



Children's Health

Betty Irene Moore  
Children's Heart Center



## Choosing a Care Team for Your Child's Heart Procedure

Finding out that *“something’s wrong with your child’s heart”* is overwhelming news for any parent. An important decision you need to make next is where to get the pediatric heart care your child needs to give him or her the best chance for a healthy life.

# How to Choose a Pediatric Heart Center for Your Child's Heart Procedure



- Talk to people you trust.** Start by asking your doctor where he or she would recommend you seek treatment. Ask family members about where they've had good care. Connect with other families who've been on this journey.
- Find the medical center that has the most experienced pediatric heart surgeons and interventional cardiologists.** The volume of heart surgeries, cardiac catheterizations, and electrophysiology (EP)/arrhythmia procedures performed is a good measure of predicting results.
- Review the hospital's track record.** Looking at the overall success rates for pediatric heart surgeries, arrhythmia, and interventional cardiac procedures can be helpful in deciding where you want to get care for your child.

The **pediatric heart surgeons** at **Betty Irene Moore Children's Heart Center at Lucile Packard Children's Hospital Stanford** successfully **treat some of the most critically ill children** – including unborn infants and teens – in the country and the world. Performing more than 600 heart surgeries each year (significantly more than at other children's hospitals in the country), our subspecialty programs and renowned experts draw families seeking the best possible care for their children.

Our pediatric heart surgeons at **Lucile Packard Children's Hospital Stanford** have more than **50 combined years of experience** and are specialized in a range of conditions and treatments from routine to complex, including **pulmonary artery reconstruction**, **heart transplant** and **single ventricle management**. And even though our pediatric heart surgeons treat the most complex cases, our **outcomes are impressive**, and our **patients' lengths of stay are shorter** for the majority of benchmark heart surgeries, than those of other peer hospitals nationwide.

If your child requires a different type of heart procedure, such as a cardiac catheterization and/or arrhythmia procedure, he or she will be in good hands with our interventional cardiologists and electrophysiologists. They treat a **high volume of patients with a variety of heart conditions**, many very complex, which helps them to deepen their expertise and provide our young patients with great outcomes. To this point, **our arrhythmia procedures' success rates are higher than the national average.**

