



turning knowledge into practice

"America's Best Children's Hospitals"

2009 Methodology

Murrey G. Olmsted
Emily McFarlane
Joe Murphy
Angela Pitts
Edward M. Drozd



To Whom It May Concern:

U.S. News & World Report's "America's Best Children's Hospitals" study is the sole and exclusive property of U.S. News & World Report, which owns all rights, including but not limited to copyright, in and to the attached data and material. Any party wishing to cite, reference, publish, or otherwise disclose the information contained herein may do so only with the prior written consent of U.S. News. Any U.S. News-approved reference or citation must identify the source as "U.S. News & World Report's America's Best Children's Hospitals" and, with the exception of academic journals, must include the following credit line: "Data reprinted with permission from U.S. News & World Report." For permission to cite or use in any other way, contact permissions@usnews.com or send a written request to Permissions Department, c/o Mary Lu Meixell, U.S. News & World Report, 1050 Thomas Jefferson Street, NW, Washington, DC 20007-3837. For custom reprints, please contact Wright's Reprints at 877-419-5725 or e-mail usnews@wrightsreprints.com.

Table of Contents

I.	Introduction	3
II.	Eligibility	5
III.	Structure	5
	A. Structural Measures—All Specialties	6
	B. Specialty-Specific Structural Measures	25
	C. Trimming, Imputation, Standardization, and Weighting	34
IV.	Outcomes	35
	A. Outcomes Measures	36
	B. Scoring	39
V.	Process	41
	A. Eligibility Requirements	42
	B. Survey Procedure	43
	C. Survey Response Weighting	44
VI.	<i>U.S. News Score</i>	45
VII.	Pediatric Honor Roll	46
VIII.	Future Improvements	47
IX.	Contact Information	47
X.	References	48

List of Tables

Table 1. Specialty-Specific Patient Volume Measures.....	8
Table 2. Advanced Clinical Services Offered by Specialty.....	13
Table 3. Key Technologies by Specialty	19
Table 4. Clinical Support Services by Specialty.....	21
Table 5. Fellowships by Specialty	22
Table 6. Physician Specialists by Specialty.....	24
Table 7. Points for Patient Clinic Visits.....	27
Table 8. Outcomes Measures by Specialty	36
Table 9. Outcomes Measures and Scoring Rules.....	39
Table 9. Outcomes Measures and Scoring Rules (continued)	41
Table 10. Physician Sample Mapping	42
Table 11. Physician Survey Mailing Schedule	43
Table 12. Response Rates, by Region and Specialty, 2009	44
Table 13. Percentage of Total Weight by Specialty	45

List of Appendixes

Appendix A Glossary of Terms	A-1
Appendix B 2008 Sample Physician Questionnaire	B-1
Appendix C 2009 Sample Physician Questionnaire	C-1
Appendix D 2009 Pediatric Rankings.....	D-1
Appendix E 2009 Pediatric Honor Roll.....	E-1

I. Introduction

U.S. News & World Report has ranked hospitals in pediatrics since the launch of the annual “America’s Best Hospitals” rankings in 1990, but until 2007 the rankings were based solely on reputation, determined by an annual survey of pediatricians.

The obstacle to data-driven rankings was that quantitative quality measures comparable to those used to rank most other specialties were unavailable for pediatrics. For example, Medicare data (i.e., MedPAR) are the basis for determining mortality in other specialties. While some children are treated under Medicare because of legislatively mandated changes in rules over time, the number is low and eligibility for care is narrowly defined. Thus, no large pediatric mortality database was available (or is available at this writing). Reliable structural measures also were absent. In available data sources, hospitals generally reported volume, advanced technologies, and patient services for the entire institution and did not break out pediatric-specific information.

Continuing to rank this important specialty on reputation alone until experts could work out definitions of performance data and the best ways to collect and verify these data was deemed unacceptable. Information available in early 2007 suggested that reaching a consensus merely on definitions would take until 2010 or well beyond, a conclusion that still holds more than 2 years later.

U.S. News, therefore, enlisted RTI International[†] to develop an enhanced methodology for ranking hospitals in pediatrics. Revised rankings were published in 2007 as “America’s Best Children’s Hospitals,” the first time pediatric rankings were published separately from the other ranked specialties. The rankings were expanded in 2008 to general pediatrics and six pediatric specialties.[‡]

The 2009 rankings have been further expanded to 10 specialties; general pediatrics has been dropped with the increase in specialties. The 10 specialty rankings are as follows:

- Cancer
- Diabetes & Endocrine Disorders
- Digestive Disorders
- Heart & Heart Surgery
- Kidney Disorders
- Neonatal Care
- Neurology & Neurosurgery
- Orthopedics
- Respiratory Disorders
- Urology

[†] RTI International is the trade name of Research Triangle Institute.

[‡] The 2007 and 2008 methodology reports are available online at www.rti.org/besthospitals.

The 2009 methodology incorporates data from a direct survey of a defined universe of children's hospitals ("Survey of Pediatric Hospitals") that was conducted from January to March of 2009. The methodology also incorporates nominations of hospitals from a survey of board-certified pediatric specialists. The Survey of Pediatric Hospitals collected various structural and outcomes data.

Separating the pediatric rankings from the adult rankings was done to highlight the change and to avoid possible confusion that the superficially similar ranking approach used in the pediatric and adult specialties might cause. While the pediatric rankings still reflect the interrelationship between *structure*, *process*, and *outcomes*, the three components of the Donabedian paradigm,¹⁻⁵ the specific measures, weights, and scoring are quite different, in part reflecting constraints of the available data. A brief description of the three Donabedian components in the context of the pediatric methodology follows.

Structure refers to hospital resources directly related to patient care. Examples include the ratio of nurses to patients, specialized clinics and programs, and certification by recognized external organizations such as designation as a Nurse Magnet hospital by the American Nurse Credentialing Center (ANCC) or accreditation by the Foundation for the Accreditation of Cellular Therapy (FACT).

The *process* of health care delivery encompasses overall rendering of diagnosis, treatment, prevention, and patient education. In the pediatric hospital rankings, as in the adult rankings, process is represented by a reputational score based on the annual survey of board-certified physicians cited above.

The third and final component is *outcomes*, the most obvious of which is death. Other outcomes include adverse events such as bloodstream infections and transplant failures.

The rankings are designed to identify hospitals that provide the highest-quality care for children with the most serious or complicated medical conditions and use the most robust and sensitive measures available to represent the three Donabedian components. ***Section III*** describes the data and the construction of each element.

II. Eligibility

Hospitals were eligible for ranking in 2009 if they were members of the National Association for Children’s Hospitals and Related Institutions (NACHRI)[§] in any of three classifications: a freestanding children’s hospital, a children’s “hospital within a hospital” (i.e., an essentially autonomous pediatric service that does not physically stand alone), or an associate member (i.e., pediatric hospitals that are affiliated with medical schools but not the primary pediatric teaching hospital). Certain specialty and non-NACHRI member hospitals were added because they had appeared previously in the Best Hospitals rankings or because they were recommended by members of expert advisory panels that participated in a review of pediatric hospital quality measures in the fall of 2008. As of January 1, 2009, the final universe comprised 160 hospitals.

III. Structure

The structural element is represented by volume, technology, clinical services, and other features characteristic of a high-quality pediatric hospital. In the America’s Best Hospitals adult specialty rankings, most of the measures and their associated data are derived from the American Hospital Association (AHA) annual survey. Because the AHA survey focuses primarily on overall hospital measures, however, its pediatric data lack specificity. Data had to be obtained through an independent effort, the Survey of Pediatric Hospitals.^{**}

The survey was administered to 160 institutions. Of the institutions surveyed, 98 participated, a response rate of 61.3 percent.^{††} Two external organizations provided additional measures: the ANCC and FACT.

To help update the hospital survey for 2009, advisory panels were convened in each of the 10 specialties in three additional areas: to advise on infection control measures, to review condition and procedure codes used in the survey, and to provide oversight and quality control of the entire process.

Members for the various advisory panels were recruited in cooperation with NACHRI, which on behalf of the survey issued a request to the pediatric hospital community to suggest individuals with broad-ranging expertise in general and specialty pediatric medical care and in

[§] More information about NACHRI and its member hospitals can be found at www.childrenshospitals.net.

^{**} The *U.S. News* Survey of Pediatric Hospitals was conducted by RTI.

^{††} American Association for Public Opinion Research standard response rate 2 (standard definitions are located on the Web at http://www.aapor.org/uploads/Standard_Definitions_07_08_Final.pdf).

current research into hospital quality. The response was outstanding. The panels assembled from those who agreed to serve comprised pediatric physicians, nurses, hospital quality experts, and other healthcare professionals.

Communicating through conference calls, individual ad hoc phone discussions, and e-mail through the summer and fall of 2008, panel members proposed extensive revisions in measures from the 2008 pediatric hospital survey and identified—in some cases, constructing from scratch—new measures that could be used to evaluate pediatric hospitals. These measures were reviewed and discussed by the various advisory panels.

The RTI project team and *U.S. News* then created a proposed set of measures and a survey instrument. A smaller group of advisors reviewed the broad content and such specific information as individual ICD-9-CM codes used to identify diagnoses and treatments. The final result was a survey of pediatric hospital activities in 10 specialty areas, significantly expanded and more thorough than the 2008 version. The survey was administered to hospitals from January to March 2009 via a dedicated Web page.

When the results were tabulated and analyzed, some measures were excluded because they failed to demonstrate meaningful variability among the responses. The remaining survey items were used to develop the majority of the structural and outcomes measures. The items are described in detail below. The Survey of Pediatric Hospitals will continue to be updated and modified in subsequent years to reflect the quality of care provided by U.S. pediatric facilities.

A. Structural Measures—All Specialties

Certain measures, such as absolute or relative patient and/or procedure volume, are included in most or all specialties because they represent fundamental pediatric care. This section describes these measures. (Measures specific to individual specialties appear in *Section III. B.*)

Infection Prevention Index

The Infection Prevention Index summarizes the degree to which a hospital demonstrates in certain specific ways its intent to reduce the risk of infection when a child receives care. This measure was used in all specialties. ‡‡ Hospitals received zero to seven points based on the following:

‡‡ This measure was used in ranking calculations but is not displayed in the magazine in print or online due to space limitations for Neurology & Neurosurgery.

- Hospitals received one or two points for implementing a standardized hand hygiene (i.e., handwashing) program with a high degree of compliance: one point for 80 to 89 percent compliance and two points for 90 percent or above.
- Hospitals could receive as many as four additional points for evidence of institutional support of infection control programs. One point was awarded for each of the following:
 - Providing financial support for a pediatric infectious disease specialist to serve as a dedicated director of the infection prevention program;
 - Receiving certification from the Certification Board in Infection Control of at least 75 percent of the hospital's eligible infection preventionists;
 - Offering free influenza vaccinations to all physicians and nurses;
 - Offering free influenza vaccinations to all of a patient's household contacts and/or caregivers.
- In all specialties other than Neonatal Care, hospitals received one point for participating in the bloodstream infection (BSI) rate reporting program of the Centers for Disease Control and Prevention's (CDC's) National Healthcare Safety Network (NHSN). Hospitals in the program voluntarily measure and report BSI rates in an effort to reduce the risk of hospital-acquired infections.

Patient Volume

For each pediatric specialty, volume unless stated otherwise was based on the number of unique patients in the past 12 or 24 months with the procedures or diagnoses indicated. If data were unavailable for the most recent year, hospitals were instructed to use data from the most recent year available.

Scores were assigned based on the distribution of volume across all hospitals. Hospitals that had no volume or were nonresponders received zero points. Hospitals with volume in the lowest one-third of the distribution of volume for all hospitals received one point, hospitals with volume in the middle one-third received two points, and hospitals with volume in the highest one-third received three points. *Table 1* identifies the volume measures used by specialty and the points assigned.

Table 1. Specialty-Specific Patient Volume Measures

Cancer Volume Measures		Volume	Points
<ul style="list-style-type: none"> New cancer patient volume for past 2 years 	0:	0	
	1-149:	1	
	150-299:	2	
	300+:	3	
Cancer patient volume: <ul style="list-style-type: none"> Acute lymphocytic leukemia Brain tumors Solid tumors 		0:	0
		1-499:	1
		500-999:	2
		1,000+:	3
Diabetes and Endocrine Disorders Volume Measures		Volume	Points
<ul style="list-style-type: none"> Type 1 diabetes volume 	0:	0	
	1-399:	1	
	400-799:	2	
	800-1,199:	3	
	1,200+:	4	
<ul style="list-style-type: none"> Type 2 diabetes volume 	0:	0	
	1-49:	1	
	50-99:	2	
	100-199:	3	
	200+:	4	
<ul style="list-style-type: none"> Nondiabetes endocrine disorders volume 	0:	0	
	1-999:	1	
	1,000-2,499:	2	
	2,500-3,999:	3	
	4,000+:	4	
<ul style="list-style-type: none"> Outpatient volume of patients on continuous glucose monitors (CGMs) 	0:	0	
	1-9:	1	
	10-39:	2	
	40+:	3	

(continued)

Table 1. Specialty-Specific Patient Volume Measures (continued)

Digestive Disorders Volume Measures	Volume	Points
Gastrointestinal diagnostic and treatment procedure volume: <ul style="list-style-type: none"> • Capsule endoscopy • Endoscopic band ligation • Esophageal impedance monitoring • Endoscopic retrograde cholangiopancreatography • Antroduodenal and full colonic motility studies 	0: 1-29: 30-99: 100+:	0 1 2 3
Gastrointestinal patient volume: <ul style="list-style-type: none"> • Foreign body • Rectal bleeding • Hematemesis • Melena • Pseudoobstruction • Short bowel syndrome • Hepatic failure • Acute pancreatitis • Biliary atresia • Portal hypertension • Protein-calorie malnutrition 	0: 1-299: 300-599: 600+:	0 1 2 3
High-complexity gastrointestinal procedures volume: <ul style="list-style-type: none"> • Hepatoportoenterostomy or Kasai procedure • Bowel lengthening such as Bianchi or serial transverse enteroplasty • Heller myotomy 	0: 1-9: 10-19: 20+:	0 1 2 3
<ul style="list-style-type: none"> • Intestinal transplant volume for the past 2 years 	Not offered: 0: 1-9: 10+:	0 1 2 3
<ul style="list-style-type: none"> • Liver transplant volume for the past 2 years 	Not offered: 0: 1-19: 20+:	0 1 2 3
Heart and Heart Surgery Volume Measures	Volume	Points
Catheter procedure volume: <ul style="list-style-type: none"> • Balloon angioplasty • Stent implantation • Transcatheter occlusion of cardiac shunts • Atrial tachycardias • Supraventricular tachycardia or Wolff-Parkinson-White syndrome • Ventricular tachycardia 	0: 1-99: 100-199: 200+:	0 1 2 3
Hypoplastic Left Heart Syndrome stage 1 repair surgical volume: <ul style="list-style-type: none"> • Norwood Stage 1 procedure • Hybrid Stage 1 procedure 	0: 1-9: 10-19: 20+:	0 1 2 3
<ul style="list-style-type: none"> • Surgical volume based on Risk Adjustment for Congenital Heart Surgery Coding System (RACHS-1), Levels 3–6 	0: 1-49: 50-99: 100+:	0 1 2 3

(continued)

Table 1. Specialty-Specific Patient Volume Measures (continued)

