

The Heart Center



Quality Counts: Cardiothoracic Surgery and Interventional Cardiology



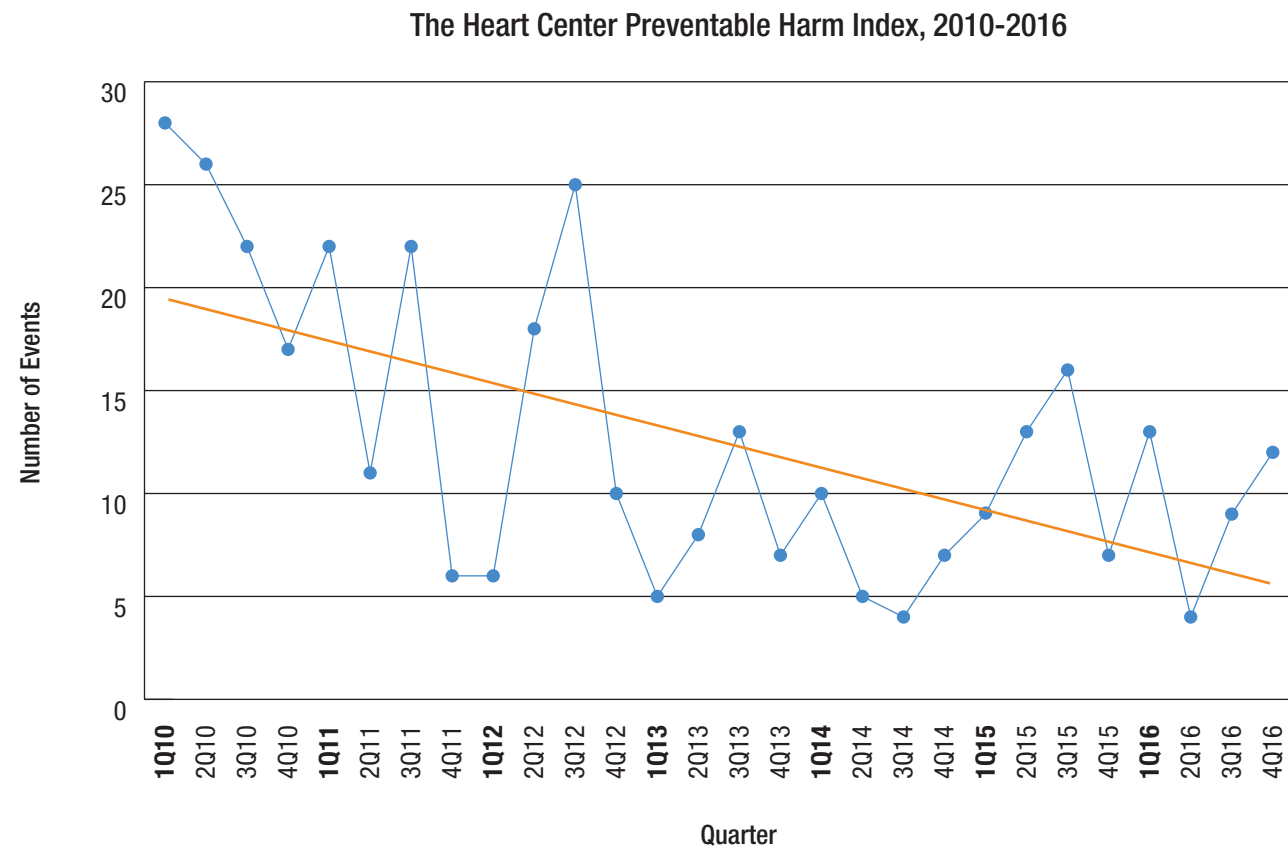
The Cardiothoracic Surgery Program at Nationwide Children’s Hospital is dedicated to the treatment of all patients, from fetus to adult, with congenital heart defects ranging from the most straightforward to the extremely complex. We offer a comprehensive approach to heart care that is based on a multidisciplinary team model. This model enables our team to constantly monitor quality of care and patient safety pre- and post-surgery to assure the best possible outcomes.

