



Riley Heart Center

A national leader in pediatric and congenital heart care

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Riley Children's Health
Indiana University Health

rileychildrens.org

About the Riley Heart Center

Riley Children's Health is home to one of the nation's leading pediatric heart programs, the Riley Heart Center, which provides expertise, experience and resources to care for infants, children and adults with congenital or acquired heart disease through a unique integrated care model. We deliver collaborative care across specialties to create comprehensive solutions for common and complex problems alike.



INSIDE OUR HEART CENTER



47
BEDS
23 CVICU
16 step down
8 neonatal
cardiac unit



3
OPERATING
SUITES
specially designed
for cardiovascular
(CV) cases



2
ADVANCED
HYBRID
CATHETERIZATION
LABS

ACCREDITATIONS AND DESIGNATIONS



Platinum Center of Excellence by the
Extracorporeal Life Support Organization



Only formalized comprehensive adult
congenital heart disease program in Indiana;
program accredited by the Adult Congenital
Heart Association



One of nine pediatric centers in the nation to
be accredited as a Pulmonary Hypertension
Center of Comprehensive Care

HIGH-VOLUME PEDIATRIC
HEART PROGRAM: 2025 NUMBERS

495+ cardiac surgeries

705+ cardiac catheterizations

625+ cardiovascular intensive care
unit admissions

26.8K+ echocardiogram
interpretations

18.2K+ cardiology outpatient visits



DEDICATED TEAM

Highly skilled team with **225+**
cardiac dedicated team members

- Pediatric cardiologists
- Cardiovascular surgeons
- Pediatric cardiac anesthesiologists
- Pediatric cardiac intensivists
- Cardiac neonatologists
- Pediatric cardiac advanced practice providers (APPs)
- Pediatric cardiovascular nurses
- Pediatric cardiovascular geneticists
- Pediatric cardiac psychologist



Specialized programs

Cardiac psychology

Riley Children's is one of about 20 pediatric heart programs in the nation to integrate pediatric cardiac psychology into its continuum of care. Our inpatient and outpatient cardiac psychology program offers assessment and psychotherapeutic intervention for patients coping with acute or chronic heart conditions, procedures and emergent events or trauma. The program also assists adolescents in developing self-management skills in preparation for their role as an adult patient.

Cardiac rehabilitation

For pediatric patients who undergo heart surgery or a heart transplant, specialized rehabilitation is essential to long-term health and recovery. Riley Children's is home to Indiana's only comprehensive pediatric cardiac rehabilitation program.

Cardiovascular genetics

Our distinguished CV genetics program aims to analyze the full scope of heritable heart disease through proper evaluations, screenings, genetic counseling and testing. With multidisciplinary collaborations, the CV genetics program focuses on understanding the underlying genetic cause of heart disease to better treat the patient. In many cases, this also informs heart risks for other family members. Our program is one of only a few in the nation to routinely investigate the relationship between pediatric cardiology and genetics thoroughly.

Cardiovascular home monitoring

An early adopter of cardiovascular home monitoring through the National Pediatric Quality Improvement Collaborative, Riley Children's is Indiana's only pediatric health system to offer cardiovascular home monitoring, which has become a standard of care for babies with hypoplastic left heart syndrome (HLHS) and other complex physiology.

Fetal cardiology

Fetal cardiologists at Riley Children's provide in-depth diagnostic imaging, evaluation and consultation for fetal heart conditions. As a leader in the Midwest for fetal echocardiography and partners in the Fetal Center, our team consults with experts in obstetrics, maternal fetal medicine, genetics, neonatology and pediatric cardiothoracic surgery to develop comprehensive treatment plans.

More programs

- Adult congenital heart disease
- Aortopathy
- Fontan
- Pediatric heart failure/transplant
- Preventive cardiology



“From fetal diagnosis to complex surgical interventions, a team of skilled professionals makes it possible to deliver the full continuum of heart care to infants, children and adults with congenital heart defects.”

Mark W. Turrentine, MD

Division Chief, Cardiothoracic Surgery
Executive Co-Director, Riley Heart Center



Skilled multidisciplinary team

Cardiac Critical Care

The expert cardiac critical care physicians at Riley Children’s provide specialized care for critically ill newborns, infants, children and adolescents with congenital and acquired heart disease. Our high-acuity, high-volume CVICU includes 23 beds for CVICU patients and an eight-bed specialized neonatal ICU.

Electrophysiology

Skilled electrophysiologists at Riley Children’s offer expertise in pediatric and adult congenital interventional procedures, including leading-edge electroanatomical mapping, catheter interventions and device placement.