Kidney Disorders Volume Measures	Volume	Points
New patient nephrology volume:	0:	0
• Primary nephritic syndrome	1-99:	1
• Membranoproliferative glomerulonephritis	100-199:	2
• Membranous nephropathy	200+:	3
• IgA nephropathy		
• Henoch-Schönlein purpura		
• Systemic lupus erythematosus with renal involvement		
• Hemolytic uremic syndrome		
• Chronic kidney disease		
	0:	0
• Nontransplant kidney biopsy volume for the past 2 years	1-49:	1
	50-99:	2
	100+:	3
Dialysis volume:	0:	0
• Chronic hemodialysis maintenance for the past 2 years	1-29:	1
• Chronic peritoneal dialysis maintenance for the past 2 years	30-99:	2
	100+:	3
Volume of patients receiving permanent dialysis catheters:	0:	0
• Placement of permanent hemodialysis vascular central venous catheters	1-19:	1
• Placement of hemodialysis arteriovenous fistula/graft access	20-39:	2
	40+:	3
Kidney transplant volume:	0:	0
• Deceased-donor kidney transplants for the past 2 years	1-9:	1
• Living-donor kidney transplants for the past 2 years	10-19:	2
	20+:	3
Neonatal Care Volume Measures	Volume	Points
Neonatal care patient volume:	0:	0
• Necrotizing enterocolitis	1-99:	1
• Patent ductus arteriosus	100-199:	2
• Retinopathy of prematurity treatment and/or laser therapy	200+:	3
• Cardiac surgeries		
• Surgical care of gastroschisis or omphalocele		
• Tracheoesophageal fistula or esophageal atresia repair		
• Hypoxic ischemic encephalopathy		
• Spina bifida treatment		
• Hirschsprung's disease treatment		

(continued)

Table 1. Specialty-Specific Patient Volume Measures (continued)

Neurology and Neurosurgery Volume Measures	Volume	Points
<ul style="list-style-type: none"> Epilepsy patient volume 	0: 1-499: 500-999: 1,000+:	0 1 2 3
New neurology/neurosurgery patient volume: <ul style="list-style-type: none"> Brain tumors Medically intractable epilepsy Status epilepticus Craniosynostosis Hydrocephalus Cerebrovascular accidents Vein of Galen malformations 	0: 1-199: 200-799: 800+:	0 1 2 3
Surgical volume (first surgical admission only): <ul style="list-style-type: none"> Brain tumors Craniosynostosis New hydrocephalus patient shunt procedures Implantation of intracranial pressure monitors for head trauma Medically intractable epilepsy New myelomeningoceles repair Intracranial procedures for head trauma Vagal nerve stimulator 	0: 1-99: 100-199: 200+:	0 1 2 3
Orthopedics Volume Measures	Volume	Points
Orthopedics patient volume: <ul style="list-style-type: none"> Total pediatric orthopedic outpatients Total pediatric orthopedic inpatients Total pediatric orthopedic emergency room patients 	0: 1-999: 1,000-9,999: 10,000+:	0 1 2 3
Surgical volume (new patients only): <ul style="list-style-type: none"> Scoliosis, including idiopathic, neuromuscular, and congenital Thoracoscopic anterior spinal surgery Development dysplasia of the hip Clubfoot (Ponsetti method) Operative reduction and fixation of the supracondylar fracture of the humerus Operative reduction and fixation of the femur fractures (6-12 years) 	0: 1-99: 100-199: 200+:	0 1 2 3
Respiratory Disorders Volume Measures	Volume	Points
Respiratory procedure volume: <ul style="list-style-type: none"> Electrophrenic respiration or diaphragm pacing Infant pulmonary function testing Bronchoscopy Extracorporeal membrane oxygenation (ECMO) with PICU/NICU patients 	0: 1-124: 125-249: 250+:	0 1 2 3
Asthma patient volume: <ul style="list-style-type: none"> Total number of <u>inpatients</u> treated with a diagnosis of asthma Total number of <u>inpatients</u> treated with a diagnosis of asthma who received a written asthma management plan Total number of <u>outpatients</u> treated with a diagnosis of asthma 	0: 1-1,499: 1,500-2,999: 3,000+:	0 1 2 3
<ul style="list-style-type: none"> Cystic fibrosis patient volume 	0: 1-74: 75-149: 150+:	0 1 2 3

(continued)

Table 1. Specialty-Specific Patient Volume Measures (continued)

Urology Volume Measures	Volume	Points
Patient volume in specialized urology clinics and programs:	0:	0
• Spina bifida clinic	1-199:	1
• Voiding dysfunction clinic	200-399:	2
• Comprehensive stone program	400+:	3
• Prenatal clinic		
Stone removal volume:	0:	0
• Shock wave lithotripsy	1-9:	1
• Ureteroscopy	10-29:	2
• Percutaneously nephrolithotripsy	30+:	3
Surgical volume:		
• Pyeloplasty	0:	0
• Nephrectomy	1-99:	1
• Newborn exstrophy closures	100-299:	2
• Reconstructive procedures for incontinence	300+:	3
• Posterior urethral valve ablation		
• Pediatric urodynamic procedures		
• Renal transplants		

Nurse Staffing

This measure is a relative ratio of the number of nurses to the average daily patient census. The numerator is the number of on-staff registered nurses (RNs) devoted to inpatient clinical care, expressed in full-time equivalents. Nurses are included only if they have an RN degree from an approved nursing school and hold a current state license. The denominator is the average daily number of pediatric inpatients. The source of data was the Survey of Pediatric Hospitals. The index was used in all specialties. For Neonatal Care, the index used an equivalent measure for nurses dedicated specifically to Neonatal Intensive Care Unit (NICU) care.

Standardization was performed to ensure that the data were distributed normally, with a mean of zero. This was necessary to prepare the data for factor analysis, restoring balance so that trimmed and untrimmed measures had equal influence on the final score. See *Section III.C* for a description of the trimming process to reduce the effect of extreme variation.

Nurse Magnet Hospital

“Nurse Magnet” is a formal designation by the ANCC, an arm of the American Nursing Association (ANA). The designation was included in all specialties and indicates that a hospital meets specific standards of nursing excellence. The list of Nurse Magnet hospitals is updated throughout the year as hospitals apply for designation and redesignation status. Hospitals accorded Nurse Magnet status as of March 1, 2009, received one point in all specialties. The

current list of Nurse Magnet hospitals is at <http://www.nursecredentialing.org/MagnetOrg/searchmagnet.cfm>.

Advanced Clinical Services^{§§}

Hospitals frequently offer clinical services and organize teams or programs to address special needs of specific groups of patients. These services or programs may be organized around a particular diagnosis, need, or age group. The structure of the services or programs facilitates care and ensures that a range of resources are available. Patients also frequently benefit from specialized skills of the multidisciplinary staff who provide care, improving the overall quality of care and, thus, presumably the outcomes. The clinical services recognized in each specialty are described below. Data for these measures come from the Survey of Pediatric Hospitals. Advanced clinical services were included in all specialties except Urology. One point was awarded for each service offered by a hospital in each specialty. *Table 2* shows the services offered by specialty.

Table 2. Advanced Clinical Services Offered by Specialty

	Clinical Service	Description
Cancer (11 services)	Cancer care coordination	<ul style="list-style-type: none"> Ensuring that each patient has a primary hematologist-oncologist who is consulted regularly Having the hematologist-oncologist involved in at least 50% of the evaluations and management visits with the patient
	Clinical cancer programs	<ul style="list-style-type: none"> Offering a brain tumor treatment program Offering a bone or soft tissue sarcoma treatment program
	Cancer pharmacists	<ul style="list-style-type: none"> Providing a dedicated chemotherapy-certified pharmacist Pharmacists specifically assigned to participate in daily inpatient rounds with the pediatric cancer treatment team
	Best practices	<ul style="list-style-type: none"> Providing regular morbidity/mortality conferences Providing a long-term survivors program Offering participation in tumor registry programs
	Community-based services	<ul style="list-style-type: none"> Offering satellite offices or outreach clinics to accommodate patients living in distant areas Offering a coordinated outreach program to enable community-based follow-up care for cancer patients

(continued)

^{§§} Measure was used in ranking calculations but is not displayed in print.

Table 2. Advanced Clinical Services Offered by Specialty (continued)

	Clinical Service	Description
Diabetes & Endocrine Disorders (22 services)	Diabetes support staff	Having the following support personnel available for consultation: <ul style="list-style-type: none"> • Social workers with a specialty in diabetes • Dieticians with a specialty in diabetes • Psychologists with a specialty in diabetes • Certified diabetes educators
	Endocrinology support staff	Having the following support personnel available for consultation: <ul style="list-style-type: none"> • Social workers with a specialty in nondiabetes endocrine disorders • Dieticians with a specialty in nondiabetes endocrine disorders • Psychologists with a specialty in nondiabetes endocrine disorders • Genetic counselors with a specialty in nondiabetes endocrine disorders
	Diabetes patient services	<ul style="list-style-type: none"> • Offering the following programs or services: • Standardized educational program used to evaluate and prepare patients for use of an insulin pump • CDEs to provide pump training to patient families • Standardized education program used to evaluate and prepare patients for use of CGMs • Certified CGM trainers to provide CGM training to patient families • Standardized protocol or algorithm distributed to all patients showing them how to manage carbohydrate and insulin therapy during illness • Standardized educational program for families of new-onset diabetes patients • Formal educational program for school nurses through either a yearly school nurse education conference or written materials distributed each school year to the school nurses to ensure appropriate care of each patient • Designated school liaison who is an RN or CDE in hospital's pediatric diabetes program • Product fair to introduce patients and families to various monitoring and treatment options • Diabetes-specific support group for parents and families
	Diabetes education program	<ul style="list-style-type: none"> • Offering a diabetes education program certified by the American Diabetes Association
	Electronic health records	<ul style="list-style-type: none"> • Having an electronic personal health record that allows patients to access their medical information (including laboratory results) and communicate or exchange information with the diabetes program
	Endocrinology education program	<ul style="list-style-type: none"> • Providing patient/family education materials on their Web site related to endocrine disorders (other than diabetes)
	Tumor board	<ul style="list-style-type: none"> • Discussing thyroid cancer patients at the hospital's tumor board on a regular basis

(continued)

Table 2. Advanced Clinical Services Offered by Specialty (continued)

	Clinical Service	Description
Digestive Disorders (6 services)	Gastrointestinal (GI) specialists	<ul style="list-style-type: none"> • Having pediatric gastroenterology/liver-specialized pathologists available for consultation 24 hours a day, 7 days a week • Having pediatric interventional radiologists who are members of the Society for Pediatric Interventional Radiology available for consultation 24 hours a day, 7 days a week
	GI support groups	<ul style="list-style-type: none"> • Providing an inflammatory bowel disease support group • Providing a celiac disease support group • Providing a liver disease support group • Providing another pediatric gastroenterology support group
	Clinical Service	Description
Heart & Heart Surgery (17 services)	Cardiovascular services	<p>Offering a variety of important diagnostic and treatment services:</p> <ul style="list-style-type: none"> • inpatient cardiology consultation services • dedicated cardiac surgical operating rooms • cardiac intensive care unit • remote monitoring of cardiac patients • cardiac diagnostic catheterization laboratory • cardiac interventional catheterization laboratory • electrophysiology laboratory • ventricular assist program • congenital heart disease clinic • echocardiography laboratory • fetal echocardiography laboratory • echocardiography laboratory certified by the Intersocietal Commission for the Accreditation of Echocardiography Laboratories • heart failure program
	Non-ECMO circulatory support	<p>Providing non-ECMO circulatory support devices for patients under 10 years of age:</p> <ul style="list-style-type: none"> • Berlin heart • Thoratec or Abiomed ventricular assist device • Other circulatory support device
	High-volume operating rooms	<ul style="list-style-type: none"> • Performing 250 surgical procedures or more in the pediatric cardiac surgical operating room in the last calendar year

(continued)

Table 2. Advanced Clinical Services Offered by Specialty (continued)

	Clinical Service	Description
Kidney Disorders (13 services)	Pediatric dialysis unit	<ul style="list-style-type: none"> • Having a pediatric dialysis unit with a designated medical director who is a board-certified pediatric nephrologist • Having a pediatric dialysis unit <u>administratively</u> separated from the adult dialysis service • Having a pediatric dialysis unit <u>physically</u> separated from the adult dialysis service • Offering chronic hemodialysis (more than 3 consecutive months) at-home program for adolescents • Offering a summer camp program for patients who are on dialysis, have received transplant, or are undergoing other nephrology treatment • Having an ambulatory blood pressure monitoring program • Giving an influenza vaccination to all pediatric dialysis patients in the last calendar year
	Renal replacement therapy (RRT)	Having a pediatric nephrology program that supervises or leads the following types of RRT: <ul style="list-style-type: none"> • Hemodialysis • Peritoneal dialysis • Continuous RRT
	Transplant services	<ul style="list-style-type: none"> • Being a United Network for Organ Sharing (UNOS)–recognized pediatric kidney transplant program • Having the ability to perform laparoscopic donor nephrectomies • Having a formal transition program for kidney transplant recipients into internal medicine/nephrology/transplant medicine programs
	Clinical Service	Description
Neonatal Care (12 services offered)	NICU pharmacist	Offering a s NICU-specific pharmacist onsite 24 hours a day, 7 days a week
	Family support	Providing the following services to pediatric patients and their families in the NICU: <ul style="list-style-type: none"> • March of Dimes Family Support Center (with financial support for a family-centered care program) • Breast pumping rooms available in the NICU • NICU-specific lactation specialists available daily for consults • Parental visitation available 24 hours a day, 7 days a week • Sibling visitation allowed • NICU-specific parent advisory committee (or a subcommittee from the larger parent advisory committee) • NICU-specific parent-to-parent support group(s)
	Home transition teams	Providing specialized teams to help patients and their families make the transition from the NICU to home <ul style="list-style-type: none"> • Metabolic team • Home total parenteral nutrition (TPN) team • Home enteral tube feeding team • Home ventilator management team

(continued)

Table 2. Advanced Clinical Services Offered by Specialty (continued)

	Clinical Service	Description
Neurology & Neurosurgery (11 services)	Headache clinic	<ul style="list-style-type: none"> • Pediatric headache treatment clinic
	Headache services	Headache clinic offers: <ul style="list-style-type: none"> • Psychologists who specialize in headache treatment • Biofeedback treatment • Abortive therapy for individual headache episodes • Preventive therapy, focusing on lifestyle or behavior change
	Rehabilitation program	<ul style="list-style-type: none"> • Pediatric neurological rehabilitation program
	Rehabilitation services	Rehabilitation services for patients with <ul style="list-style-type: none"> • Traumatic brain injury • Brain tumors • Guillain-Barre syndrome • Multiple sclerosis • Spinal cord injury
	Clinical Service	Description
Orthopedics (11 services)	Orthopedic surgical specialists	Specialized orthopedic surgeons in: <ul style="list-style-type: none"> • Hand surgery • Spinal surgery • Musculoskeletal oncology
	Advanced care services	Comprehensive pediatric orthopedic program with <ul style="list-style-type: none"> • Dedicated postsurgery unit for pediatric patients • Dedicated pediatric imaging center • Pediatric protocols to reduce radiation exposure during CT scans • Ultrasonographers with specialized training to perform hip exams • Remote retrieval of test results, images, and medical records from locations offsite or away from the hospital
	Musculoskeletal oncology program	<ul style="list-style-type: none"> • Musculoskeletal oncology program for the treatment of bone and soft tissue sarcomas • Musculoskeletal cancer patient cases discussed at a tumor board at least once a quarter • Hosting of regular morbidity and mortality conferences to review orthopedic patient cases

(continued)

Table 2. Advanced Clinical Services Offered by Specialty (continued)

	Clinical Service	Description
Respiratory Disorders (16 services)	Home care services	Providing the following specialized home care services to at least one patient during the past calendar year: <ul style="list-style-type: none"> • Nurse home visits • TPN therapies • Intravenous (IV) antibiotics • Tracheostomy care • Ventilator care • Venipunctures, central line care, and peripherally inserted central catheter (PICC) lines • Apnea monitoring
	Asthma care specialists	Providing the following pulmonary care specialists to support the care of asthma patients: <ul style="list-style-type: none"> • Respiratory therapists • Asthma-certified educators
	Written asthma management plan	<ul style="list-style-type: none"> • Providing written asthma management plans to 75 percent or more of asthma patients who had an inpatient stay in the hospital within the last calendar year
	Asthma control testing	<ul style="list-style-type: none"> • Conducting an asthma control test with 50 percent or more of outpatients asthma patients in the last calendar year
	Best practices	Providing comprehensive pediatric respiratory program with <ul style="list-style-type: none"> • Pathways for inpatient management of patients with <ul style="list-style-type: none"> ○ asthma exacerbations ○ bronchiolitis ○ croup • Primary attending/on-staff pediatric pulmonologist assigned to every patient • Offering an American Academy of Sleep Medicine (AASM)-accredited sleep center or sleep laboratory

Key Technologies^{***}

Hospitals provide access to key diagnostic and treatment technologies directly, through the hospital’s health system, a local community network, or a contractual arrangement or joint venture with another community provider. On- and off-site services received equal credit. Data for the key technologies index are from the Survey of Pediatric Hospitals. For eligible hospitals, specialty-specific mixes of technology were used in computing the values for this index. **Table 3** presents the complete list of technology services for each specialty. Definitions can be found in the glossary in **Appendix A**.