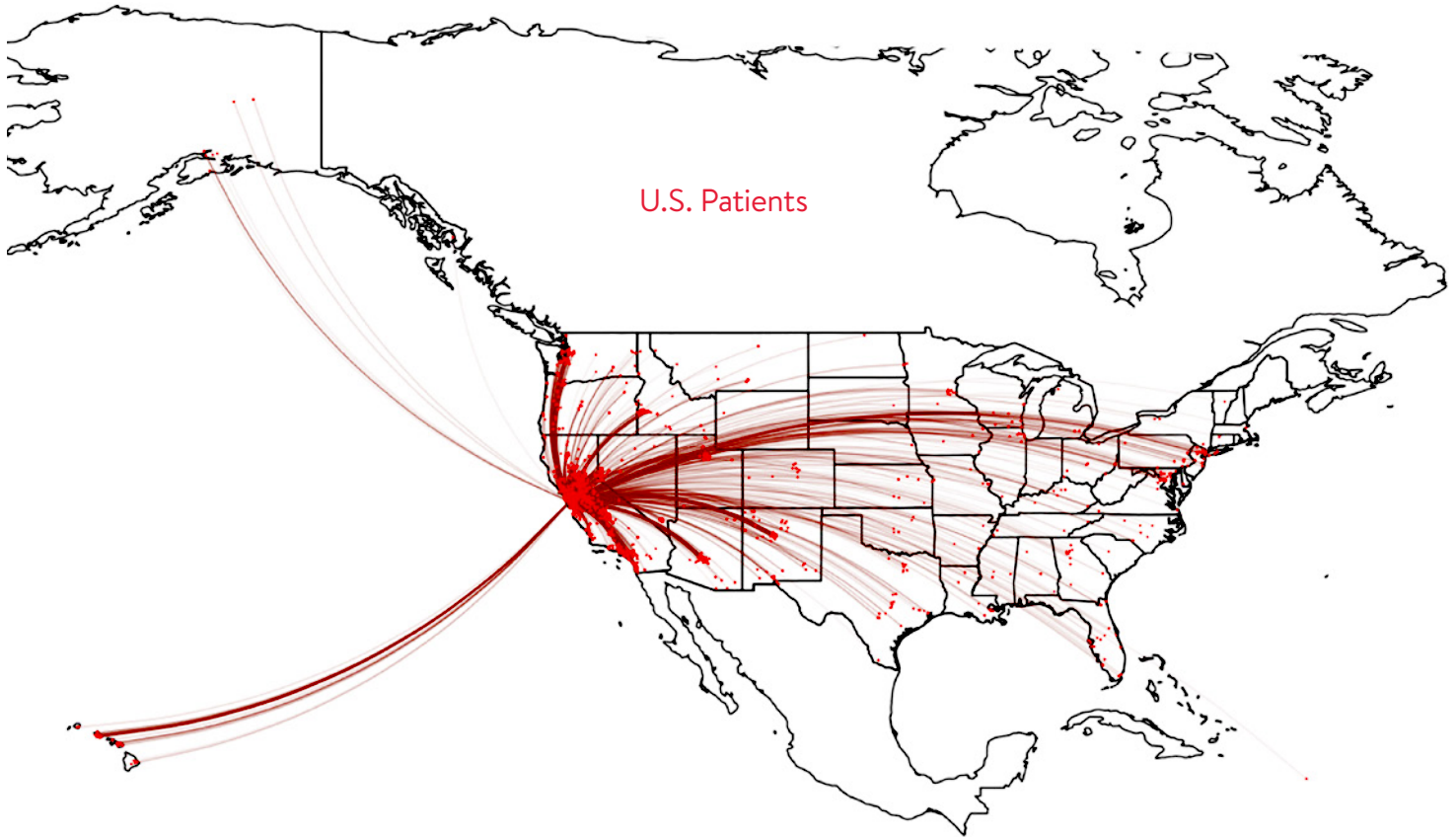
*"Our pediatric heart surgeons, interventional cardiologists and electrophysiologists have more than 50 combined years of experience and are specialized in a range of heart conditions and treatments from routine to the most complex."*



The Packard Children's Hospital cardiology and heart surgery programs have been nationally ranked by U.S. News & World Report consistently over the last 10 years. Visit [heartoutcomes.stanfordchildrens.org](https://heartoutcomes.stanfordchildrens.org) to see a complete list of national organizations that have access to our hospital's results in heart surgery and related areas.

## Lucile Packard Children's Hospital pediatric heart surgery volumes and outcomes

Families travel to Packard Children's Hospital from all over the country and the world to seek care for their children's heart needs.



### International Patients

Canada	Mexico	Saudi Arabia
Germany	Norway	Switzerland
Israel	Poland	United Arab Emirates
Japan	Qatar	