To ensure our program and outcomes are held at the highest standards, we participate in several national databases and registries as well as advisory panels where issues of value (outcomes/cost) are reviewed. We greatly value the transparency and accountability that participating in these databases, registries and advisory panels promotes. Through looking comprehensively at the data and outcomes available, we are able to develop quality improvement initiatives and measurements that will continue to lead and enhance cardiac care here at home and around the country.

Reducing Preventable Harm

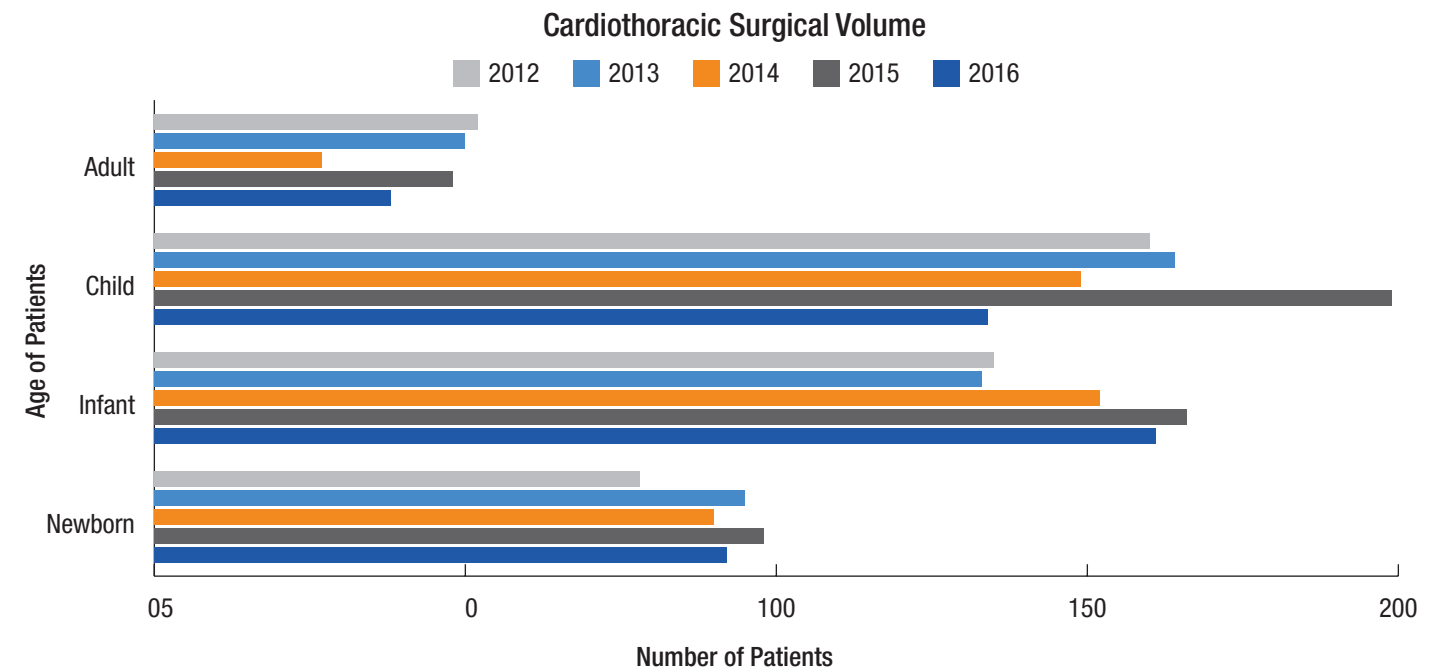
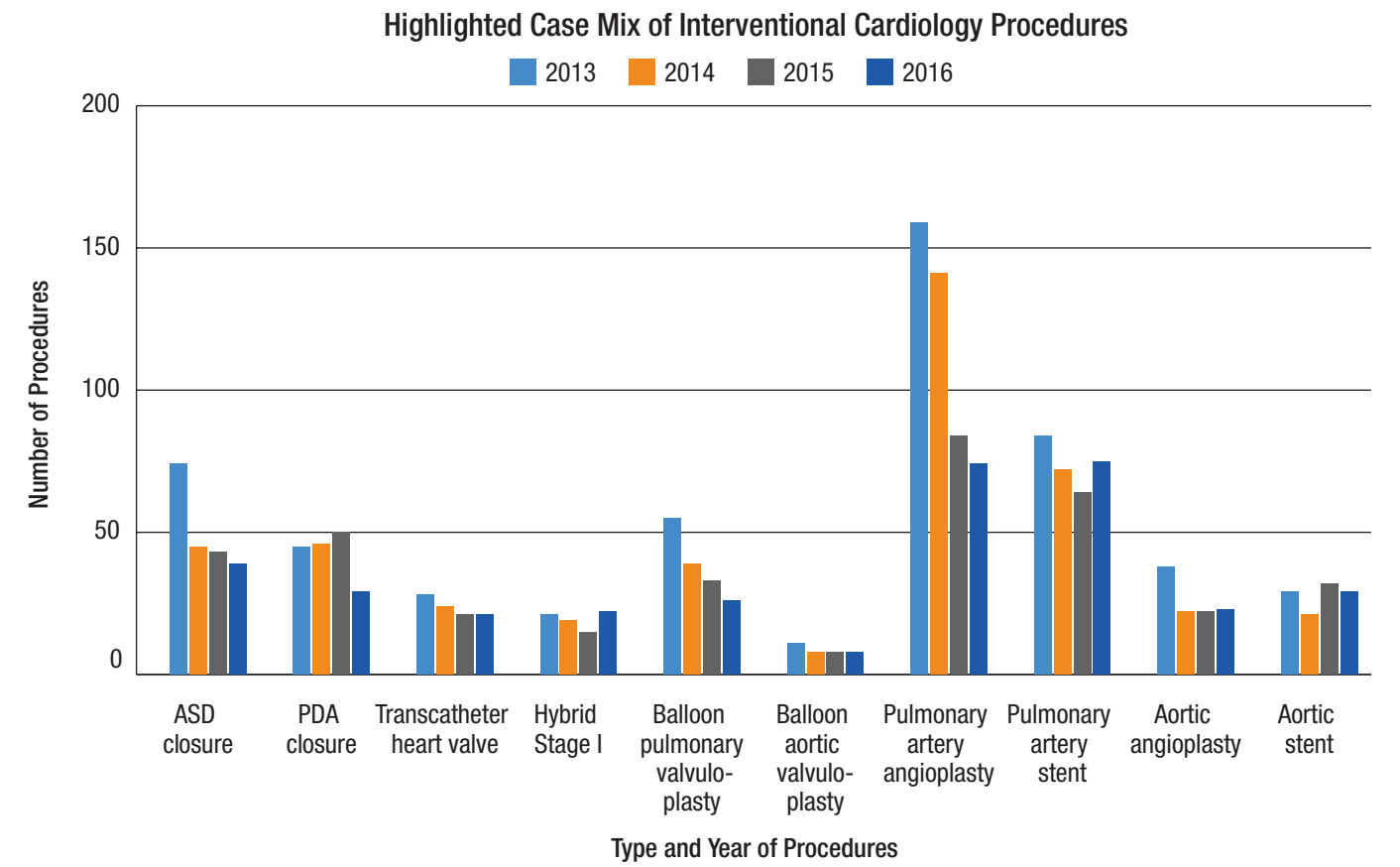
Our goal is zero preventable harm. This commitment to zero preventable harm – achieved through quality improvement – is a cornerstone of the institution as a whole, as well as within The Heart Center. We currently have 35-40 ongoing quality projects to improve quality and outcomes in heart care.