^{***} Measure was used in ranking calculations but is not displayed in print.

Table 3. Key Technologies by Specialty

Specialty	Key Technologies
Cancer (10 technologies)	<ul style="list-style-type: none"> • Positron emissions tomography (PET) or PET/CT • Intraoperative magnetic resonance imaging (ioMRI) • 3-Tesla magnetic resonance imaging (3T MRI) • Image-guided radiation therapy (IGRT) • Intensity-modulated radiation therapy (IMRT) • Bone scan • Linac or other linear particle accelerator, Gamma knife, Cyber knife, or other shaped-beam stereotactic radiation therapies • Multislice computed tomography (MSCT) • Meta-iodine-benzyl-guanidine with I-131 radionuclide (I-131 MIBG) • Magnetic resonance spectroscopy (MRS)
Diabetes & Endocrine Disorders (10 technologies)	<ul style="list-style-type: none"> • PET or PET/CT scanning • ioMRI • 3T MRI • Diagnostic radioiodine scan • Therapeutic radioiodine treatment for Graves disease • Therapeutic radioiodine treatment for thyroid cancer • Fine needle aspiration of a thyroid nodule • Thyroidectomy • Dual-energy x-ray absorptiometry (DXA) scans using pediatric software and normative data • Endocrine testing and infusion studies
Digestive Disorders (3 technologies)	<ul style="list-style-type: none"> • PET or PET/CT scanning • Magnetic resonance cholangiopancreatography (MRCP) • CT enterography
Heart & Heart Surgery (4 technologies)	<ul style="list-style-type: none"> • PET or PET/CT scanning • Three-dimensional mapping • Cryoablation • Radiofrequency ablation
Kidney Disorders (3 technologies)	<ul style="list-style-type: none"> • PET or PET/CT scanning • ioMRI • 3T MRI
Neonatal Care (8 technologies)	<ul style="list-style-type: none"> • PET or PET/CT scanning • ioMRI • 3T MRI • Continuous EEG monitoring with pediatric neurology support • Continuous EEG reading • MRI-compatible neonatal transporter • Molecular diagnostic/virology laboratory • Specialized chemistry laboratory with tandem mass spectroscopy
Neurology & Neurosurgery (3 technologies)	<ul style="list-style-type: none"> • PET or PET/CT scanning • ioMRI • 3T MRI

(continued)

Table 3. Key Technologies by Specialty (continued)

Specialty	Key Technologies
Orthopedics (4 technologies)	<ul style="list-style-type: none"> • PET or PET/CT scanning • ioMRI • 3T MRI • Bone scan
Respiratory Disorders (1 technology)	<ul style="list-style-type: none"> • PET or PET/CT scanning
Urology (5 technologies)	<ul style="list-style-type: none"> • PET or PET/CT scanning • Dedicated pediatric urodynamic equipment onsite 24 hours a day, 7 days a week • Shock wave lithotripsy • Ureteroscopy • Percutaneously nephrolithotripsy

Patient and Family Services

Hospitals received up to eight points for patient and family services, one point for each of the services listed below. Data for the patient and family services index come from the Survey of Pediatric Hospitals.

1. Family access to certified child life specialists
2. Family access to family support specialists
3. Family access to pediatric psychologists
4. Family access to interpreter services
5. Family resource center
6. Sleep rooms for parents/siblings
7. School intervention program
8. Ronald McDonald House or other residential facility convenient to the hospital for parents

Clinical Support Services***

Many hospitals provide access to medical and surgical clinical support services through the hospital's health system, a local community network, or a contractual arrangement or joint venture with another provider in the community. On- and off-site services received equal credit.

*** Measure was used in ranking calculations but is not displayed in the magazine in print or online.

Up to 10 services are included in the clinical support services index, depending on the specialty. Brief descriptions follow. Data came from the Survey of Pediatric Hospitals.

For eligible hospitals, specialty-specific mixes of medical and surgical services are used in computing the score for this index. **Table 4** presents the complete list of medical and surgical services considered for each specialty in 2009. Definitions can be found in the glossary in **Appendix A**.

Table 4. Clinical Support Services by Specialty

Clinical Support Service	Cancer	Diabetes & Endocrine Disorders	Digestive Disorders	Heart & Heart Surgery	Kidney Disorders	Neonatal Care	Neurology & Neurosurgery	Orthopedics	Respiratory Disorders	Urology
Genetic testing/counseling	●	●	●	●	●	●	●	●	●	●
Multidisciplinary pediatric acute pain/sedation service (available onsite 24 hours a day)	●	●	●	●	●	●	●	●	●	●
NICU	●	●	●	●	●		●	●	●	●
Pediatric anesthesia program (available onsite 24 hours a day)	●	●	●	●	●	●	●	●	●	●
Pediatric infectious disease program (available onsite 24 hours a day)	●	●	●	●	●	●	●	●	●	●
PICU	●	●	●	●	●		●	●	●	●
Pediatric pain management program (available onsite 24 hours a day)	●	●	●	●	●	●	●	●	●	●
Rapid response team (available onsite 24 hours a day)	●	●	●	●	●	●	●	●	●	●
Reverse isolation/infection control facilities	●	●	●	●	●	●	●	●	●	●
Surgical intensive care unit (SICU) or dedicated beds in a NICU or PICU for surgical patients	●	●	●	●	●		●	●	●	●
Total Elements	10	10	10	10	10	7	10	10	10	10

● Indicates a service is included for the specialty.

Fellowships***

Participation in fellowship training programs represents a commitment by hospitals to provide high-quality care in a specialty area and assure that the program meets standards of

*** Variable was used in ranking calculations but is not displayed in the magazine in print or online.

quality. Hospitals that offer fellowship programs accredited by the Accreditation Council for Graduate Medical Education were awarded one point. **Table 5** indicates the fellowships credited. Hospitals received one point for each fellowship program offered.

Table 5. Fellowships by Specialty

Clinical Support Service	Cancer	Diabetes & Endocrine Disorders	Digestive Disorders	Heart & Heart Surgery	Kidney Disorders	Neonatal Care	Neurology & Neurosurgery	Orthopedics	Respiratory Disorders	Urology
Child neurology						●	●			
Congenital cardiac surgery				●		●				
Neonatal-perinatal medicine						●				
Neurosurgery (with a focus on pediatrics)	●					●	●			
Pediatric cardiology				●		●				
Pediatric endocrinology		●				●				
Pediatric gastroenterology			●			●				
Pediatric hematology-oncology	●					●				
Pediatric nephrology					●	●				
Pediatric orthopedics						●		●		
Pediatric pathology	●					●				
Pediatric pulmonology						●			●	
Pediatric urology						●				●
Thoracic surgery (with focus on pediatric cardiothoracic surgery)				●		●			●	
Total Elements	3	1	1	3	1	14	2	1	2	1

● Indicates a fellowship is included for the specialty.

Parent and Family Involvement***

This measure reflects the extent to which a hospital involves parents and families in care. It applies to all pediatric specialties and is worth up to five points: one point for having a parent

*** Variable was used in ranking calculations but is not displayed in the magazine in print or online.

advisory committee, plus one point if the committee meets at least three times a year, and up to three additional points if the hospital involves

- At least one parent or family member as an active member of the strategic or facility committee;
- At least one parent or family member as an active member of one or more standing committees (e.g., quality improvement, patient safety, ethics); and
- Parents or family members regularly in clinical decision making in ways such as family-centered rounds, care conferences, or other participatory programs.

Pediatric Trauma Center***

The trauma center indicator is dichotomous. One point was awarded for either Level 1 or Level 2 pediatric trauma certification by the American College of Surgeons or the state licensing board.

Physician Specialists***

This measure evaluates the presence of a variety of physician specialists and surgeons who are critical to the delivery of appropriate care by pediatric hospitals. *Table 6* identifies the relevant specialists for each pediatric specialty. Hospitals received one point for each type of appropriate physician specialist in their program.

Public Reporting of Performance***

Hospitals received one point if their pediatric program publicly reports performance data on one or more quality metrics by displaying the data in the facility or on the hospital's or program's Web site. This measure applies to all pediatric specialties.

Quality Improvement Activities***

Hospitals received up to three to five points, depending on specialty, for participating in quality improvement activities. Such activities promote internal review and improvement programs and procedures that often lead to improvements in care.

*** Measure was used in ranking calculations but is not displayed in the magazine in print or online.

For all specialties, hospitals received up to three points for having a formal program review plan, using performance-based metrics, tracking patient data to measure against metrics, and participating in national quality-enhancing initiatives.

In Heart & Heart Surgery, hospitals could receive one additional point for participating in one or more national quality-of-care or improvement initiatives specific to that specialty.

In Cancer, Diabetes & Endocrinology Disorders, Gastroenterology, Kidney Disease, Neurology and Neurosurgery, Orthopedics, Respiratory and Urology hospitals could receive two additional points for participating in two or more national quality-of-care or improvement initiatives specific to that specialty.

Table 6. Physician Specialists by Specialty

Physician Specialists	Cancer	Diabetes & Endocrine Disorders	Digestive Disorders	Heart & Heart Surgery	Kidney Disorders	Neonatal Care	Neurology & Neurosurgery	Orthopedics	Respiratory Disorders	Urology
Pediatric anesthesiologist	●	●	●	●	●	●	●	●	●	●
Pediatric cardiothoracic surgeon				●		●			●	
Pediatric critical care specialist	●	●	●	●	●	●	●	●	●	●
Pediatric gastroenterology surgeon	●		●			●				
Pediatric head and neck surgeon	●	●				●				
Pediatric neurosurgeon	●	●				●	●	●		
Pediatric ophthalmology surgeon	●					●				
Pediatric orthopedic surgeon	●					●		●		
Pediatric radiologist specializing in diagnostic radiology	●	●	●	●	●	●	●	●	●	●
Pediatric radiologist specializing in interventional radiology	●	●	●	●	●	●	●	●	●	●
Pediatric rheumatologist								●		
Pediatric urology surgeon	●					●				●
Total Elements	10	6	5	5	4	11	5	7	5	5

B. Specialty-Specific Structural Measures

These measures reflect the extent of care expected from a comprehensive pediatric specialty program. The specific measures used in each specialty are described below.

Cancer

Palliative Care

Hospitals received one point for offering a qualifying palliative care program. A qualifying program is organized and staffed for children nearing the end of life or living with conditions that limit lifespan or quality of life. Its purpose is to minimize pain and discomfort, provide emotional and spiritual support for children and their families, assist with financial guidance and social services, and support decision making. A program must include at least one physician providing direct patient care; a nurse coordinator; and either a social worker, certified child life specialist, or pastoral counselor. All program staff must have training in palliative care. A hospital received one additional point if a pediatric palliative care program was specifically organized for cancer patients.

FACT Accreditation

Accreditation indicates that as of March 1, 2009, a hospital met standards set by FACT for transplantation of cells for treatment of pediatric cancer, an indication of a high degree of care in handling and using cellular tissue. Programs can be certified as an adult or as a pediatric service provider and as offering two types of transplant services: autologous and allogeneic. For the Cancer specialty, a hospital was awarded one point if it was accredited as a pediatric service provider for allogeneic transplants as of March 1, 2009. Currently accredited FACT facilities are listed at www.factwebsite.org/FacilitySearch.aspx?SearchType=FACT.

*Participation in Cancer Research****

Hospitals received one point for participating in one or more cancer research networks such as the Children's Oncology Group, National Cancer Institute Phase 1/Pilot Consortium, or another cancer-related organized clinical research network. These networks advance the understanding and ability of hospitals to diagnose and treat patients with cancer.

***Measure was used in ranking calculations but is not displayed in the magazine in print or online.

Hospitals received up to four additional points for engaging in investigator-initiated phase I and II clinical trials (translational research) in leukemia, brain tumors, sarcomas, or neuroblastomas. Participation in these types of clinical trials both advances the ability of the field to treat cancer and enhances patient care by offering new or novel treatment options.

Bone Marrow Transplant (BMT) Services***

Hospitals received up to four points for offering various BMT programs. These programs are critical in treating a variety of cancers. Hospitals received one point for each of the following: cord blood cell transplantation, autologous stem cell transplantation, allogeneic (unrelated donor) transplantation, and allogeneic (related donor) transplantation.

Transplant Center***

Hospitals received one point for recognition as a transplant center by the National Marrow Donor Program, the organization that facilitates matches of donors and patients for BMT procedures in the United States.

Diabetes & Endocrine Disorders

Specialized Clinics and Programs

Hospitals received up to four points for specialized treatment programs for endocrine patients, one point for each of the following: lipid disorders, hypertension, comprehensive weight management, and Turner syndrome.

Congenital Hypothyroid Management Index***

Hospitals received up to two points for successfully managing thyroid levels of hypothyroid patients. Hospitals that had 1 to 74 percent of their established primary hypothyroid patients maintain thyroid stimulating hormone (TSH) measurements between 0.5 and 4.0 mcIU/ml received one point. Hospitals that had 75 percent or more of their patients maintain TSH measurements between 0.5 and 4.0 mcIU/ml received two points.

*** Measure was used in ranking calculations but is not displayed in the magazine in print or online.

*Daily Blood Glucose Measurements****

Hospitals received up to two points based on the percentage of diabetes patients for whom at least 2 weeks of daily blood glucose measurements were available for review at outpatient followup. Hospitals were awarded one point if 70 to 89 percent of patients had 2 weeks' of measurements available and two points if 90 percent or more of patients had measurements available.

*Diabetes Patient Clinic Visits****

Hospitals received up to 10 points based on the percentage of diabetes patients who had at least four outpatient clinic visits each year. This measure is based on the standard treatment recommendations of the American Diabetes Association. **Table 7** shows how points were awarded.

Table 7. Points for Patient Clinic Visits

Percentage of Patients Attending at Least 4 Outpatient Clinic Visits Each Year	Points Awarded
90% or more	10
80%–89%	9
70%–79%	8
60%–69%	7
50%–59%	6
40%–49%	5
30%–39%	4
20%–29%	3
10%–19%	2
Less than 10%	1

*Insulin Therapy Treatment Options****

Hospitals received up to six points for providing certain treatment options for patients in their pediatric diabetes program. One point was awarded for each of the following: insulin pump, insulin pump plus basal insulin injection, basal insulin injection with rapid-acting insulin analog, neutral protamine hegedorn–based insulin, premixed insulin, and pramlintide therapy with any of the above.