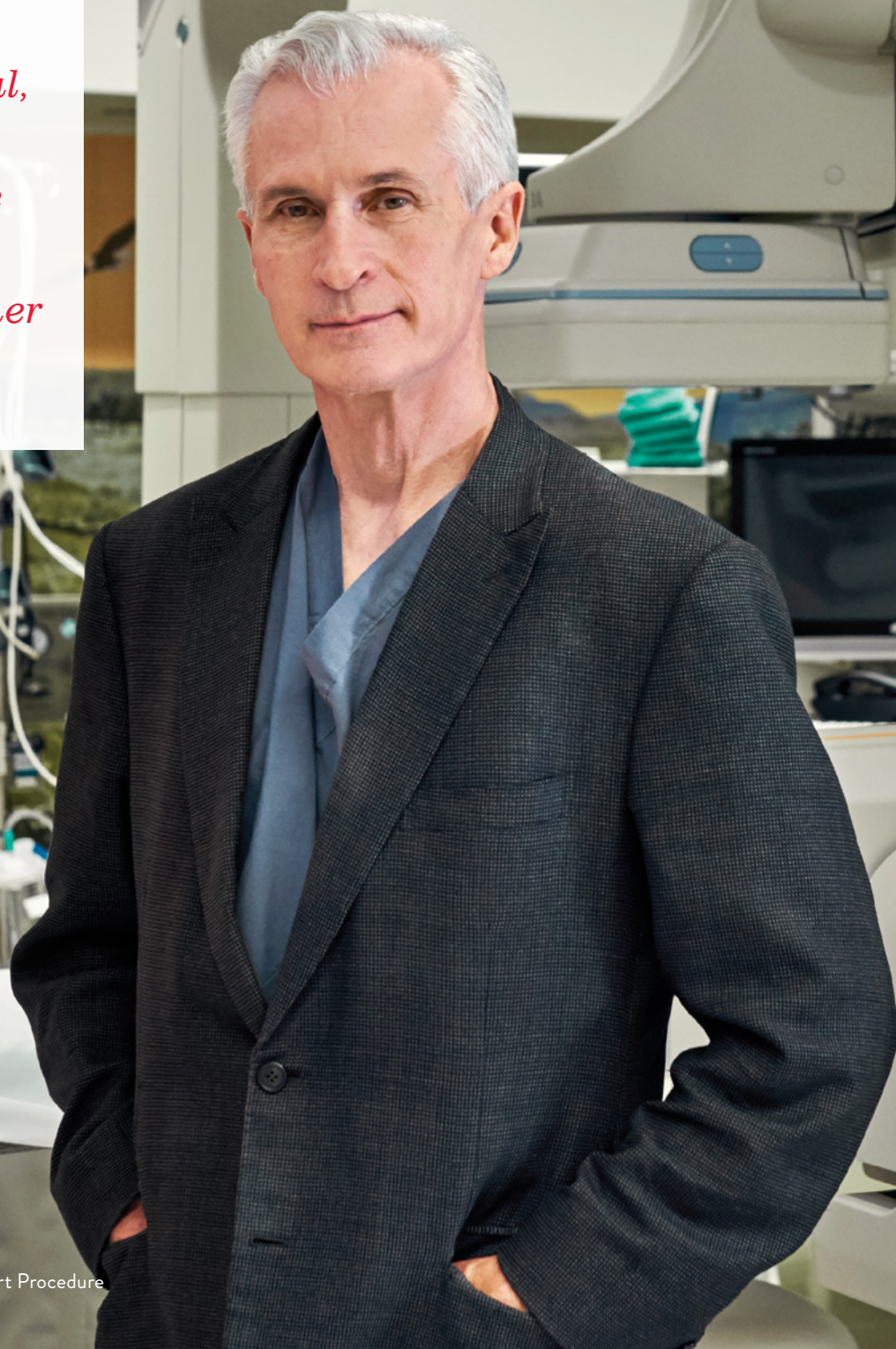
Source: Lucile Packard Children's Hospital Stanford 2023 internal data







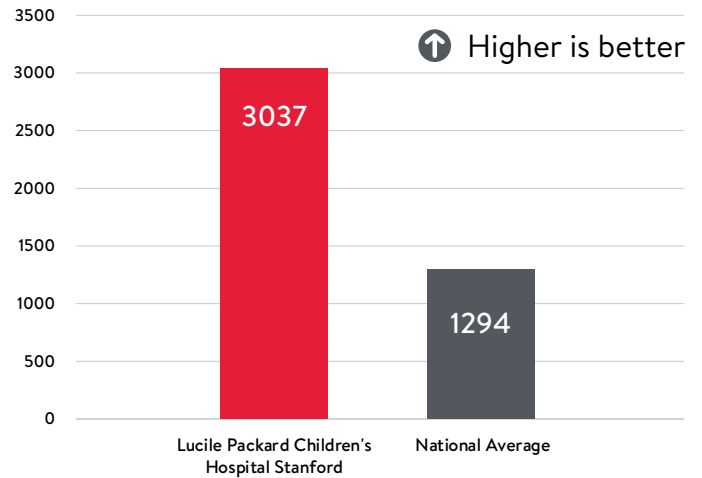
*"At Packard  
Children's Hospital,  
we've performed  
significantly more  
pediatric heart  
surgeries than other  
peer hospitals."*