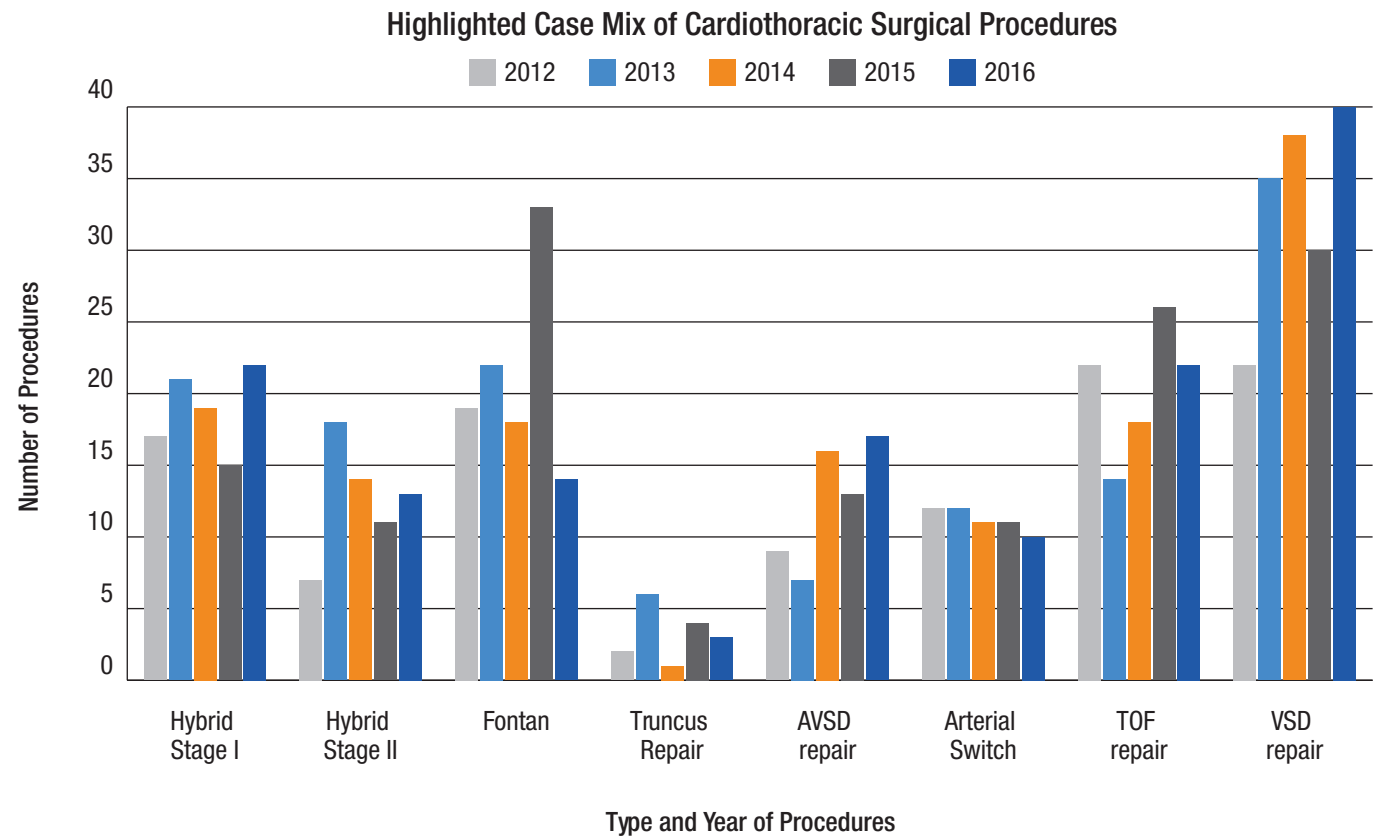
The Preventable Harm Index (below) shows how we’ve decreased preventable harm from 2010 to 2016.