*** Measure was used in ranking calculations but is not displayed in print or online.

*Primary Hypothyroid Management Index****

Hospitals received up to two points for demonstrating effective management of newborn congenital hypothyroid patients. Hospitals that began thyroid hormone therapy before 21 days on 1 to 74 percent of their congenital hypothyroidism patients received one point. Hospitals that began therapy before 21 days for 75 percent or more of their patients received two points.

Digestive Disorders

*Gastrointestinal (GI) Procedures****

Hospitals received up to five points for providing various GI diagnostic and treatment procedures. To receive credit, a hospital had to indicate that it offered the procedure and that at least one patient had been seen in the past calendar year. One point was granted for each of the following procedures: capsule endoscopy, endoscopic band ligation, esophageal impedance monitoring, endoscopic retrograde cholangiopancreatography, and antroduodenal and full colonic motility studies.

*Gastrointestinal Research Participation****

Hospitals received one point for participating in clinical research activities such as clinical trials or other translational research activities. Participation advances the ability of the field to treat GI conditions, as well as enhancing patient care by offering new or novel treatment options at centers participating in this type of research.

*Interdisciplinary Programs****

Hospitals received up to six points for offering various interdisciplinary treatment programs for GI disorders. To receive credit, a hospital had to have an organized program and had to have seen at least one patient in the past calendar year. One point was awarded for each of the following programs: intestinal rehabilitation, cystic fibrosis treatment, TPN, pediatric intensive feeding, multidisciplinary childhood obesity management, inflammatory bowel disease.

*** Measure was used in ranking calculations but is not displayed in print or online.

Heart & Heart Surgery

Adult Congenital Heart Program***

Hospitals received one point for providing an organized adult congenital heart program. Hospitals could receive one additional point if the program was an approved program of the Adult Congenital Heart Disease Association. These programs are often provided by pediatric heart centers, which often have the most expertise in inherited or congenital heart disorders.

Catheter Procedures***

Hospitals received one point for each of the following catheter procedures offered to at least one patient in the past calendar year: balloon angioplasty, stent implantation, transcatheter occlusion of cardiac shunts, transcatheter ablations for atrial tachycardias, supraventricular tachycardia, and ventricular tachycardia.

Congenital Heart Surgery Program***

Hospitals received up to two points: one point for providing two or more congenital heart surgeons and one additional point if at least one surgeon performed 100 or more congenital heart procedures in the last calendar year.

ECMO Services***

Extracorporeal membrane oxygenation (ECMO) technology involves a pump that circulates blood through an artificial lung back into the bloodstream of a very ill neonate, essentially providing heart-lung bypass support outside the body. A hospital received one point if an ECMO program was available 24 hours a day and one additional point if designated a Center for Excellence by the Extracorporeal Life Support Organization (ELSO).

Heart Transplant Program***

Hospitals received one point each for a heart transplant or heart-lung transplant program listed with UNOS. In addition, hospitals that had 10 to 19 heart or heart-lung transplant patients in the past year received one additional point, and those having 20 or more patients received two additional points.

*** Measure was used in ranking calculations but is not displayed in print or online.

*Research Network Participation****

Hospitals received one point for participation in one and two points for participation in more than one externally audited, national quality improvement research network such as the Society of Thoracic Surgeons Congenital Cardiac Surgery Database, Child Health Corporation of America Collaborative, Congenital Heart Surgeons Society database, or Pediatric Heart Research Network. These networks advance both the understanding and ability of hospitals to diagnose and treat medical and surgical cardiac patients.

*Surgical Infection Prevention Index****

Hospitals received one point for monitoring compliance with preoperative antibiotic prophylaxis (i.e., administration of antibiotics to ward off infection prior to surgery) timing for cardiothoracic surgeries. Hospitals could also receive one point for reporting a rate of compliance with prophylaxis timing of 90 percent or more.

Kidney Disorders

No additional specialty-specific measures were included for Kidney Disorders.

Neonatal Care

Specialized Clinics and Programs

Hospitals received up to five points for providing specialized treatment teams/clinics to deal with particularly challenging conditions. To receive credit for the program, hospitals must indicate that they offer the team and that they have seen at least one patient in the past calendar year. Hospitals received one point for each of the following: craniofacial team, spina bifida team, comprehensive retinopathy of prematurity program, ECMO team, and NICU-dedicated percutaneous intravenous central catheter team.

CDC Infection Control

Hospitals in the NHSN program voluntarily measure and report BSI rates to reduce the risk of hospital-acquired infections. Hospitals received up to four points for participation and for following best practices in calculating BSI rates—such as including “clinical sepsis” in the numerator (e.g., as an infection) when calculating central line-associated bloodstream infection

*** Measure was used in ranking calculations but is not displayed in print or online.

(CLABSI) rates, and reporting stratified CLABSI rates in accordance with NHSN guidelines^{†††} for birth weight category and device type (central versus umbilical).

ECMO Services^{***}

A hospital received one point if an ECMO program was available 24 hours a day. ECMO technology involves a pump that circulates blood through an artificial lung back into the bloodstream of a very ill neonate, essentially providing heart-lung bypass support outside the child's body. Hospitals received an additional point for designation as a Center for Excellence by ELSO.

NICU Research Network Participation^{***}

Hospitals received up to four points for participation in externally audited, national NICU treatment and quality-improvement research networks such as the National Institute of Child Health and Human Development Neonatal Research Network, the Vermont Oxford Network, or the ELSO data exchange network/registry. These networks advance both the understanding and ability of hospitals to diagnose and treat NICU patients.

Neurology & Neurosurgery

Surgical Infection Prevention

Hospitals received one point for monitoring their compliance with preoperative antibiotic prophylaxis protocols (i.e., administration of antibiotics to ward off infection prior to surgery) timing for ventricular shunt surgeries. Hospitals could receive one additional point for reporting 90 percent or better compliance with prophylaxis timing protocols.

Hospitals received one point for monitoring surgical site infections (i.e., infections that occur following surgery due to exposure to a pathogen) for neurological shunt surgeries. Hospitals could receive one additional point for reporting a total of 5% or fewer infections in patients following neurological shunt surgeries in the last calendar year.

For display purposes, scores were adjusted to a range of 1-5 rather than 0-4, with more points indicating better performance.

^{†††} For the most recent definitions on healthcare infection reporting, see <http://www.cdc.gov/ncidod/dhqp/pdf/NNIS/NosInfDefinitions.pdf>.

^{***} Variable was used in ranking calculations but is not displayed in print or online.

Specialized Clinics and Programs

Hospitals received up to nine points for access to specialized treatment clinics or programs for pediatric neurological disorders. To receive credit, a hospital had to have an organized program and had to have seen at least one patient in the past calendar year. One point was awarded for each of the following clinics: movement disorders, neurofibromatosis, neuromuscular, and tuberous sclerosis. One point was awarded for each of the following programs: brain tumor, cerebrovascular accident (stroke), craniofacial surgical, neuron-oncology, and spina bifida.

*Clinical Research Consortium Participation****

Hospitals received one point for belonging to a national Phase 1 neuro-oncology clinical research consortium. Participation in such consortiums advances the ability of the field to treat neurological cancers and enhances patient care through new or novel treatment options.

*Epilepsy Treatment Services****

Hospitals received one point for offering a pediatric epilepsy treatment center. Hospitals could receive up to four additional points for offering the following services within the center: neurosurgical epilepsy treatment, psychologists specializing in neuropsychological testing, an American Academy of Sleep Medicine–accredited sleep laboratory, and Level 3 or 4 certification from the National Association of Epilepsy Centers.

Orthopedics

Specialized Clinics and Programs

Hospitals received up to seven points for providing specialized treatment clinics or programs to treat significant conditions. To receive credit, a hospital had to indicate that a program or clinic had been utilized by at least one patient in the past calendar year. Hospitals received one point for offering each of the following clinics or programs: spina bifida, spasticity, skeletal dysplasia, brachial plexus, neurofibromatosis, muscular dystrophy, and pain.

*** Measure was used in ranking calculations but is not displayed in print or online.

Surgical Infection Prevention

Hospitals received one point for monitoring compliance with preoperative antibiotic prophylaxis (i.e., administration of antibiotics to ward off infection prior to surgery) timing for spinal fusion surgeries. Hospitals also received one additional point for reporting a rate of compliance with prophylaxis timing greater than or equal to 90 percent.

*POSNA Membership****

Hospitals received one point for having one or more clinicians who are active members of the Pediatric Orthopedic Society of America (POSNA), which promotes research and practice in pediatric orthopedics to advance quality of care.

Respiratory Disorders

Specialized Clinics and Programs

Hospitals received up to seven points for providing specialized treatment clinics or teams to treat significant respiratory conditions in the last year. To receive credit, a hospital had to indicate that at least one patient had utilized the service in the past calendar year. Hospitals received one point for each of the following: multidisciplinary neuromuscular disease team, multidisciplinary ventilator/tracheostomy-dependent team, congenital central hypoventilation team, pulmonary hypertension program, noninvasive ventilation program, sickle cell anemia pulmonary support team, and multidisciplinary asthma center.

*ECMO Services****

ECMO technology involves a pump that circulates blood through an artificial lung back into the bloodstream of a very ill neonate, essentially providing heart-lung bypass support outside the body. A hospital received one point if an ECMO program was available 24 hours a day. Hospitals received one additional point for being designated as a Center for Excellence by the ELSO.

*Research Network Participation****

Hospitals received up to three points for participating in externally audited, national respiratory quality-improvement and research networks such as the Cystic Fibrosis Foundation

*** Measure was used in ranking calculations but is not displayed in the magazine in print or online.

Therapeutics Development Network, National Institutes of Health Asthma Clinical Research Network, or another pulmonary-related organized clinical research network. These networks advance the ability to diagnose and treat pediatric respiratory patients.

*UNOS Lung Transplant Program****

Hospitals received one point for offering a lung transplant program recognized by UNOS and one additional point for providing one or more lung transplants in the past 2 years.

Urology

Laparoscopic Surgery

Hospitals received one point if they had the ability to conduct laparoscopic urology surgical procedures. To receive credit, a hospital had to indicate that at least one patient had received such a procedure in the past calendar year.

Specialized Clinics and Programs

Hospitals received up to four points for specialized treatment clinics or programs to treat significant urological conditions. To receive credit, a hospital had to indicate that at least one patient had been seen by a service in the past calendar year. Hospitals received one point for offering specialized treatment clinics including spina bifida, voiding dysfunction, comprehensive stone program, and prenatal intervention clinic.

C. Trimming, Imputation, Standardization, and Weighting

Trimming

Distributions for volume, and the nursing index were transformed using inverse logit transformation. This process was initially introduced to the adult specialty rankings in 2006. The function $\exp(x) / \{1 + [\exp(x)]\}$ is used to transform the variables before standardization. This technique is sensitive to the number of outliers and produces a truer distribution by reducing the effect of extreme outliers.

*** Measure was used in ranking calculations but is not displayed in the magazine in print or online.

Standardization and Weighting

Standardization was performed on the structural measures to ensure that the data were distributed normally with a mean of zero. This step was necessary to prepare the data for factor analysis, restoring balance so that trimmed and untrimmed measures had the same influence on the final score.

To combine the structural variables from the Survey of Pediatric Hospitals and external databases, the elements were weighted to create a composite measure. Using factor analysis, we reduced the number of variables to force a one-factor solution. Factor analysis is a statistical technique used to identify underlying similarities among the structural variables. More simply, variables that are strongly associated with one another receive lower factor loadings than those that have a unique distribution. The factor loading for each measure was divided by the total of the factor loadings to derive a weight. Each measure's weight was applied to reduce the effect of multiple variables that, because of their strong association, may measure the same concept.

IV. Outcomes

Patient outcomes from hospital care can be measured in a variety of ways. For the adult specialty rankings in “America’s Best Hospitals,” we use risk-adjusted mortality 30 days after admission as an outcome measure of the quality of hospital care. Other measures now used by healthcare researchers as quality indicators^{***} include readmissions following surgical or hospital discharge, patient functional status (or improvement), infection rates, and medical complications.

Because of the absence of comprehensive national sources of pediatric outcomes data equivalent to the MedPAR data used in the adult rankings, outcomes-related data were obtained directly from pediatric hospitals through the Survey of Pediatric Hospitals. Such data included bloodstream infection rates, transplant survival rates, mitigation of adverse events, and surgical outcomes. Other outcomes measures will be added over time to address the need for relevant outcomes and provide a more complete picture of pediatric hospital care. Measures for the 2009 rankings were developed from recommendations by expert advisory panels, as previously

^{***} For more information on hospital quality measures and updates on national quality of hospital care initiatives, please see reports from the Agency for Healthcare Research and Quality (AHRQ) at <http://www.qualitymeasures.ahrq.gov/> and the Joint Commission at <http://www.jointcommission.org/PerformanceMeasurement/PerformanceMeasurement/Current+NHQM+Manual.htm>.

described. Details on the specific outcomes measures, how they were calculated, and how they were scored are provided below.

A. Outcomes Measures

Table 8 indicates the outcome measures used in each specialty. Outcomes were used in all specialties except for Cancer. Both the expert advisory panels and the field have yet to reach a consensus on what appropriate outcomes of cancer care are in pediatrics since the standards of care are focused on protocol based treatment rather than outcomes. We believe that appropriate outcomes can and will be identified as some point in the future and will continue to push for their use in the rankings in the future years.

Table 8. Outcomes Measures by Specialty

Outcomes Measures	Cancer	Diabetes & Endocrine Disorders	Digestive Disorders	Heart & Heart Surgery	Kidney Disorders	Neonatal Care	Neurology & Neurosurgery	Orthopedics	Respiratory Disorders	Urology
Bloodstream infection index		●	●	●	●	●	●	●	●	●
Cystic fibrosis outcomes									●	
Diabetes-management index		●								
Hypoplastic left heart syndrome outcomes				●						
Surgical-mortality index				●			●			
Transplant survival index			●	●	●				●	
Total Elements	0	2	2	4	2	1	2	1	2	1

● Indicates a measure included in the index for that specialty.

Bloodstream Infection Index

Bloodstream infections are considered a good benchmark of patient safety and outcome in healthcare, because the rate of such infections should be minimal in hospital-based care. The rate is calculated as the number of bloodstream infections that occurred per 1,000 central-line days in the intensive care unit during the previous 12 months. For Neonatal care, the rate was

calculated for the NICU. For all other specialties, the index was calculated for all other pediatric ICU units and used as a hospital-wide measure. Bloodstream infections are not yet considered a relevant benchmark in Cancer because of the high rate of infections caused by immunocompromising treatments such as radiation and chemotherapy. Hospitals received up to three points, with more points for lower bloodstream infection rates. For display, points are then reversed so that lower values indicate better performance (i.e., fewer blood stream infections).

Cystic Fibrosis Outcomes

This measure represents success in improving the functional status of cystic fibrosis patients. It includes a composite of median body mass index and forced expiratory volume for pediatric cystic fibrosis patients treated at hospital-based respiratory programs in the last year. Higher scores indicate better outcomes (or better functional status) for patients.

Diabetes Management Index

This measure evaluates a number of adverse outcomes in patients with Type 1 diabetes that can result from lapses in care. Such events included diabetes-related mortality, serious diabetes-related morbidity, and one or more inpatient admissions for diabetes-related reasons. Hospitals received up to three points, with more points for lower levels of adverse events.