From 2019 through 2023, the Betty Irene Moore Children's Heart Center at Lucile Packard Children's Hospital Stanford performed more than **3,000 pediatric heart surgeries**. At other hospitals across the country, that number was an average of 1294.

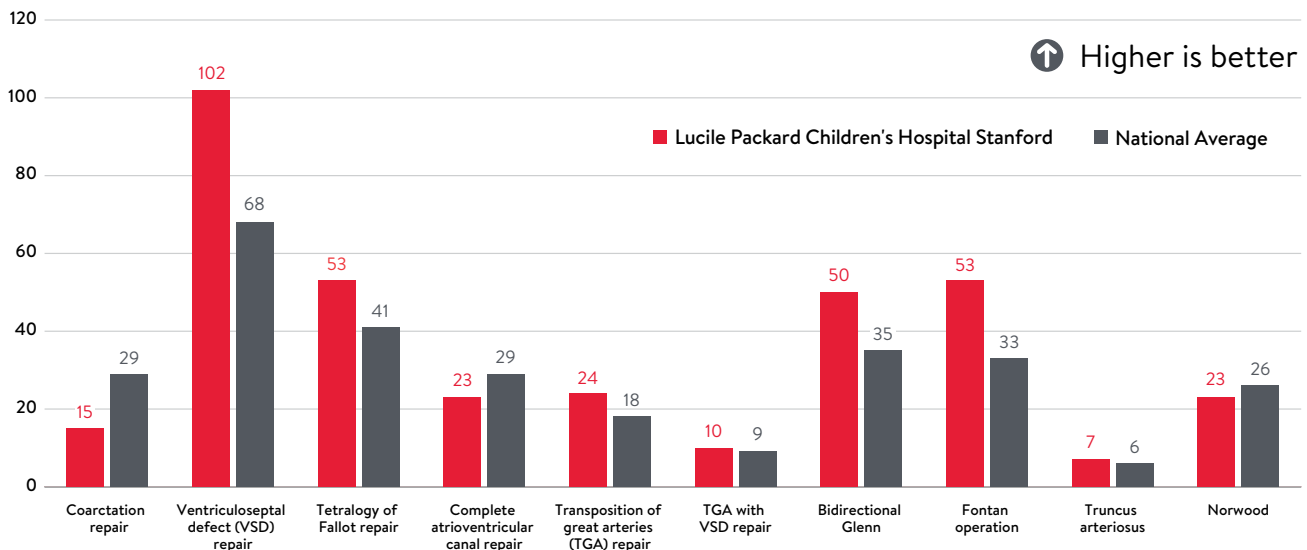
Medical teams who perform a higher number of pediatric heart surgeries are better equipped to care for your child as they see a wider range of heart problems than pediatric heart surgeons who perform only a handful of procedures per year.

Volume of heart surgeries performed 2019–2023



At Packard Children's Hospital, **we've performed a significant number of heart surgeries** for these 10 childhood heart conditions. These procedures are referred to as “benchmark operations”; surgical centers use them for making comparisons.

Volume of heart surgery by specific surgery type 2019–2023



Source: Data Analyses of the Society of Thoracic Surgeons Congenital Heart Surgery Database, Duke Clinical Research Institute, July 2019–June 2023

The overall pediatric heart surgery **survival rate** at Lucile Packard Children’s Hospital Stanford was **close to the national average** for 2019–2023. This is truly impressive when you consider that we tackle the hardest, most complex, and rarest heart cases sent to us by other pediatric heart centers across the nation and world.

