive care unit — the only one of its kind in the greater Chicago area. The unit can provide 24-hour extracorporeal membrane oxygenation (ECMO) support. This artificial heart-lung bypass machine can help severely ill infants and children whose lungs and/or heart are not working properly.

PEDIATRIC HEART CARE AT THE FOREFRONT OF MEDICINE

Chicago Comer Children's Hospital features a unique pediatric and congenital heart disease program. Our experts specialize in treating conditions such as:

- Aortopulmonary window
- Aortic stenosis
- Arrhythmias
- Atrial septal defect
- Bacterial endocarditis
- Cardiomyopathy (disease of the heart muscle)
- Congestive heart failure
- Heart murmurs
- Hypoplastic left heart syndrome
- Hypoplastic right heart syndrome

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• Marfan syndrome
• Mitral valve prolapse
• Myocarditis
• Patent ductus arteriosus
• Patent foramen ovale
• Pulmonary stenosis

Our state-of-the-art hospital is equipped with the latest technology for evaluating heart disease. This includes ultrafast CT equipment that produces the highest-quality images. We also offer sophisticated intravascular tools that give a detailed view inside blood vessels. In addition, our new flat-panel fluoroscopy (X-ray) machines provide better images of the heart and blood vessels while reducing radiation exposure.

TREATING CONGENITAL HEART DEFECTS WITHOUT SURGERY
At Chicago Comer Children’s Hospital, our doctors can close certain heart defects without surgery. Instead, they perform specialized procedures in the cardiac catheterization lab. Our pediatric interventional cardiologists are often among the first in the world to use the latest tools and techniques to close congenital heart defects, open narrowed arteries, and repair heart valves. Some of these techniques include:

• Balloon dilation to open narrowed valves and vessels. Conditions treated with balloon dilation include aortic valve stenosis, branch pulmonary artery stenosis, coarctation of the aorta, and pulmonary stenosis.

• Stent placement to open narrowed vessels. At Chicago Comer Children’s Hospital, we use stents to treat branch pulmonary artery stenosis, coarctation of the aorta, and peripheral pulmonic stenosis.

• Coil embolization to treat unnecessary blood vessels or connections between blood vessels that occur in some types of congenital heart defects. Our pediatric cardiologists use specially designed metal coils or plugs that are placed inside unwanted vessels. The coil or plug causes a blood clot to form, which then closes the vessel.

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Transcatheter closure of atrial septal defect. Our doctors are the world’s leading experts in closing this type of defect — without open heart surgery — using the Amplatzer device. In fact, they were the first in the nation to use this device and have the most experience with it.

Transcatheter closure of ventricular septal defects and patent ductus arteriosus (PDA). We have closed such defects using the Amplatzer device more than any other institution in the United States.

WHEN SURGERY IS NEEDED
At Chicago Comer Children’s Hospital, the safest, most advanced surgical options are available to children of any age — even newborns. Our skilled surgeons specialize in treating conditions such as:

- Atrial septal defect
- Congestive heart failure
- Hypoplastic left heart syndrome
- Mitral valve regurgitation or stenosis
- Patent ductus arteriosus
- Pulmonary artery stenosis
- Sinus venosus defect
- Tricuspid valve regurgitation or stenosis
- Vascular ring disorders
- Ventricular septal defect

EXPERTISE WITH MINIMALLY INVASIVE SURGERY
Our cardiac surgeons can treat a variety of heart problems using minimally invasive techniques. Here, many minimally invasive heart surgeries are performed with the help of a state-of-the-art robotic device, called the DaVinci Surgical System. This system provides a greater range of motion and a magnified view of the heart during the operation.

We are one of only a few medical centers in the world to offer robot-assisted procedures to treat heart problems in young patients. In fact, our surgeons conducted the first robotic mitral valve repair and robotic sinus venosus defect repair in children.

HYBRID SURGERY IMPROVES OUTCOMES FOR COMPLEX DEFECTS
Our international heart experts were among the first to offer hybrid surgery to treat heart problems in children. In such procedures, both a heart surgeon and an interventional cardiologist (heart catheterization expert) treat the patient at the same time. Our pediatric heart specialists have pioneered this approach, making it available even to tiny infants.

Complex conditions are especially suited to the hybrid approach. Because complex heart defects, such as hypoplastic left heart syndrome, usually require more than one surgery. In the hybrid approach, some steps of the first surgery can be done using catheter-based (interventional) techniques. This approach also eliminates the need to use a heart-lung bypass machine. By using this hybrid approach, our experts have found that they can improve outcomes and reduce mortality rates.

ARRESTING ARRHYTHMIAS
At Chicago Comer Children’s Hospital, our heart care team includes pediatric electrophysiologists who have extensive expertise in diagnosing and treating abnormal heart rhythms in children and adults with congenital
heart defects. When possible, our interventional cardiologists work with the electrophysiologists to repair heart defects and arrhythmias during the same procedure.

HEART TRANSPLANTS FROM AN EXPERT TEAM
At Chicago Comer Children's Hospital, we've brought together the finest experts in pediatric transplant care. Our goal is to make the transplant experience a smooth one by providing compassionate, advanced care in a child-centered environment. Our pediatric heart transplant team has extensive experience caring for the most difficult cases, which often cannot be treated at other institutions.

TELEMEDICINE
Using state-of-the-art video-conferencing and communications equipment, our pediatric heart specialists are able to view, in real time, patient video studies and film images from off-campus locations.

This technique enables instantaneous triage of a patient's or fetus' cardiac condition and immediate consultation with the attending physician. Such technology has saved lives and reduced expense and patient discomfort by eliminating the need for unnecessary transport.

CONTACT US
To learn more about pediatric heart care at Chicago Comer Children's Hospital, please call 1-888-UCH-0200 or (773) 702-1000, or visit our Web site at www.uchicagokidshospital.org/heart/.

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