Hypoplastic Left Heart Syndrome Outcomes***

Hospitals received up to three points based on mortality of hypoplastic left heart syndrome patients who had the Norwood procedure. Hospitals received up to three additional points based on mortality of hypoplastic left heart syndrome patients who had the Hybrid Stage 1 procedure. More points were awarded for ratios approaching zero (i.e., fewer deaths following surgery).

Surgical Mortality Index

Heart & Heart Surgery

This measure represents the rate of patient deaths following moderately complex to very difficult heart surgery procedures (RACHS-1^{§§§} categories 3 to 6) at pediatric hospitals in the

*** Variable was used in ranking calculations but is not displayed in the magazine in print or online.

§§§ For more information on classifying cardiac surgical procedures into RACHS-1 categories, see <http://jtcs.ctsnetjournals.org/cgi/content/abstract/123/1/110>.

last year. To receive points, a hospital had to perform at least one RACHS-1 category 5 or 6 procedure. For each RACHS-1 category (3, 4, and 5 and 6 combined), a weighted aggregate mortality rate (i.e., the number of deaths divided by the total number of patients) was computed. Finally, the number of deaths was divided by the product of the number of patients in each RACHS-1 category and the aggregate mortality ratio for each RACHS-1 category. Lower numbers indicate a lower rate of death following surgery.

Neurology and Neurosurgery

Hospitals received up to 10 points for surgical mortality rates for a variety of significant neurological disorders, including benign and malignant brain tumors, medically intractable epilepsy, implantation of intracranial pressure monitors for head trauma, and intracranial procedures for head trauma. Lower numbers indicate a lower rate of death following surgery.

Transplant Survival Index

*Heart Transplant Survival Index****

In the Heart & Heart Surgery specialty, hospitals received up to two points for having higher 3-year survival rates for patients who received heart transplants from the pediatric heart transplant program.

Kidney Transplant Survival Index

In the Kidney Disorders specialty, hospitals received up to eight points for higher 3-year survival rates for tissue grafts and for patients who received kidney transplants from the pediatric kidney transplant program. A total of four sets of rates worth up to two points each were included measuring graft survival (deceased-donor), graft survival (living-donor), patient survival (deceased-donor), and patient survival (living-donor).

*Liver Transplant Survival Index****

In the Digestive Disorders specialty, hospitals received up to two points for having higher 3-year survival rates for patients who received liver transplants from the pediatric liver transplant program.

*** Measure was used in ranking calculations but is not displayed in print or online.

Lung Transplant Survival Index

In the Respiratory Disorders specialty, hospitals received up to two points for having higher 3-year survival rates for patients who received lung transplants from the pediatric lung transplant program.

B. Scoring

Scoring for outcomes measures was based on the distribution of the data. Cutoff points and scoring were established based on scores that differentiated among hospitals. A description for each measure appears in *Table 9*, along with scoring rules used to assign points to hospitals for these outcomes.

Table 9. Outcomes Measures and Scoring Rules

Measure	Description	Scoring Rules
Bloodstream-infection index	Bloodstream infections per 1,000 central-line days in PICU	Score equals <ul style="list-style-type: none"> • 1 if 5 or more infections per 1,000 central-line days • 2 if 3-4 infections per 1,000 central-line days • 3 if 0-2 infections per 1,000 central-line days For display, points are reversed so that lower values are better
Bloodstream-infection index (Neonatal Care)	Bloodstream infections per 1,000 central-line days in NICU	Score equals <ul style="list-style-type: none"> • 1 if 6 or more infections per 1,000 central-line days • 2 if 3-5 infections per 1,000 central-line days • 3 if 0-2 infections per 1,000 central-line days For display, points are reversed so that lower values are better
Cystic fibrosis outcomes	Score represents a composite of points awarded for median body mass index (BMI) and forced expiratory volume (FEV1) for all pediatric cystic fibrosis patients ages 6-17	Median BMI equals <ul style="list-style-type: none"> • 0 if <40 • 1 if ≤ 40 and <50 • 2 if ≤ 50 Median FEV1 (ages 6-12) equals <ul style="list-style-type: none"> • 0 if <90 • 1 if ≥ 90 and <100 • 2 if ≥ 100 Median FEV1 (ages 13-17) equals <ul style="list-style-type: none"> • 0 if <80 • 1 if ≥ 80 and <90 • 2 if ≥ 90 Median FEV1 (ages 18+) equals <ul style="list-style-type: none"> • 0 if <80 • 1 if ≥ 80 and <90

Measure	Description	Scoring Rules
		2 if ≥ 90 Points are added for each measure so that 6 is best (range 0-6)
Diabetes-management index	Percentage of adverse diabetes-related events	Score equals <ul style="list-style-type: none"> 1 if more than 10% of patients had adverse events 2 if 5-10% of patients had adverse events 3 if less than 5% of patients had adverse events
Hypoplastic left heart syndrome outcomes	Percentage of inpatients surviving Hybrid Stage 1 procedure for hypoplastic left heart syndrome	Score equals <ul style="list-style-type: none"> 1 if inpatient mortality $\geq 30\%$ 2 if inpatient mortality $\geq 10\%$ and $< 30\%$ 3 if inpatient mortality $< 10\%$
	Percentage of inpatients survival Norwood Stage 1 procedure	Score equals <ul style="list-style-type: none"> 1 if inpatient mortality $\geq 30\%$ 2 if inpatient mortality $\geq 10\%$ and $< 30\%$ 3 if inpatient mortality $< 10\%$
Surgical-mortality index (Neurology & Neurosurgery)	Percentage of inpatient deaths from benign brain tumors	Score equals <ul style="list-style-type: none"> 1 if inpatient mortality $> 5\%$ and $\leq 10\%$ 2 if inpatient mortality $\leq 5\%$ For display, points are reversed so that lower values are better
	Percentage of inpatient deaths from malignant brain tumors	Score equals <ul style="list-style-type: none"> 1 if inpatient mortality $> 5\%$ and $\leq 10\%$ 2 if inpatient mortality $\leq 5\%$ For display, points are reversed so that lower values are better
	Percentage of inpatient deaths from implantation of ICP monitors for head trauma	Score equals <ul style="list-style-type: none"> 1 if inpatient mortality $> 5\%$ and $\leq 10\%$ 2 if inpatient mortality $\leq 5\%$ For display, points are reversed so that lower values are better
	Percentage of inpatient deaths from medically intractable epilepsy	Score equals <ul style="list-style-type: none"> 1 if inpatient mortality $> 5\%$ and $\leq 10\%$ 2 if inpatient mortality $\leq 5\%$ For display, points are reversed so that lower values are better
	Percentage of inpatient deaths from intracranial procedures for head trauma	Score equals <ul style="list-style-type: none"> 1 if inpatient mortality $> 5\%$ and $\leq 10\%$ 2 if inpatient mortality $\leq 5\%$ For display, points are reversed so that lower values are better

(continued)

Table 9. Outcomes Measures and Scoring Rules (continued)

Measure	Description	Scoring Rules
Surgical-mortality index (Heart & Heart Surgery)	Ratio of pediatric deaths to the number of RACHS-1 category 3-6 surgical procedures	Score equals <ul style="list-style-type: none"> • 1 if adjusted mortality rate ≥ 1.5 • 2 if adjusted mortality rate ≥ 0.5 and < 1.5 • 3 if adjusted mortality rate < 0.5 For display, points are reversed so that lower values are better
Lung transplant survival index	3-year liver transplant survival rate	Score equals <ul style="list-style-type: none"> • 1 if survival $< 70\%$ • 2 if survival $\geq 70\%$ and $< 80\%$ • 3 if survival is $\geq 90\%$
Liver transplant survival index	3-year liver transplant survival rate	Score equals <ul style="list-style-type: none"> • 1 if survival $\geq 80\%$ and $< 90\%$ • 2 if survival is $\geq 90\%$
Heart transplant survival index	3-year heart transplant survival rate	Score equals <ul style="list-style-type: none"> • 1 if survival $\geq 70\%$ and $< 80\%$ • 2 if survival is $\geq 80\%$
Kidney transplant survival index	3-year graft survival rate for deceased-donor kidney transplant	Score equals <ul style="list-style-type: none"> • 1 if survival $\geq 70\%$ and $< 80\%$ • 2 if survival is $\geq 80\%$
	3-year graft survival rate for living-donor kidney transplant	Score equals <ul style="list-style-type: none"> • 1 if survival $\geq 70\%$ and $< 80\%$ • 2 if survival is $\geq 80\%$
	3-year patient survival rate for deceased-donor kidney transplant	Score equals <ul style="list-style-type: none"> • 1 if survival $\geq 80\%$ and $< 90\%$ • 2 if survival is $\geq 90\%$
	3-year patient survival rate for living-donor kidney transplant	Score equals <ul style="list-style-type: none"> • 1 if survival $\geq 80\%$ and $< 90\%$ • 2 if survival is $\geq 90\%$

V. Process

The process component is represented by a hospital's reputation, which can be viewed as a form of peer review of the hospital's capability across a wide variety of processes related to quality of care. For the six specialties carried over from the 2008 pediatric rankings, reputational scores were based on responses to the 2008 and 2009 physician surveys. For the four pediatric specialties introduced in 2009 (Diabetes & Endocrine Disorders, Kidney Disorders, Orthopedics, and Urology), reputational scores were based on responses only to the 2009 physician survey. In the future, scores in all specialties will be based on the most recent 3 years of responses.

The 2009 survey sample consisted of 1,500 board-certified pediatricians selected from the American Board of Medical Specialties (ABMS). Stratifying by census region (http://www.census.gov/geo/www/us_regdiv.pdf) and by specialty within region, we selected a probability (i.e., random) sample of 150 pediatricians for each of the 10 specialty areas. The final sample included federal and nonfederal medical and osteopathic physicians in the United States.

A. Eligibility Requirements

To define a probability sample of physicians who properly represented the 10 specialty groupings, we used (1) a mapping between the 10 *U.S. News* specialties and the 23 ABMS member boards and (2) a mapping between the ABMS specialty and specialty boards. For two subspecialties that were not available from the ABMS, physicians were selected from the American Medical Association Masterfile. Physicians who designated a primary specialty in one of the areas listed were eligible for the survey. **Table 10** displays the association among the specialty listed in “America’s Best Children’s Hospitals” and the corresponding member board. The sample for the 10 pediatric specialty areas included physicians with board certification in the specialty boards listed in **Table 10**.

Table 10. Physician Sample Mapping

America’s Best Hospitals Specialty	American Board of	Subspecialties
Cancer	Pediatrics	Pediatric Hematology-Oncology
Digestive Disorders	Pediatrics	Pediatric Gastroenterology
		Pediatric Transplant Hepatology
Diabetes & Endocrine Disorders	Pediatrics	Pediatric Endocrinology
Heart & Heart Surgery	Pediatrics	Pediatric Cardiology
	Thoracic Surgery	Pediatric Cardiothoracic Surgeons*
Kidney Disorders	Pediatrics	Pediatric Nephrology
Neonatal Care	Pediatrics	Neonatal-Perinatal Medicine
Neurology & Neurosurgery	Pediatrics	Neuro-developmental Disabilities
		Sleep Medicine
	Psychiatry and Neurology	Child Neurology
	Pediatric Neurological Surgery	Pediatric Neurological Surgery
Orthopedics	Orthopedics	Pediatric Orthopedics*
Respiratory Disorders	Pediatrics	Pediatric Pulmonary
Urology	Pediatrics	Pediatric Urology
	Urology	Urology

*These specialists were selected from the American Medical Association Masterfile as self-designated specialists.

B. Survey Procedure

Materials

For 2008 and 2009, sampled physicians in each specialty were mailed a one-page, single-sided questionnaire containing a single nomination element. Respondents were asked to select as many as five hospitals in their specialty that provide the best care to patients with serious conditions, regardless of location or expense (see *Appendices B* and *C*). Along with the questionnaire, physicians were sent a cover letter, a business reply envelope, and a \$2 bill (a token incentive used since the first set of Best Hospitals rankings in 1990).

Mailings

The physician survey mailings were conducted in stages over several weeks at the beginning of 2009. The initial mailing was sent via U.S. Postal Service (USPS) First Class metered mail. Two weeks after the initial survey mailing, a replacement survey and new cover letter were sent to the sampled physicians. Two weeks following the reminders, we sent a USPS Priority mailing to nonresponders, along with another copy of the questionnaire, a new cover letter, and a business reply envelope. Two weeks after the second survey was sent, a third survey mailing was sent either by USPS Priority or overnight via Federal Express to the remaining nonresponders; the packet included the questionnaire, a cover letter, and a business reply envelope. (See *Table 11* for a simplified schedule of the physician survey mailing.)

Table 11. Physician Survey Mailing Schedule

Materials Mailed	Sent via	Sent to	Date
1st copy of physician survey	USPS, First Class mail	Full physician sample	January 6, 2009
2nd copy of physician survey	USPS, First Class mail	Sample members who did not respond	January 20, 2009
3rd copy of physician survey	USPS, Priority mail	Sample members who did not respond	February 3, 2009
4th copy of physician survey	USPS, Priority mail, or Federal Express	Sample members who did not respond	February 17, 2009

Response Rates

Of the 1,500 physicians sampled for this year's report, 100 were deemed ineligible after determining that they were no longer actively practicing. Of the remaining 1,400 physicians,

more than half (812) returned the completed questionnaire by the deadline of March 31, 2009. The final response rate was 58.0 percent, using American Association for Public Opinion Research standard response rate 6 (standard definitions are located on the Web at http://www.aapor.org/uploads/Standard_Definitions_07_08_Final.pdf), which treats undeliverables as ineligible cases.

Table 12 shows the response rate for 2009 by region and specialty.

Table 12. Response Rates, by Region and Specialty, 2009

Specialty	Midwest	Northeast	South	West	Total
	%	%	%	%	%
Cancer	60.6	58.3	59.5	56.8	58.7
Diabetes & Endocrine Disorders	74.2	50.0	45.9	46.9	53.7
Digestive Disorders	63.6	59.4	54.5	72.7	62.7
Heart & Heart Surgery	72.2	70.6	68.8	68.6	70.1
Kidney Disorders	50.7	52.7	41.2	41.7	46.7
Neonatal Care	58.3	55.6	41.7	58.3	53.5
Neurology & Neurosurgery	56.8	73.5	54.3	75.0	64.8
Orthopedics	60.0	51.5	75.7	66.7	63.8
Respiratory Disorders	59.5	66.7	59.4	54.5	60.1
Urology	50.7	52.7	41.2	41.7	46.7
Total	60.5	59.0	54.2	58.4	58.0

C. Survey Response Weighting

The physician survey was stratified by specialty and census region (Midwest, Northeast, South, and West). Weights were constructed and applied to each physician's survey response to make nominations representative at the national level. Weights were based on probability of selection within each unique specialty-region combination, adjusting to account for nonresponders.

VI. U.S. News Score

In calculating the *U.S. News* ranking scores, the structural measure received 40 percent of the weight in all specialties. For specialties where outcome measures were available, the process measure received 50 percent and the outcome measures received 10 percent of the weight. For the one specialty where outcome measures were not available (Cancer), process received 60 percent of the weight. **Table 13** shows component weighting by specialty.