### Overall survival rate following heart surgery 2019–2023

Lucile Packard Children’s Hospital Stanford	National aggregate
95.56%	97.32%

↑ Higher is better

And in the chart below, you can see that the Packard Children’s pediatric heart surgery survival rates were in general **comparable to the national averages** for the 10 benchmark pediatric heart surgeries.

### Survival rate for types of heart surgery 2019–2023

Benchmark surgery	Survival rate	
	Lucile Packard Children’s Hospital Stanford	National average
Coarctation repair	100%	99%
Ventriculoseptal defect (VSD) repair	100%	100%
Tetralogy of Fallot repair	98%	99%
Complete atrioventricular canal repair	100%	98%
Transposition of great arteries (TGA) repair	100%	98%
TGA with VSD repair	90%	96%
Bidirectional Glenn	96%	99%
Fontan operation	98%	99%
Truncus arteriosus	86%	92%
Norwood	74%	88%

Source: Data Analyses of the Society of Thoracic Surgeons Congenital Heart Surgery Database, Duke Clinical Research Institute, July 2019–June 2023

↑ Higher is better



*"Despite treating the most complex heart cases, our results are impressive."*





*"Our success rate for catheter ablations to treat arrhythmia is higher than the national average."*

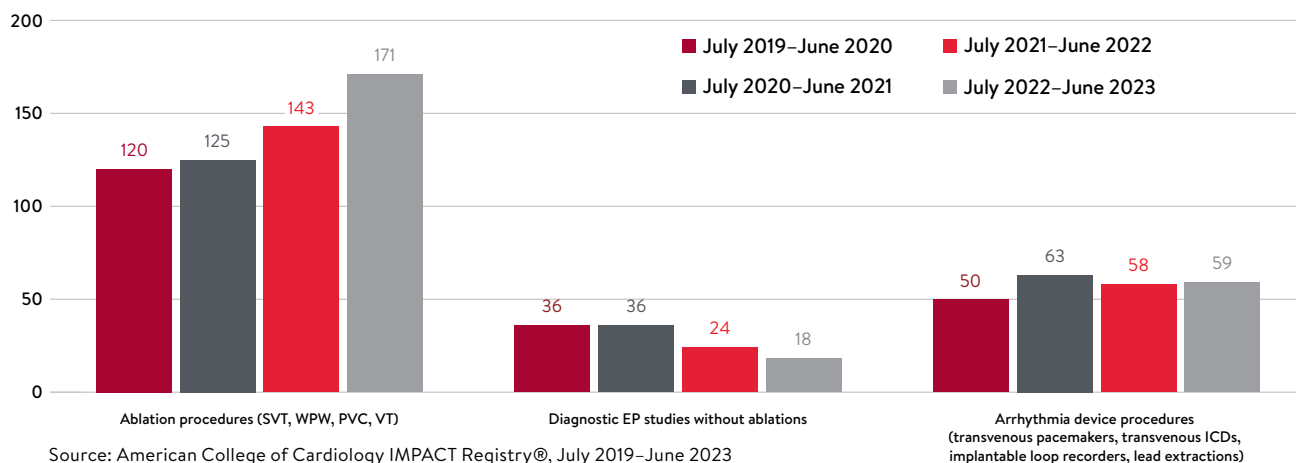


## Lucile Packard Children's Hospital arrhythmia procedures volumes and outcomes

At Packard Children's, we perform arrhythmia diagnostics and procedures for children of all ages who come to us with various types of arrhythmia.

As shown in the chart below, we consistently perform a **high number of electrophysiology studies** (arrhythmia diagnostics) **and arrhythmia procedures**—ablations and device implantations—each year.