Interventional Cardiology

The interventional cardiologists at Riley Children’s have expertise in using the latest invasive, catheter-based procedures to diagnose and treat congenital heart conditions. Our skilled specialists provide essential anatomic evidence during diagnostic procedures to direct cardiovascular surgical interventions. They also repair heart conditions, such as patent ductus arteriosus (PDA), atrial septal defect and ventricular septal defect, that allow both children and adults to avoid open heart surgery.



More teams involved in the heart center

- Anesthesiology
- Maternal Fetal Medicine
- Medical & Molecular Genetics
- Neonatology
- Pediatric Critical Care

SURGEON HIGHLIGHTS



In early 2025, Mark Turrentine, MD, reached a milestone few have achieved when he performed his 200th heart transplant.

“The richness of Riley’s program is what we’re celebrating, not one individual. The fact that you have one of the most highly regarded pediatric transplant programs in the country as part of the overall transplant program at IU Health, I’m not sure people understand the historical significance of this program,” remarked Dr. Turrentine on this accomplishment.

Mark Rodefeld, MD, received The Society for Thoracic Surgeons Earl Bakken Scientific Achievement Award, an honor given to individuals making significant contributions to cardiothoracic surgery. The award recognizes Dr. Rodefeld’s development of the innovative Fontan pump, a medical device designed to revolutionize care for patients with single-ventricle heart defects. “It is deeply humbling to be included among a group of exceptionally accomplished past awardees. They are giants in the field, and many were my mentors who significantly impacted my clinical and scientific work,” said Dr. Rodefeld.



The Riley Heart Center is a destination for advanced cardiovascular training. Medical simulations are developed in our simulation lab to teach procedures, medical concepts and decision-making to team members. Simulation training is offered on a variety of devices, including ventricular assist devices.

Patient-focused research

Riley Children's is affiliated with Indiana University School of Medicine, one of the nation's largest medical schools and one of the highest funded institutions for pediatric research by the National Institutes of Health. Riley Children's is active in interventional and observational trials—newborn through adolescence and adulthood.



RESEARCH HIGHLIGHTS

Notable cardiology publications

The Journal of Clinical Investigation: July 2024

Early ascertainment of genetic diagnoses clarifies impact on medium term-survival following neonatal congenital heart surgery

Digestive and Liver Disease: August 2024

Biomarkers of fibrosis and portal hypertension in Fontan-associated liver disease in children and adults

World Journal for Pediatric and Congenital Heart Surgery: February 2025

Conduit size, branch pulmonary artery size and reoperation in patients with truncus arteriosus

Notable cardiothoracic surgery publications

World Journal for Pediatric and Congenital Heart Surgery: January 2025

Twenty-seven-year institutional experience with surgery for adults with congenital heart disease

JTCVS Open: July 2024

Autonomous Fontan pump: Computational feasibility study
Lead author: Mark D. Rodefeld, MD

World Journal for Pediatric and Congenital Heart Surgery: February 2025

Conduit size, branch pulmonary artery size, and reoperation in patients with truncus arteriosus

World Journal for Pediatric and Congenital Heart Surgery: January 2025

Prospective evaluation of extubation failure in neonates and infants after cardiac surgery

Notable cardiac critical care publications

World Journal for Pediatric and Congenital Heart Surgery: July 2024

Deep sedation in pediatric patients with single ventricle physiology outside of the operating room

Shock: July 2024

Novel echocardiogram analysis of cardiac dysfunction is associated with mortality in pediatric sepsis
Lead author: Daniel T. Cater, MD

Perfusion: April 2025

Developing a generalizable pediatric ECMO emergency checklist for clinical specialist: Progress and challenges

Resuscitation: February 2025

Evaluating post-cardiac arrest blood pressure thresholds associated with neurologic outcome in children: Insights from the pediRES-Q database

Pediatric Critical Care Medicine: May 2024

Cardiac surgery-associated AKI in neonates undergoing the Norwood operation: Retrospective analysis

Statewide outreach

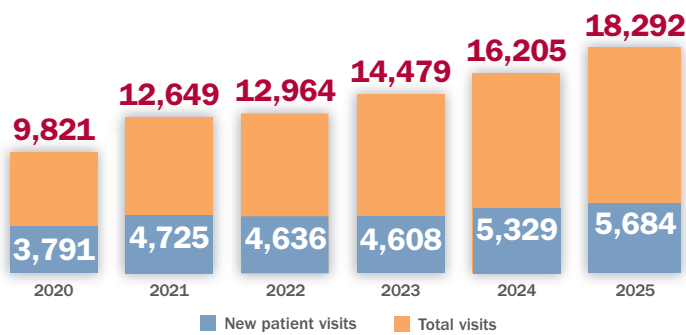
Riley Children's provides outpatient care in 12 Indiana communities. Services included diagnosis, consultation, treatment and follow-up care.