Table 13. Percentage of Total Weight by Specialty

Specialty	Structure	Process	Outcomes
Cancer	40%	60%	0%
Diabetes & Endocrine Disorders	40%	50%	10%
Digestive Disorders	40%	50%	10%
Heart & Heart Surgery	40%	50%	10%
Kidney Disorders	40%	50%	10%
Neonatal Care	40%	50%	10%
Neurology & Neurosurgery	40%	50%	10%
Orthopedics	40%	50%	10%
Respiratory Disorders	40%	50%	10%
Urology	40%	50%	10%

Although each measure represents a specific aspect of quality, a single score provides a result that is easy to use and understand and that portrays overall quality more accurately than would any one of the three elements individually. The rankings for the top 30 hospitals in each of the pediatric specialties by *U.S. News* score are shown in **Appendix D**.

The formula for calculating the *U.S. News* score is in Equation (1). The score can be thought of as a simple weighted sum of structural, process, and outcome measures. Please note that this formula is meant for illustrative purposes only. It *cannot* be used to directly calculate a score for an individual hospital. Standardized data values were adjusted based on the distribution of measures across the eligible universe, which consisted of many more than 30 hospitals.

$$(1) \text{ Score} = \left\{ \begin{aligned} &w_s \times \left(\sum_1^{n_s} F + \sum_1^{n_o} F \right) \times \left[(S_1 \times F_{1_s}) + (S_2 \times F_{2_s}) + \dots + (S_n \times F_{n_s}) \right] + w_p \times \left[P \times \left(\sum_1^{n_s} F + \sum_1^{n_o} F \right) \right] \\ &+ w_o \times \left(\sum_1^{n_s} F + \sum_1^{n_o} F \right) \times \left[(O_1 \times F_{1_o}) + (O_2 \times F_{2_o}) + \dots + (O_n \times F_{n_o}) \right] \end{aligned} \right\},$$

where

- Score* = *U.S. News* score for pediatrics,
- w_s = weight assigned to structure measures
- w_p = weight assigned to process measures
- w_o = weight assigned to outcomes measures
- S_n = standardized value for structural indicator n (STRUCTURE),
- F_{n_s} = factor loadings for structural indicator n_s ,
- F_{n_o} = factor loadings for outcomes indicator n_o ,
- P = standardized nomination score (PROCESS), and
- O_n = standardized value for mortality indicator n (OUTCOMES),

For presentation purposes, we transformed the raw *U.S. News* scores to a scale that assigns a score of 100 to the top hospital. The formula for the transformation is shown in Equation (2):

$$(2) \quad (\text{Raw } U.S. \text{ News score}_i - \text{minimum}_i) / \text{range}_i.$$

VII. Pediatric Honor Roll

This year, 56 different hospitals were ranked in at least one pediatric specialty. For the first time, we have established a pediatric Honor Roll to recognize excellence across a broad range of pediatric specialties. To be listed, a hospital must rank in the top 30 in all 10 pediatric specialties. Ranking in all pediatric specialties sets a threshold for excellence. For 2009, 10 hospitals qualified for listing. *Appendix E* lists the 2009 10 Honor Roll hospitals in alphabetical order.

VIII. Future Improvements

In the coming years, we plan to further refine the measures used in the current pediatric specialties and add new measures and specialties. Specifically, we anticipate the following improvements.

- **Develop additional outcome measures.** For example, we plan to explore alternatives for collecting additional mortality data, infection rates, patient functional measures, and complications rates.
- **Explore risk adjustment.** We will continue to investigate methods for risk-adjusting pediatric mortality data to better reflect hospital-to-hospital differences in patient mix, severity, and comorbidities.
- **Identify additional structural measures.** External certifications of hospital quality, excellence in specialty areas, and awards for high-quality care will be considered for incorporation in the rankings. Furthermore, additional technologies, teams, and practices that define high-quality pediatric services will be evaluated for possible inclusion.
- **Conduct more extensive field testing of the Survey of Pediatric Hospitals.** Testing will be designed to fine-tune the survey and reduce the response burden on participating hospitals.
- **Evaluate different weighting schemes.** As additional measures are included in the rankings, the weights used to calculate the final score will continue to be evaluated and revised to better reflect high-quality pediatric care.

The project team will continue to work with expert advisory panels of physicians, nurses, hospital quality experts, and other healthcare professionals who provide valuable recommendations and advice to the project.

IX. Contact Information

We welcome suggestions and questions. Readers and users of the rankings are encouraged to contact the Best Hospitals research team at BestHospitals@rti.org. This report and methodology reports for the adult rankings can be viewed or downloaded online in their entirety from the RTI International Web site at <http://www.rti.org/besthospitals>.

X. References

1. Donabedian A. "Evaluating the quality of medical care." *The Milbank Memorial Fund Quarterly*. 1966; 44:166–203.
2. Donabedian A. "Promoting quality through evaluating the process of patient care." *Medical Care*. 1968; 6:181.
3. Donabedian A. "The quality of care: How can it be assessed?" *Journal of the American Medical Association*. 1988; 260:1743–1748.
4. Donabedian A. "The seven pillars of quality." *Archives of Pathology and Laboratory Medicine*. 1990; 114:1115–1118.
5. Donabedian A. "The role of outcomes in quality assessment and assurance." *Quality Review Bulletin*. 1992; 18(11):356–360.
6. Child Health Corporation of America. *Nursing-sensitive indicators of children's hospital care quality* (A white paper of the Pediatric Data Quality Systems Collaborative). Washington, DC: Author; 2007.
7. National Center for Health Statistics. *The international classification of diseases, ninth revision, clinical modification (ICD-9-CM)*. Hyattsville, MD: National Center for Health Statistics. Available at <www.cdc.gov/nchs/about/otheract/icd9/abtcd9.htm>. Accessed on April 21, 2006.
8. Jenkins KJ, Gauvreau K, Newburger JW, Spray TL, Moller JH, & Iezzoni LI. Consensus-based method for risk adjustment for surgery for congenital heart disease. *Journal of Thoracic Cardiovascular Surgery*. 2002; 123:110–118.
9. Jenkins KJ. Risk adjustment for congenital heart surgery: The RACHS-1 method. *Seminar in Thoracic Cardiovascular Surgery Pediatric Cardiology Surgery Annual*. 2004; 7:180–184.

Appendix A
Glossary of Terms

Computer tomography (CT) enterography. CT enterography allows for visualization of the small bowel wall and lumen by combining a CT scan with large amounts of ingested contrast material.

Continuous EEG monitoring with pediatric neurology support. EEG is a technology for measuring electrical activity produced by the brain, as recorded from electrodes placed on the scalp. EEG monitoring provides the ability to collect the brain's electrical activity continuously to help detect and diagnose neurological problems.

Continuous EEG reading. EEG reading is done by a board-certified physician or psychologist trained in diagnosing disorders related to brain activity.

Cryoablation. This process uses cooled, thermally conductive gases and fluids circulated through hollow needles (cryoprobes) that are inserted adjacent to diseased tissue in order to kill the tissue.

Genetic testing/counseling. A genetic testing/counseling service is equipped with adequate laboratory facilities and is directed by a qualified physician to advise parents and prospective parents on potential problems in cases of genetic defects. A genetic test is the analysis of human DNA, RNA, chromosomes, proteins, and certain metabolites in order to detect heritable disease-related genotypes, mutations, phenotypes, or karyotypes for clinical purposes. Genetic tests can have diverse purposes, including the diagnosis of genetic diseases in newborns, children, and adults; the identification of future health risks; the prediction of drug responses; and the assessment of risks to future children.

Image-guided radiation therapy (IGRT). IGRT is an automated system that produces high-resolution x-ray images to pinpoint tumor sites, adjust patient positioning, and generally make treatment more effective and efficient.

Intensity-modulated radiation therapy (IMRT). IMRT is a three-dimensional radiation therapy that improves the targeting of treatment delivery in a way that is likely to decrease damage to normal tissues and allows for varying intensities.

Intraoperative magnetic resonance imaging (ioMRI). ioMRI uses a uniform magnetic field and radio frequencies to study tissue and structure of the body. It enables visualization of biochemical cellular activity in vivo without the use of ionizing radiation, radioisotopes, or ultrasound.

Magnetic resonance cholangiopancreatography (MRCP). MRCP is a noninvasive approach for imaging the biliary and pancreatic ducts using magnetic resonance imaging.

Magnetic resonance spectroscopy (MRS). MRS differs from MRI in that MRS uses a continuous band of radio wave frequencies to analyze the chemical composition of proton (hydrogen)-hydrogen based molecules in a variety of chemical compounds. This technology evaluates the chemical composition and integrity of functioning upper-motor neurons in the brain.

Meta-iodine-benzyl-guanidine with I-131 radionuclide (I-131 MIBG). I-131MIBG is a functional imaging agent used to help locate and diagnose tumors of adrenergic tissues, such as neuroblastoma and pheochromocytoma.

Molecular diagnostic/virology laboratory. This is a diagnostic laboratory that supports the NICU by conducting culture and tissue studies to determine the nature of biological and virological conditions.

MRI-compatible neonatal transporter. This is an MRI-compatible incubator system with integrated coils to support imaging that includes a trolley to facilitate safe intrahospital transport of neonates.

Multislice computed tomography (MSCT). This specialized CT procedure provides three-dimensional processing and allows for more and narrower sections, increasing spatial resolution and reducing scanning time as compared with a regular CT scan.

Multidisciplinary pediatric acute pain/sedation service (available onsite 24 hours a day). This service provides monitored anesthesia care and sedation within the hospital (but not within an operating room or PICU), as well as emergency airway management and acute and chronic pain management for neonates and pediatric patients on a 24-hour basis. A qualified program must have at least an identified medical director (e.g., general pediatrician, pediatric subspecialist, or anesthesiologist) with documented education in conscious sedation and an RN coordinator (or pain management clinical nurse specialist).

Neonatal intensive care unit (NICU). A NICU provides mechanical ventilation, neonatal surgery, and special care for the sickest infants, including those with the lowest birth weights (below 1,500 grams), who are born in the hospital or transferred from another institution. The NICU is separate from the newborn nursery. A full-time neonatologist serves as director.

Pediatric anesthesia program (available onsite 24 hours a day). This team provides anesthesia care for children before, during, and after surgery (or other medical procedures). The team provides 24-hour coverage by board-certified anesthesiologists who specialize in pediatric anesthesia.

Pediatric infectious disease program (available onsite 24 hours a day). This program provides consultation and treatment for children with severe illnesses that are infectious in origin. The team provides 24-hour coverage by physicians board-certified in pediatric infectious diseases.

Pediatric intensive care unit (PICU). A PICU is staffed with specially trained personnel and has monitoring and specialized support equipment for treating pediatric patients who, because of shock, trauma, or other life-threatening conditions, require intensified, comprehensive observation and care.

Pediatric pain management program (available onsite 24 hours a day). Administered by specially trained physicians and other clinicians, this is a recognized clinical service or program providing specialized medical care, drugs, or therapies for the management of acute or chronic pain and other distressing symptoms among children suffering from an acute illness of diverse causes.

PET/computed tomography scanning (PET/CT). PET/CT combines the capabilities of PET and CT scanning into a single integrated device, which provides both structural and metabolic functional information for monitoring chemotherapy, radiotherapy, and surgical planning.

Positron emission tomography (PET) scanning. PET scanning is a computerized nuclear medicine imaging technology that use a short-lived [radioactive](#) tracer to provide functional images of metabolic processes in patients to aid in the diagnosis and treatment of patients.

Radiofrequency ablation. This procedure involves placing probes that emit radiofrequency energy into the heart using a catheter. The radiofrequency energy is then used to destroy abnormal electrical activity in the heart tissue.

Rapid response team (available onsite 24 hours a day). A rapid response team, also known as a medical emergency team, is distinct from the hospital “code” team. The team of appropriately trained individuals is available 24 hours a day and has three essential characteristics: (1) The team creates tools and provides staff education for recognizing an acute deterioration in patient condition. (2) The team follows the SBAR method (for situation, background, assessment, recommendation) to communicate such a change in condition effectively and efficiently (i.e., escalation policy). (3) The team responds to the change in condition with the goal of reducing/eliminating preventable “codes.”

Reverse isolation/infection control facilities. This facility is a controlled environment that protects patients from getting an infection caused by bacteria, viruses, or fungus that may be in the environment or carried by staff and visitors.

Specialized chemistry laboratory with tandem mass spectroscopy. This specialized diagnostic laboratory has the ability to use tandem mass spectroscopy and other advanced techniques to aid in the diagnosis of medical conditions in NICU patients.

Surgical intensive care unit (SICU) or dedicated beds in a NICU or PICU for surgical patients. A SICU is a specialized unit designed to meet the needs of pediatric surgical patients who require intensive care services following surgery. For hospitals that do not have a SICU, having dedicated surgical intensive care beds in their PICU or NICU is also acceptable.

Three-dimensional mapping. This includes the use of three-dimensional imaging systems, such as MRI or ultrasound, to guide ablation probes.

3 Tesla magnetic resonance imaging (3T MRI). 3T MRI is a higher-powered version of MRI that offers improved morphological and functional studies of the brain compared with the more common field strength of 1.5T.

Appendix B

2008 Sample Physician Questionnaire

America's Best Hospitals

THIS SURVEY OF PHYSICIANS' JUDGMENTS PROVIDES THE
BASIS FOR THE REPUTATIONAL COMPONENT OF THE ANNUAL
RANKINGS OF HOSPITALS FOR *U.S. NEWS & WORLD REPORT*.



List the five U.S. hospitals (and/or affiliated medical schools) that in your opinion provide the best care for patients with the most serious or difficult medical problems associated with <<SPECIALTY>>, without considering location or expense. (Please do not list any hospital where you currently practice.)

	Hospital and/or affiliated medical school	City	State
a.	<input type="text"/>	<input type="text"/>	<input type="text"/>
b.	<input type="text"/>	<input type="text"/>	<input type="text"/>
c.	<input type="text"/>	<input type="text"/>	<input type="text"/>
d.	<input type="text"/>	<input type="text"/>	<input type="text"/>
e.	<input type="text"/>	<input type="text"/>	<input type="text"/>

Conducted by RTI International
3040 Cornwallis Road, P.O. Box 12194, Research Triangle Park, NC 27709-2194

Thank you for your participation.

***RTI International
3040 Cornwallis Road, P.O. Box 12194
Research Triangle Park, NC 27709-2194***

Appendix C

2009 Sample Physician Questionnaire



America's Best Hospitals

Your nominations will be reflected in the 2009 *U.S. News & World Report* <<specialty>> rankings.

Without considering location or expense, list up to five U.S. hospitals (and/or affiliated medical schools) that in your opinion provide the best inpatient care for the most complex or difficult medical <<fill>> associated with <<specialty>>.

	Hospital and/or affiliated medical school	City	State
a.	<input type="text"/>	<input type="text"/>	<input type="text"/>
b.	<input type="text"/>	<input type="text"/>	<input type="text"/>
c.	<input type="text"/>	<input type="text"/>	<input type="text"/>
d.	<input type="text"/>	<input type="text"/>	<input type="text"/>
e.	<input type="text"/>	<input type="text"/>	<input type="text"/>

Please send your response in the enclosed postpaid envelope, or by fax (800-476-9721), or fill out the survey online at <http://americasbesthospitals.rti.org/>. Your username is <<username>> and password is <<id>>.