Arrhythmia procedures volume by type 2019–2023



At Packard Children's Hospital, **our success rate for catheter ablations to treat arrhythmia is higher than the national average.**

Success rate of catheter ablation for arrhythmia 2019–2023

Arrhythmia type	Success rate	
	Lucile Packard Children's Hospital Stanford	National average
Concealed accessory pathway (concealed AP)	95%	95%
Wolff-Parkinson-White syndrome (WPW)	96%	93%
Atrioventricular nodal reentry tachycardia (AVNRT)	98%	97%
Atrial tachycardia	86%	85%
Ventricular tachycardia	73%	73%



Children who experience fewer complications after arrhythmia procedures have better outcomes. **On average, our major complication rate for arrhythmia procedures (as defined below) is in line with the national average.**

### Major complications in arrhythmia procedures 2019-2023

Lucile Packard Children's Hospital Stanford	National Aggregate
0.5%	0.5%

↓ Lower is better

1. Death, procedural (peri-procedural) within 30 days of procedure and related to procedure	5. Cardiac tamponade (requiring pericardial drainage)
2. Cardiac arrest	6. RBC/whole blood transfusion (w/in 72 hours – due to procedural complication)
3. Embolic stroke	7. Unplanned cardiac or vascular surgery (due to procedural complication)
4. Need for permanent pacemaker	8. ECMO or LVAD due to procedural complication

Source: American College of Cardiology IMPACT Registry®, July 2019–June 2023

## Lucile Packard Children's Hospital cardiac catheterization volumes

At Betty Irene Moore Children's Heart Center, we perform an extremely **high volume of cardiac catheterizations**, placing us in the **top four pediatric heart centers in the country**.

We perform cardiac catheterizations in children of all ages, including premature infants and teens, for a **wide range of heart conditions**.

We are pleased to offer **all types of catheter interventions**. We use the latest interventional cardiology devices—including new innovations discovered through research, clinical trials, and/or collaborations with other organizations—to provide your child with the most advanced heart care and best possible outcome.

Catheterizations volume 2023

	All patients	Patients younger than 1 month	Patients older than 1 month and younger than 1 year	Patients older than 1 year and younger than 18 years	Patients aged 18+
Lucile Packard Children's Hospital Stanford	1,170	40	99	755	152
National average	318				

Source: Lucile Packard Children's Hospital Stanford 2023 internal data

*"Our high volume of cardiac catheterizations places us in the top four pediatric heart centers in the country."*





# Getting Treatment



- **Plan for your child's birth.** If you are expecting a baby who requires heart care, an interdisciplinary team will partner with you and your obstetrician to ensure that your child starts strong. Members of this team include **pediatric cardiologists, pediatric cardiothoracic surgeons, high-risk obstetricians, neonatologists** and **genetic counselors**.

If your child will require a procedure shortly after birth, we recommend you deliver your baby at Packard Children's Hospital Stanford so that every necessary resource is available.

- **Learn about the procedure your child will have in advance,** so you'll know what to expect afterward. Activity level, appetite, and growth should eventually return to normal after heart surgery/an interventional cardiac procedure. While rare, the most common complications after heart surgery include bleeding, irregular heartbeat, difficulty with feeding, and infection. Complications that can occasionally occur with arrhythmia treatments include cardiac arrest; embolic stroke; cardiac tamponade; blood transfusion; and a need for a pacemaker, a ventricular assist device, ECMO, or cardiac or vascular surgery. We have effective processes and tools in place to help address and limit these complications.
- **Ask questions at every stage** and participate in the medical team's daily rounds, at which time your child's progress is reviewed. In addition to the medical team, numerous staff members can offer information, support, and advice. They include case managers, chaplains, child life specialists, child psychiatrists, dietitians, financial counselors, interpreters, rehab specialists, schoolteachers and social workers.
- **Bond with your child.** For all children but especially for babies, holding, cuddling, and stroking them are vital to creating a relationship with them. We will do our best to enable you to provide comforting touch, and to speak to your child often, when holding is not possible. Some children will be too fragile to be held before or immediately after their heart procedure.