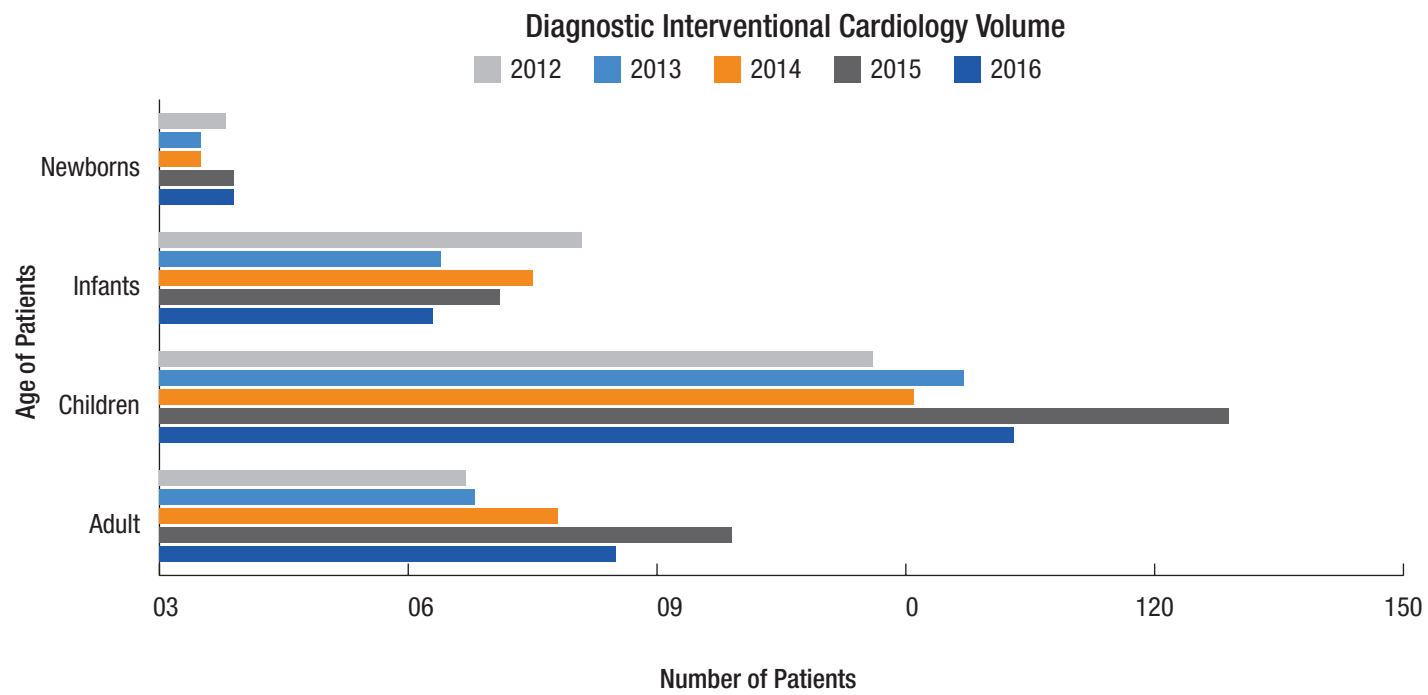