Conducted by:



RTI International
3040 Cornwallis Rd, PO Box 12194,
Research Triangle Park, NC 27709-2194

Appendix D
2009 Pediatric Rankings

Pediatrics Rankings 2009—Cancer

2009 Rank	Hospital	U.S. News Score	Reputation (%)	Infection prevention index (higher is better)	Patient volume	Nurse staffing	Nurse Magnet hospital	Advanced clinical services	Key technologies (of 10)	Patient and family services (of 8)	Palliative care	FACT Accreditation	Participation in cancer research	BMT services	Cancer patient volume	Clinical Support Services	Fellowships	Patient and family involvement	Pediatric trauma center	Physician specialists	Public reporting of performance	Quality improvement activities	Transplant center
1	Children's Hospital of Philadelphia	100.0	66.8	7	High	6.5	Yes	11	10	8	2	Yes	5	4	4,570	10	2	5	1	10	1	5	Yes
2	Children's Hospital Boston	96.5	62.7	6	High	4.2	Yes	11	10	8	2	Yes	5	4	1,474	10	3	5	1	10	1	5	Yes
3	St. Jude Children's Research Hospital, Memphis	87.2	55.9	6	High	4.0	No	11	9	8	2	Yes	5	4	3,202	8	1	5	0	10	1	5	Yes
4	Texas Children's Hospital, Houston	64.3	30.8	7	High	3.1	Yes	11	9	8	2	Yes	5	4	3,146	10	2	5	0	10	1	5	Yes
5	Cincinnati Children's Hospital Medical Center	63.6	30.7	4	High	3.8	Yes	11	10	7	2	Yes	5	4	1,204	9	2	5	1	10	1	5	Yes
6	Seattle Children's Hospital	53.8	21.6	6	High	2.4	Yes	11	9	7	2	Yes	4	4	2,207	10	1	5	0	10	1	5	Yes
7	Memorial Sloan-Kettering Cancer Center, New York	52.8	21.0	4	High	2.4	No	11	10	8	2	Yes	5	4	2,212	10	1	5	0	8	1	5	Yes
8	Children's Hospital Los Angeles	48.1	15.3	5	High	1.8	Yes	11	9	8	2	Yes	5	4	12,469	10	1	5	1	10	1	5	Yes
9	Johns Hopkins Children's Center, Baltimore	48.0	16.5	3	High	2.7	Yes	10	10	8	2	Yes	5	4	338	10	1	5	1	10	0	5	Yes
10	Children's Hospital, Denver	43.2	9.8	6	High	2.6	Yes	11	9	8	2	Yes	5	4	1,552	10	1	5	1	10	1	5	Yes
11	Packard Children's Hosp., Palo Alto, Calif.	41.9	9.7	5	High	1.7	No	11	7	8	2	Yes	5	4	1,469	10	1	5	1	10	1	5	Yes
12	Children's Healthcare of Atlanta	40.2	6.8	7	High	2.4	No	9	10	8	2	Yes	5	4	3,577	10	1	5	1	10	1	5	Yes
13	Children's Cancer Hospital, M.D. Anderson, Houston	39.7	9.1	1	High	2.4	Yes	9	10	8	2	Yes	5	4	962	9	1	5	0	10	0	4	Yes
14	Children's Memorial Hospital, Chicago	39.4	5.7	6	High	3.2	Yes	11	9	8	2	Yes	5	4	4,576	10	1	5	1	10	1	5	Yes
15	Children's National Medical Center, Washington, D.C.	37.8	5.0	5	High	2.3	No	10	10	8	2	Yes	5	4	802	10	1	5	1	10	1	5	Yes
16	Mattel Children's Hospital UCLA, Los Angeles	37.7	3.9	5	High	2.5	Yes	11	9	8	2	Yes	4	4	1,077	10	2	5	1	10	1	5	Yes
17	Children's Medical Center, Dallas	37.6	3.0	5	High	2.0	Yes	11	9	8	2	Yes	5	4	2,787	10	3	5	1	10	1	5	Yes
18	NY-Presbyterian Morgan Stanley-Komansky Children's Hosp.	37.2	2.9	5	High	3.0	No	11	10	8	2	Yes	5	4	1,909	10	2	5	1	10	1	5	Yes
19	UCSF Children's Hospital, San Francisco	36.7	5.3	5	High	3.8	No	9	10	7	2	Yes	5	4	446	10	1	3	0	10	1	5	Yes
20	Univ. of Minn. Amplatz Children's Hosp., Minneapolis	36.4	4.1	4	High	3.0	Yes	9	10	8	2	Yes	4	4	511	10	1	5	0	10	1	5	Yes
21	Nationwide Children's Hospital, Columbus, Ohio	36.1	2.7	6	High	3.6	Yes	11	9	8	2	Yes	3	4	1,126	10	1	5	1	10	1	5	Yes
22	St. Louis Children's Hospital-Washington University	35.3	2.4	7	Med.	2.9	Yes	11	10	8	2	Yes	3	4	754	10	1	5	1	10	1	5	Yes
23	Univ. of Mich. C.S. Mott Children's Hospital, Ann Arbor	35.0	2.2	5	Med.	2.0	No	10	10	8	2	Yes	5	4	1,021	10	1	5	1	10	1	5	Yes
24	Duke Children's Hosp. and Health Center, Durham, N.C.	34.8	4.9	2	Med.	2.5	Yes	10	9	8	1	Yes	2	4	1,790	10	1	3	1	10	0	4	Yes
25	Monroe Carell Jr. Children's Hospital, Nashville	33.9	1.5	5	High	3.0	Yes	10	9	8	2	Yes	5	4	867	10	1	5	0	10	1	4	Yes
26	Primary Children's Medical Center, Salt Lake City	33.9	0.5	5	High	4.3	No	11	9	8	2	Yes	4	4	1,843	10	1	5	1	10	1	5	Yes
27	Children's Hospital of Michigan, Detroit	33.5	1.7	5	Med.	2.2	Yes	11	9	8	2	Yes	2	4	607	10	1	5	1	10	1	5	Yes
28	Children's Hospital of Wisconsin, Milwaukee	33.3	1.1	3	High	2.6	Yes	10	9	8	2	Yes	1	4	1,000	10	1	5	1	10	1	5	Yes
29	Cook Children's Medical Center, Fort Worth	33.3	1.1	5	High	4.1	Yes	11	10	8	2	Yes	5	4	308	10	0	5	0	10	1	5	Yes
30	Rainbow Babies, Cleveland	33.2	1.1	4	Med.	2.0	Yes	11	10	8	2	Yes	5	4	436	10	1	5	1	10	1	5	Yes

Rankings are based on all of the above measures. Those **in bold** are displayed online and in the print magazine. Those *in italics* are only displayed online.

Pediatric Rankings 2009-- Diabetes & Endocrine Disorders

2009 Rank	Hospital	U.S. News Score	Reputation (%)	Bloodstream infection index (lower is better)	Infection prevention index (higher is better)	Diabetes management index (higher is better)	Patient volume	Nurse staffing	Nurse Magnet hospital	Advanced clinical services	Key technologies (of 10)	Patient and family services (of 8)	Specialized clinics and programs (of 4)	Clinical Support Services	Congenital hypothyroid management index (higher is better)	Continuous Glucose Monitor Outpatient Volume	Daily blood glucose measurements	Diabetes patient clinic visits	Fellowships	Insulin therapy treatment options	Parent and family involvement	Pediatric trauma center	Physician specialists	Primary hypothyroid management index (higher is better)	Public reporting of performance	Quality improvement activities
1	Children's Hospital of Philadelphia	100.0	65.6	3	7	3	7,636	6.5	Yes	19	9	8	4	10	2	102	1	7	1	6	5	1	6	2	1	4
2	Children's Hospital Boston	70.5	37.7	2	6	2	9,024	4.2	Yes	22	10	8	4	10	2	48	2	8	1	6	5	1	6	1	1	5
3	Johns Hopkins Children's Center, Baltimore	53.2	23.7	2	3	3	2,665	2.7	Yes	20	10	8	4	10	2	18	2	10	1	6	5	1	6	1	0	4
4	Cincinnati Children's Hospital Medical Center	50.6	20.8	1	4	2	5,106	3.8	Yes	21	10	7	4	9	1	53	2	5	1	6	5	1	6	1	1	5
5	Children's Hospital Los Angeles	47.1	16.1	1	5	2	15,180	1.8	Yes	20	9	8	4	10	2	49	2	8	1	6	5	1	6	2	1	5
6	UCSF Children's Hospital, San Francisco	46.2	18.7	2	5	1	2,577	3.8	No	20	7	7	2	10	1	50	2	8	1	6	3	0	6	1	1	4
7	NY-Presbyterian Morgan Stanley-Komansky Children's Hosp.	45.6	15.0	2	5	3	9,169	3.0	No	22	10	8	3	10	1	80	2	9	1	6	5	1	6	2	1	5
8	Children's Hospital of Pittsburgh of UPMC	44.6	14.8	2	3	1	7,018	3.2	No	21	10	8	3	10	2	20	2	8	1	5	5	1	6	2	1	5
9	Texas Children's Hospital, Houston	39.9	13.0	2	7	1	8,410	3.1	Yes	19	9	8	3	10	0	5	1	4	1	4	5	0	6	0	1	5
10	Children's Hospital, Denver	39.5	8.9	2	6	3	6,794	2.6	Yes	22	9	8	4	10	2	447	2	10	1	6	5	1	6	2	1	5
11	Mass. General Hospital for Children, Boston	39.4	10.1	1	5	3	4,860	1.9	Yes	20	9	8	3	10	2	15	2	9	1	5	5	1	6	2	1	5
12	Riley Hospital for Children, Indianapolis	36.0	7.9	2	3	1	3,312	1.8	Yes	21	9	8	1	10	2	82	2	4	1	6	5	1	6	2	1	4
13	Rainbow Babies, Cleveland	35.8	6.7	1	4	1	5,146	2.0	Yes	20	10	8	3	10	2	20	2	6	1	6	5	1	6	2	1	5
14	Packard Children's Hosp., Palo Alto, Calif.	35.1	8.2	3	5	1	3,660	1.7	No	18	9	8	1	10	1	100	2	8	1	5	5	1	6	1	1	3
15	Mattel Children's Hospital UCLA, Los Angeles	34.4	7.3	1	5	1	1,667	2.5	Yes	16	9	8	4	10	1	3	2	10	1	4	5	1	6	1	1	4
16	Mayo Children's Hospital Rochester, Minn.	33.9	7.6	2	2	1	2,938	3.2	Yes	13	10	8	4	10	2	10	2	1	1	3	5	1	5	2	1	5
17	Yale-New Haven Children's Hospital, New Haven, Conn.	33.6	5.6	2	3	1	1,786	2.0	No	21	9	6	3	10	2	87	1	9	1	6	5	1	6	2	1	5
18	Children's Hospital Cleveland Clinic	32.6	4.3	2	6	1	4,956	2.5	Yes	22	10	8	4	10	2	20	2	10	0	5	5	0	6	1	1	5
19	St. Louis Children's Hospital-Washington University	31.5	3.2	2	7	3	4,465	2.9	Yes	20	10	8	3	10	1	63	1	3	1	5	5	1	6	1	1	5
20	Schneider Children's Hospital, New Hyde Park, N.Y.	31.4	3.3	2	6	1	7,742	2.1	No	22	10	8	1	10	2	20	2	10	1	5	4	1	6	2	1	5
21	Duke Children's Hosp.and Health Center, Durham, N.C.	31.0	3.4	1	2	3	3,852	2.5	Yes	22	9	8	3	10	2	10	1	8	1	6	3	1	6	2	0	5
22	Univ. of Chicago Comer Children's Hospital	30.7	5.0	2	3	2	4,320	2.0	Yes	19	9	7	4	10	0	0	2	10	1	6	3	1	6	0	1	4
23	Children's Mercy Hospitals, Kansas City, Mo.	29.7	2.5	3	7	1	10,357	2.8	Yes	20	6	7	3	9	2	150	1	9	1	3	5	1	6	2	0	5
24	Cook Children's Medical Center, Fort Worth	29.7	1.7	2	5	1	6,049	4.1	Yes	20	10	8	2	10	2	50	1	9	0	6	5	0	6	2	1	5
25	Univ. of Mich. C.S. Mott Children's Hospital, Ann Arbor	29.3	1.8	2	5	1	3,149	2.0	No	22	10	8	4	10	2	10	1	3	1	5	5	1	6	2	1	4
26	Nationwide Children's Hospital, Columbus, Ohio	29.2	0.9	1	6	1	5,569	3.6	Yes	19	9	8	4	10	2	25	1	4	1	6	5	1	6	2	1	3
27	Children's Healthcare of Atlanta	29.2	5.2	1	7	2	3,192	2.4	No	20	7	8	0	10	1	0	1	7	0	5	5	1	6	1	1	0
28	Rady Children's Hospital, San Diego	29.2	0.0	1	5	3	7,814	3.3	No	21	9	8	3	10	2	25	2	10	1	6	5	1	6	2	1	4
29	Univ. of Minn. Amplatz Children's Hosp., Minneapolis	28.9	2.7	2	4	3	1,964	3.0	Yes	21	10	8	3	10	0	24	1	7	1	5	5	0	6	0	1	5
30	Children's Medical Center, Dallas	28.8	1.7	3	5	2	6,308	2.0	Yes	20	9	8	3	10	1	34	1	4	1	4	5	1	6	1	1	5

Rankings are based on all of the above measures. Those **in bold** are displayed online and in the print magazine. Those *in italics* are only displayed online.