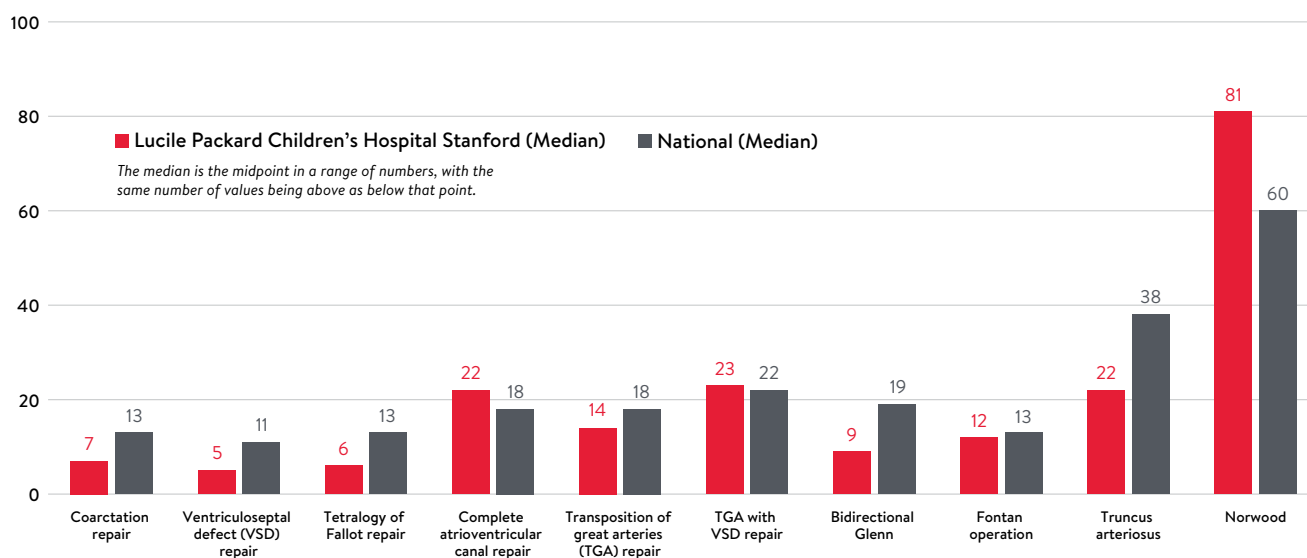
# Going Home



Your care team will work with you to decide when is the right time to go home, based on your child's health. There's no one magic number for that date, but at Lucile Packard Children's Hospital Stanford we're proud of our efforts to get you home as quickly as possible.

This chart shows the median number of days typically spent in the hospital for these procedures. Since interventional cardiology procedures are less invasive, they typically do not require a significant hospital stay.

Typical days spent in the hospital for types of heart surgery 2019–2023



Source: Data Analyses of the Society of Thoracic Surgeons Congenital Heart Surgery Database, Duke Clinical Research Institute, July 2019–June 2023

↓ Lower is better

*"Our patients stay in the hospital for fewer days for the majority of benchmark pediatric heart surgeries than the national average."*





# Follow-up Care and Beyond



After your child's heart procedure, your physician will give a progress report to your child's cardiologist.

- The team will arrange for an office visit with your child's doctor to occur after you take him/her home.
- As your child gets older, we'll work with you to ensure a smooth transition from childhood to adult heart care.
- Our **Adult Congenital Heart Program** provides a unique approach to care with a team of doctors who specialize in caring for adolescents and adults with congenital heart disease.

Visit [heart.stanfordchildrens.org](http://heart.stanfordchildrens.org) to learn more about why thousands of families choose us for the advanced heart care their children need, and what we can do for your family.





## Contact Us

For more information, visit  
[heart.stanfordchildrens.org](http://heart.stanfordchildrens.org)  
or call (650) 721-2121.