Also, Riley Children's is a **Project ADAM** affiliate, assisting schools and communities in establishing emergency action plans for sudden cardiac arrest across Indiana. To date, Riley Children's has helped more than 75 schools become "heart safe."

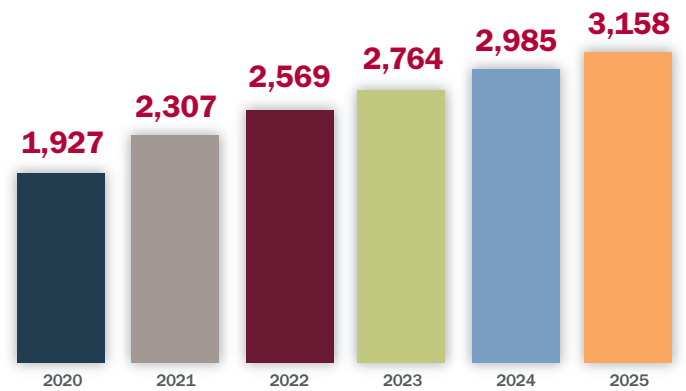


By the numbers

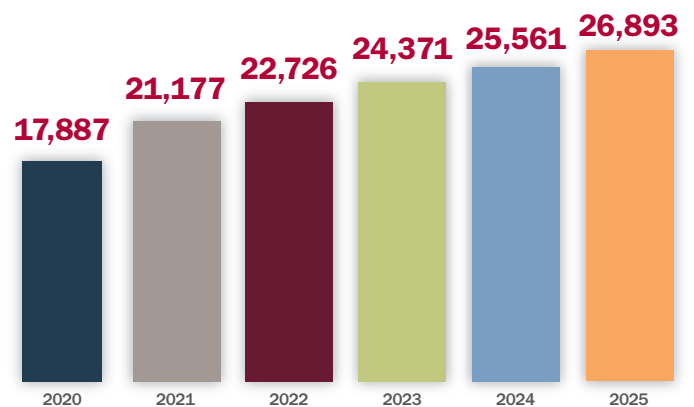
Riley Cardiology Volume: 2020 – 2025



Fetal Echocardiogram Volume: 2020 – 2025
Performed at eight locations across Indiana



Echocardiogram Interpretations: 2020 – 2025
Our program serves more than 40 Indiana hospitals and achieves record volume.



Patient outcomes



Among the Top 10 in the nation
for highly complex surgical volume¹



97% survival rate (adjusted)² across case mix, reflecting high-quality surgical outcomes



Return home an average of **8 days sooner**
than the national STS median³



Recognized as **one the nation's best**
for heart transplant outcomes^{1,4}

- **100% 90-day pediatric patient survival**
(benchmark: 96.81%)
- **100% one-year pediatric patient survival**
(benchmark: 92.63%)
- **90% three-year pediatric patient survival**
(benchmark: 87.10%)

¹ U.S. News & World Report

² Society for Thoracic Surgeons (STS) Table 16, Harvest Report, 7/1/2021 to 6/30/2025

³ STS Table 19, Harvest Report, 7/1/2021 to 6/30/2025

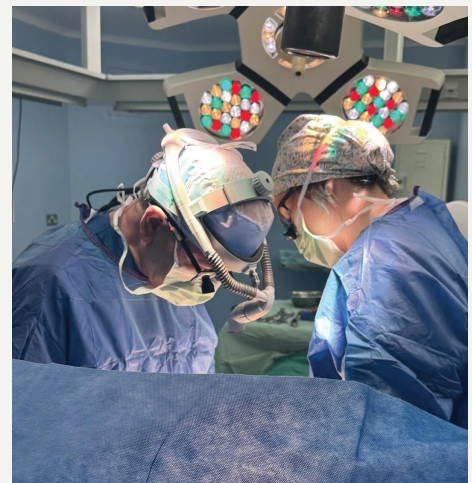
⁴ Scientific Registry of Transplant Recipients, Release Date: 1/6/2026



Global impact

International missions

In 2025, Riley Children's team members, led by cardiothoracic surgeon Mark Turrentine, MD, returned from Amman, Jordan, where they gave new hope and life to kids with heart conditions. This was the 42nd medical mission trip to Jordan led by Dr. Turrentine. Together, the group cared for multiple children from the Middle East, including Jordan, Egypt, Iraq and Palestine. Conditions treated included tetralogy of Fallot (TOF), atrial and ventricular septal defects, pulmonary valve stenosis and AV canal defect.





Refer a patient

Riley Children's cares for the heart needs of children in Indiana, across the nation and around the world.

Call **317.944.8906** or refer a patient online at **rileychildrens.org/refer**.



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