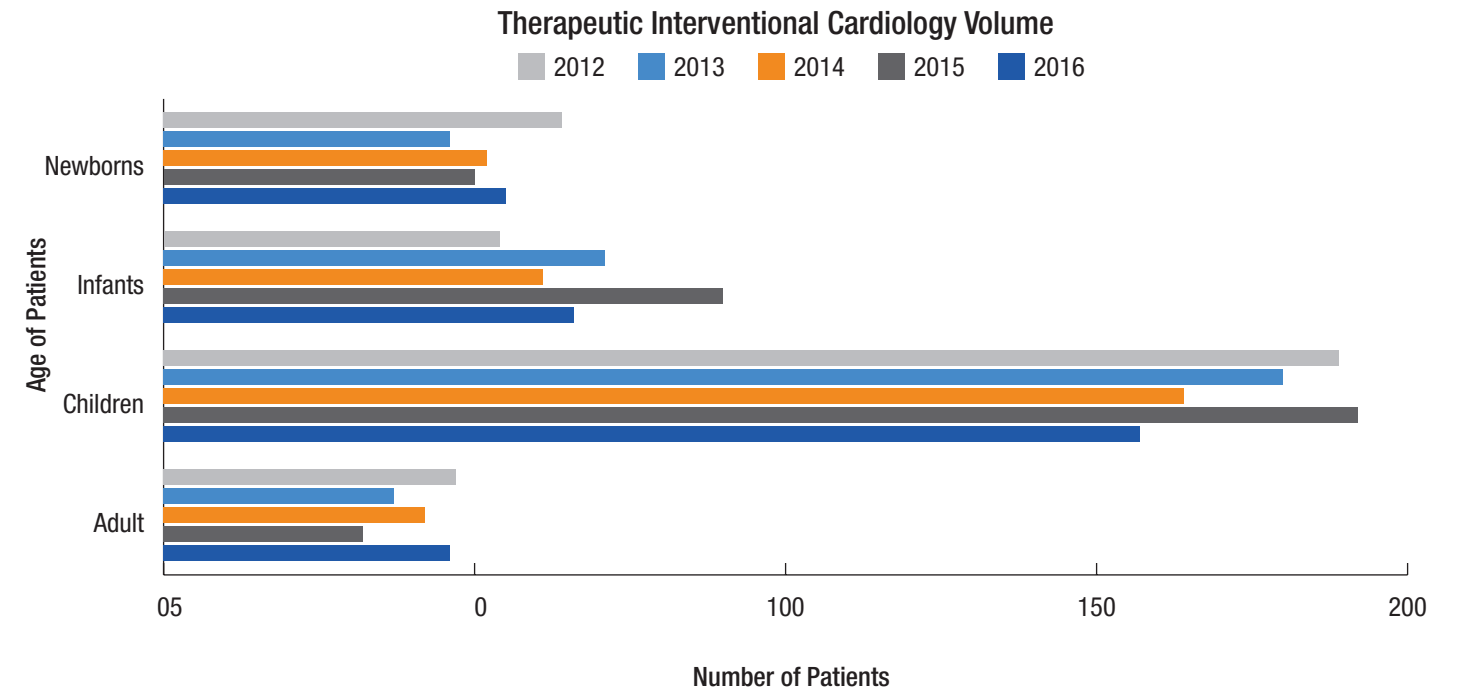
By the Numbers

Numerous metrics are used to monitor the growth and quality of surgical programs. Among them, “case mix” describes the types of cases seen in the program, and “volume” describes how many patients are seen in different populations. By sharing these data for Cardiothoracic Surgery and Interventional Cardiology, we offer families an objective measure of our experience with certain types of cases and ages of patients.





* 2015 Fontan: providing interim surgical coverage in the region



Surgical Survival Outcomes

Congenital heart surgeons perform more than 200 different types of procedures on fewer than 1 million patients each year in the United States. This makes comparing survival outcomes difficult at best. The Society of Thoracic Surgeons (STAT) categorizes different types of pediatric cardiothoracic surgeries and procedures based on complexity. STAT Level 1 contains the least complex, while Level 5 procedures are the most complex. By comparing outcomes data from previous years, we are able to track how the quality of our program and outcomes is changing.

One thing that is important to understand is that the STAT categories are not perfect and they don't necessarily account for how sick a child is. A very sick child may need a lower-category procedure, but the risk is still higher because of the underlying condition of the child. At The Heart Center, we pride ourselves on taking highly complex patients.

Cardiothoracic Surgical Survival Rates by STAT Category of Complexity

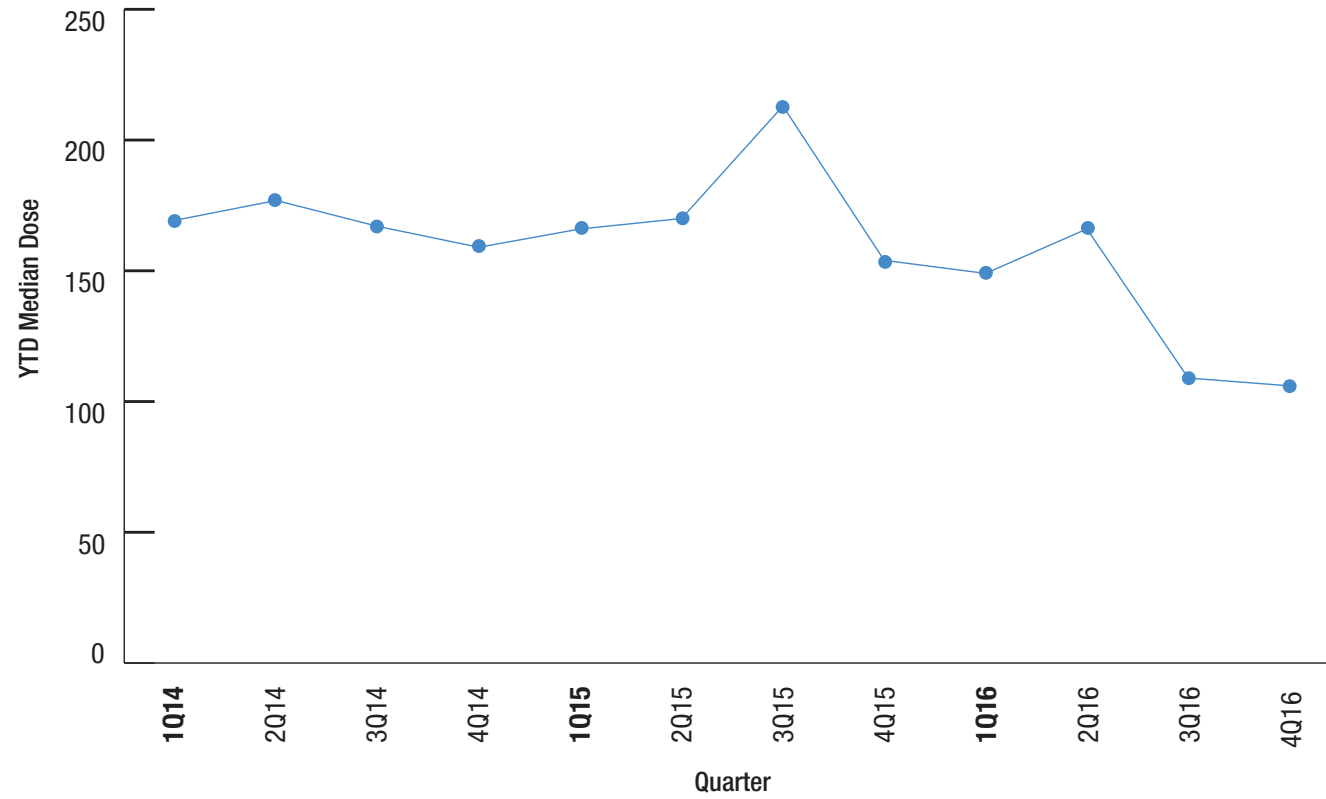
(STAT Category 1-5: Level 1, least complex; Level 5, most complex)

STAT Level	2012		2013		2014		2015		2016	
	Surgeries	Deaths	Surgeries	Deaths	Surgeries	Deaths	Surgeries	Deaths	Surgeries	Deaths
STAT Level 1	86	0	114	0	118	1	110	0	113	0
STAT Level 2	94	1	93	2	101	2	157	0	99	4
STAT Level 3	36	0	29	1	34	0	35	2	32	3
STAT Level 4	53	7	70	3	67	4	65	5	70	2
STAT Level 5	27	2	39	3	38	4	24	5	38	1
Total	296	10	345	9	358	11	391	12	352	10

Highlights in Quality: Reducing Radiation Exposure for Catheterization and Electrophysiology Procedures

Concerns related to patient radiation exposure have led The Heart Center to create quality initiatives to reduce median radiation dosage during catheterization and electrophysiology (EP) procedures. Through the increased use of collimation when appropriate, implementation of a color-coded dose tracking system (DTS), installation of new software, decrease in the frame rate to 10 fps when possible (based on patient weight), use of “Live Zoom” rather than “Radiological Zoom” and system alerts for staff, the year to date (YTD) median dose continues to decline.

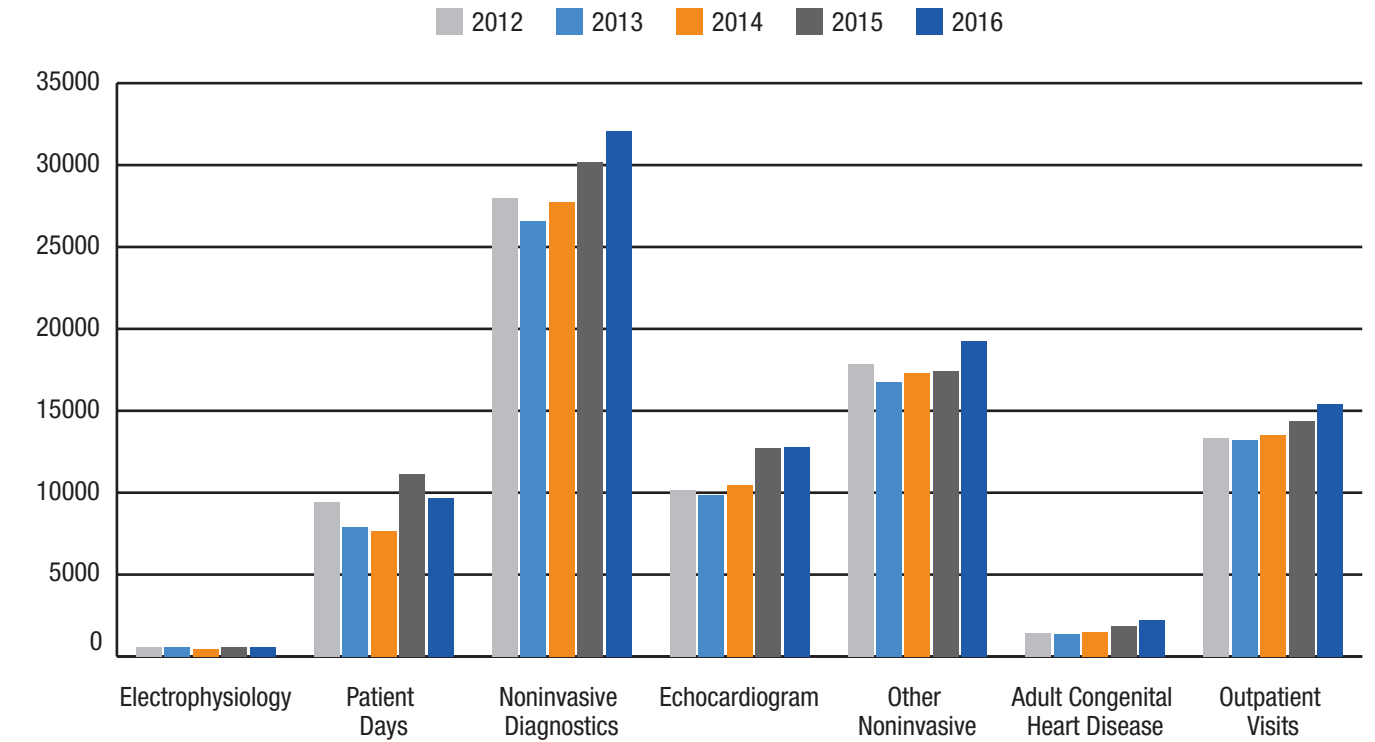
Median Dose Reduction for Cath and EP



Providing a Lifetime of Comprehensive Care

The Heart Center at Nationwide Children’s is a high-volume, comprehensive center focused on delivering best outcomes to children living with congenital heart conditions. From our fetal interventions to our adult congenital heart disease clinics, we are here to provide a lifetime of care. The table below shows our volumes for specialty services other than surgery and interventional cardiology.

Comprehensive Volumes for The Heart Center



Comprehensive Volumes for The Heart Center

Specialty Services	2012	2013	2014	2015	2016
Electrophysiology	179	185	163	180	183
Patient Days	9,427	7,876	7,642	11,111	9,646
Noninvasive Diagnostics	27,981	26,612	27,771	30,160	32,075
Echocardiogram	10,153	9,877	10,441	12,740	12,792
Other Noninvasive	17,828	16,735	17,330	17,420	19,283
Adult Congenital Heart Disease	1,409	1,384	1,501	1,846	2,258
Outpatient Visits	13,367	13,222	13,517	14,357	15,391

Highlighted Case Mix of Cardiothoracic Surgical Procedures