Pediatric Rankings 2009-- Digestive Disorders

2009 Rank	Hospital	U.S. News Score	Reputation (%)	Liver-transplant survival index (higher is better)	Bloodstream infection index (lower is better)	Infection prevention index (higher is better)	Transplant volume index (higher is better)	Patient Volume	Nurse staffing	Nurse Magnet hospital	Advanced clinical services	Key technologies (of 3)	Patient and family services (of 8)	Clinical Support Services	Fellowships	Gastrointestinal research participation	GI Procedure Volume	GI Procedures	Interdisciplinary Programs	Parent and family involvement	Pediatric trauma center	Physician specialists	Public reporting of performance	Quality Improvement Activities
1	Cincinnati Children's Hospital Medical Center	100.0	70.7	2	1	4	6	433	3.8	Yes	6	3	7	9	1	1	414	5	6	5	1	5	1	5
2	Children's Hospital of Philadelphia	95.4	64.8	3	3	7	3	268	6.5	Yes	6	3	8	10	1	1	221	5	6	5	1	5	1	5
3	Children's Hospital Boston	93.6	62.7	3	2	6	5	377	4.2	Yes	6	3	8	10	1	1	359	5	6	5	1	5	1	5
4	Texas Children's Hospital, Houston	63.5	30.4	2	2	7	3	189	3.1	Yes	6	3	8	10	1	1	144	5	6	5	0	5	1	5
5	Children's Hospital, Denver	57.6	24.3	3	2	6	2	203	2.6	Yes	6	3	8	10	1	1	180	4	6	5	1	5	1	5
6	Children's Hospital of Pittsburgh of UPMC	55.6	23.1	3	2	3	6	106	3.2	No	6	3	8	10	1	1	78	3	6	5	1	5	1	5
7	Nationwide Children's Hospital, Columbus, Ohio	48.4	14.7	NA	1	6	0	298	3.6	Yes	6	3	8	10	1	1	287	5	6	5	1	5	1	5
8	Maternal Children's Hospital UCLA, Los Angeles	47.3	12.4	2	1	5	6	379	2.5	Yes	6	3	8	10	1	1	362	5	6	5	1	5	1	5
9	Children's Hospital of Wisconsin, Milwaukee	42.0	8.8	1	1	3	2	148	2.6	Yes	5	3	8	10	1	1	144	5	6	5	1	5	1	5
10	Johns Hopkins Children's Center, Baltimore	40.8	8.3	2	2	3	2	80	2.7	Yes	5	3	8	10	1	1	55	5	6	5	1	5	0	5
11	Children's Hospital Los Angeles	40.7	5.8	3	1	5	5	130	1.8	Yes	5	3	8	10	1	1	103	4	6	5	1	5	1	5
12	Children's Healthcare of Atlanta	40.6	6.9	2	1	7	3	224	2.4	No	5	3	8	10	0	1	203	4	6	5	1	5	1	5
13	NY-Presbyterian Morgan Stanley-Komansky Children's Hosp.	39.7	4.5	3	2	5	5	293	3.0	No	6	3	8	10	1	1	263	4	6	5	1	5	1	5
14	Packard Children's Hosp., Palo Alto, Calif.	39.5	5.7	3	3	5	5	82	1.7	No	4	3	8	10	1	1	58	5	6	5	1	5	1	5
15	St. Louis Children's Hospital-Washington University	39.0	4.7	3	2	7	3	46	2.9	Yes	6	3	8	10	1	1	22	5	6	5	1	5	1	5
16	Children's Memorial Hospital, Chicago	38.9	5.0	3	2	6	5	35	3.2	Yes	6	3	8	10	1	1	16	4	6	5	1	5	1	5
17	UCSF Children's Hospital, San Francisco	37.5	7.0	3	2	5	3	40	3.8	No	6	3	7	10	1	1	29	3	6	3	0	5	1	4
18	Riley Hospital for Children, Indianapolis	37.4	2.8	2	2	3	4	457	1.8	Yes	6	3	8	10	1	1	433	5	6	5	1	5	1	4
19	Children's Hospital Cleveland Clinic	37.3	1.8	3	2	6	4	329	2.5	Yes	6	3	8	10	1	1	299	5	6	5	0	5	1	5
20	Children's Medical Center, Dallas	37.2	1.8	1	3	5	5	133	2.0	Yes	6	3	8	10	1	1	112	5	6	5	1	5	1	5
21	Monroe Carell Jr. Children's Hospital, Nashville	36.6	3.0	1	2	5	2	102	3.0	Yes	6	3	8	10	1	1	73	5	6	5	0	5	1	4
22	Mass. General Hospital for Children, Boston	36.4	2.7	1	1	5	2	131	1.9	Yes	6	3	8	10	1	1	127	5	6	5	1	5	1	3
23	Mayo Children's Hospital Rochester, Minn.	36.1	2.9	3	2	2	2	121	3.2	Yes	5	3	8	10	1	1	111	5	5	5	1	4	1	5
24	Children's National Medical Center, Washington, D.C.	35.5	1.4	3	1	5	6	55	2.3	No	6	3	8	10	0	1	33	4	6	5	1	5	1	5
25	Rainbow Babies, Cleveland	34.8	2.4	NA	1	4	0	85	2.0	Yes	5	3	8	10	1	1	83	5	5	5	1	5	1	5
26	Children's Mercy Hospitals, Kansas City, Mo.	34.8	1.4	3	3	7	2	252	2.8	Yes	4	3	7	9	1	1	239	5	6	5	1	5	0	5
27	Schneider Children's Hospital, New Hyde Park, N.Y.	34.1	0.7	NA	2	6	0	105	2.1	No	5	3	8	10	1	1	101	5	6	4	1	5	1	5
28	Univ. of Mich. C.S. Mott Children's Hospital, Ann Arbor	34.1	1.0	2	2	5	2	80	2.0	No	4	3	8	10	1	1	64	5	5	5	1	5	1	5
29	Seattle Children's Hospital	33.8	2.0	2	3	6	5	52	2.4	Yes	6	3	7	10	0	1	22	2	6	5	0	5	1	5
30	Primary Children's Medical Center, Salt Lake City	33.7	1.9	3	3	5	2	44	4.3	No	5	3	8	10	0	1	24	3	6	5	1	5	1	5

Rankings are based on all of the above measures. Those **in bold** are displayed online and in the print magazine. Those *in italics* are only displayed online.

Pediatric Rankings 2009-- Heart & Heart Surgery

2009 Rank	Hospital	U.S. News Score		Reputation (%)		Surgical mortality index (lower is better)		Bloodstream infection index (lower is better)		Infection prevention index (lower is better)		Surgical Volume		Catheter Procedure Volume		Nurse staffing		Nurse Magnet hospital		Advanced clinical services		Key technologies (of 4)		Patient and family services (of 8)		Adult Congenital Heart Program		Catheter Procedures		Clinical Support Services		Congenital heart surgery program		ECMO Services		Fellowships		Heart transplant program		Heart-transplant survival index (higher is better)		Hypoplastic Left Heart Syndrome Outcomes		Parent and family involvement		Pediatric trauma center		Physician specialists		Public reporting of performance		Quality Improvement Activities		Research network participation		Surgical infection prevention (higher is better)	
		Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank								
1	Children's Hospital Boston	100.0	86.6	2	2	6	397	High	4.2	Yes	16	4	8	2	6	10	2	2	1	3	2	5	22	5	1	5	1	4	2	2																											
2	Children's Hospital of Philadelphia	98.4	83.9	2	3	7	212	High	6.5	Yes	16	4	8	2	6	10	2	2	2	3	1	3	50	5	1	5	1	4	2	2																											
3	Texas Children's Hospital, Houston	71.9	49.3	2	2	7	296	High	3.1	Yes	17	4	8	2	6	10	2	1	1	3	1	3	23	5	0	5	1	4	2	2																											
4	Univ. of Mich. C.S. Mott Children's Hospital, Ann Arbor	71.0	48.9	3	2	5	345	High	2.0	No	17	4	8	2	6	10	2	2	2	2	1	2	33	5	1	5	1	4	2	2																											
5	Packard Children's Hosp., Palo Alb, Calif.	62.7	37.1	2	3	5	240	High	1.7	No	17	4	8	2	6	10	2	1	1	4	2	5	58	5	1	5	1	4	2	2																											
6	NY-Presbyterian Morgan Stanley-Komansky Children's Hosp.	48.7	16.7	2	2	5	271	High	3.0	No	16	4	8	2	6	10	2	2	2	4	1	6	38	5	1	5	1	4	2	2																											
7	Children's Healthcare of Atlanta	46.7	14.2	2	1	7	315	High	2.4	No	17	4	8	2	6	10	2	2	3	3	1	3	27	5	1	5	1	4	2	1																											
8	Children's Hospital of Wisconsin, Milwaukee	43.4	11.7	2	1	3	219	High	2.6	Yes	16	4	8	2	6	10	2	2	1	2	1	3	20	5	1	5	1	4	2	1																											
9	Cincinnati Children's Hospital Medical Center	43.2	11.8	3	1	4	117	High	3.8	Yes	17	4	7	2	6	9	2	2	1	1	1	6	12	5	1	5	1	4	2	2																											
10	Children's Hospital Los Angeles	41.1	7.8	3	1	5	279	High	1.8	Yes	15	4	8	2	6	10	2	2	1	3	2	6	81	5	1	5	1	4	2	2																											
11	Nationwide Children's Hospital, Columbus, Ohio	40.8	7.0	2	1	6	137	High	3.6	Yes	17	4	8	2	6	10	2	2	1	3	0	5	31	5	1	5	1	4	1	2																											
12	Children's Memorial Hospital, Chicago	38.4	5.4	3	2	6	115	High	3.2	Yes	16	4	8	2	6	10	2	1	1	2	2	6	9	5	1	5	1	4	2	2																											
13	Children's Hospital of Pittsburgh of UPMC	38.2	3.7	2	2	3	151	High	3.2	No	17	4	8	1	6	10	2	1	2	4	1	6	39	5	1	5	1	4	2	2																											
14	Mattel Children's Hospital UCLA, Los Angeles	38.0	4.7	3	1	5	98	High	2.5	Yes	14	4	8	2	6	10	2	1	3	4	2	3	16	5	1	5	1	4	1	2																											
15	Miami Children's Hospital	37.6	5.7	2	2	5	161	High	2.1	Yes	15	3	8	2	6	10	2	2	0	0	0	3	15	5	1	5	1	4	2	2																											
16	St. Louis Children's Hospital-Washington University	37.4	3.2	2	2	7	153	High	2.9	Yes	16	4	8	2	6	10	2	1	2	4	1	3	19	5	1	5	1	4	2	2																											
17	Mayo Children's Hospital Rochester, Minn.	37.2	6.1	1	2	2	124	Med.	3.2	Yes	14	4	8	2	6	10	2	1	1	2	2	1	2	5	1	4	1	4	2	2																											
18	Children's Hospital, Denver	36.8	2.9	2	2	6	181	High	2.6	Yes	17	4	8	2	6	10	2	1	1	3	0	5	19	5	1	5	1	4	2	1																											
19	Children's National Medical Center, Washington, D.C.	36.7	4.1	3	1	5	144	High	2.3	No	13	4	8	2	6	10	2	2	1	0	2	2	20	5	1	5	1	4	1	2																											
20	Primary Children's Medical Center, Salt Lake City	36.5	1.8	3	3	5	247	High	4.3	No	15	4	8	2	6	10	2	2	1	2	2	4	33	5	1	5	1	4	2	2																											
21	UCSF Children's Hospital, San Francisco	36.0	3.5	1	2	5	239	High	3.8	No	13	4	7	2	6	10	2	1	1	0	0	4	23	3	0	5	1	4	2	2																											
22	Children's Hospital Cleveland Clinic	35.9	5.4	3	2	6	70	Med.	2.5	Yes	14	4	8	2	6	10	2	2	0	3	2	3	8	5	0	5	1	4	1	2																											
23	Monroe Carell Jr. Children's Hospital, Nashville	35.9	0.8	3	2	5	160	High	3.0	Yes	13	4	8	2	6	10	2	2	2	3	2	3	21	5	0	5	1	4	2	2																											
24	Duke Children's Hosp.and Health Center, Durham, N.C.	35.8	1.7	2	1	2	134	High	2.5	Yes	17	4	8	2	6	10	2	2	1	2	0	6	20	3	1	5	0	4	2	2																											
25	Seattle Children's Hospital	35.6	2.4	2	3	6	124	High	2.4	Yes	14	4	7	2	6	10	2	1	0	2	2	5	34	5	0	5	1	4	2	2																											
26	Children's Medical Center, Dallas	35.1	2.2	3	3	5	169	Med.	2.0	Yes	17	4	8	2	6	10	2	1	1	3	2	2	14	5	1	5	1	4	2	2																											
27	Children's Hospital of Michigan, Detroit	35.1	3.3	3	2	5	104	High	2.2	Yes	14	4	8	2	6	10	2	1	1	2	0	6	9	5	1	5	1	4	1	2																											
28	MUSC Children's Hospital, Charleston, S.C.	35.0	2.2	1	3	1	149	High	2.8	No	16	4	8	2	6	10	2	2	1	2	2	6	11	4	1	4	1	4	2	2																											
29	Johns Hopkins Children's Center, Baltimore	34.9	1.0	2	2	3	114	Med.	2.7	Yes	16	4	8	2	6	10	2	2	2	3	2	3	4	5	1	5	0	4	2	2																											
30	Rady Children's Hospital, San Diego	34.6	0.0	2	1	5	151	High	3.3	No	13	4	8	2	6	10	2	2	1	0	0	6	23	5	1	5	1	4	2	2																											

Rankings are based on all of the above measures. Those **in bold** are displayed online and in the print magazine. Those *in italics* are only displayed online.

Pediatrics Rankings 2009-- Kidney Disorders

2009 Rank	Hospital	U.S. News Score	Reputation (%)	Kidney-transplant survival index (higher is better)	Bloodstream infection index (higher is better)	Infection-prevention index (lower is better)	Patient volume	Dialysis Volume	Nurse staffing	Nurse Magnet hospital	Advanced clinical services	Key technologies (of 3)	Patient and family services (of 8)	Catheter Placement Volume	Clinical Support Services	Fellowships	Non-transplant Kidney Biopsies	Parent and family involvement	Pediatric trauma center	Physician specialists	Public reporting of performance	Quality Improvement Activities	Transplant volume
1	Texas Children's Hospital, Houston	100.0	28.2	5	2	7	163	166	3.1	Yes	12	2	8	47	10	1	3	5	0	4	1	5	23
2	Children's Hospital of Philadelphia	70.1	15.6	8	3	7	183	59	6.5	Yes	11	3	8	45	10	1	3	5	1	4	1	5	37
3	Mattel Children's Hospital UCLA, Los Angeles	69.6	15.4	8	1	5	236	255	2.5	Yes	13	2	8	116	10	1	2	5	1	4	1	5	54
4	Seattle Children's Hospital	60.7	12.0	8	3	6	332	101	2.4	Yes	13	2	7	87	10	1	2	5	0	4	1	5	36
5	Children's Hospital Boston	57.7	10.9	8	2	6	1,230	75	4.2	Yes	12	3	8	15	10	1	2	5	1	4	1	5	41
6	Mass. General Hospital for Children, Boston	55.8	12.0	6	1	5	515	74	1.9	Yes	8	2	8	16	10	0	1	5	1	4	1	4	1
7	Johns Hopkins Children's Center, Baltimore	55.8	11.4	8	2	3	70	37	2.7	Yes	12	3	8	9	10	1	2	5	1	4	0	5	12
8	UCSF Children's Hospital, San Francisco	55.6	10.2	8	2	5	267	69	3.8	No	11	3	7	28	10	1	3	3	0	4	1	5	53
9	Children's Hospital Los Angeles	51.9	8.9	8	1	5	196	417	1.8	Yes	11	2	8	77	10	0	2	5	1	4	1	4	35
10	Holtz Children's Hospital, Miami	50.9	8.4	6	2	3	133	107	2.3	No	11	2	8	121	10	1	2	4	1	4	1	5	40
11	Univ. of Mich. C.S. Mott Children's Hospital, Ann Arbor	50.7	8.3	5	2	5	85	35	2.0	No	12	3	8	45	10	1	2	5	1	4	1	5	25
12	Cincinnati Children's Hospital Medical Center	45.9	5.4	8	1	4	231	103	3.8	Yes	13	3	7	60	9	1	3	5	1	4	1	5	22
13	Children's Hospital at Montefiore, New York	45.9	5.5	6	2	7	351	115	1.6	No	13	3	8	54	10	1	2	5	1	4	1	4	53
14	Levine Children's Hospital, Charlotte, N.C.	45.0	6.6	4	1	6	496	45	2.4	No	12	2	8	30	9	0	3	5	0	4	1	2	13
15	St. Louis Children's Hospital-Washington University	44.1	5.4	6	2	7	117	109	2.9	Yes	13	3	8	11	10	0	2	5	1	4	1	5	22
16	Children's Hospital Cleveland Clinic	42.9	6.0	NA	2	6	111	62	2.5	Yes	13	3	8	39	10	0	1	5	0	4	1	5	8
17	NY-Presbyterian Morgan Stanley-Komansky Children's Hosp.	42.5	5.5	8	2	5	167	33	3.0	No	12	3	8	12	10	0	1	5	1	4	1	5	22
18	Children's Memorial Hermann Hospital, Houston	41.9	6.6	6	3	3	55	48	2.6	No	12	2	8	84	10	1	1	0	1	3	1	3	16
19	Rainbow Babies, Cleveland	41.7	5.9	8	1	4	40	34	2.0	Yes	13	3	8	9	10	0	1	5	1	4	1	5	9
20	Packard Children's Hosp., Palo Alto, Calif.	41.1	4.7	8	3	5	57	112	1.7	No	12	2	8	95	10	1	2	5	1	4	1	0	37
21	Children's Hospital of Pittsburgh of UPMC	41.0	3.7	8	2	3	307	121	3.2	No	12	3	8	61	10	0	3	5	1	4	1	5	40
22	Children's Hospital, Denver	40.1	4.1	8	2	6	388	87	2.6	Yes	12	2	8	29	10	0	2	5	1	4	1	5	16
23	Children's Medical Center, Dallas	37.0	1.8	6	3	5	568	178	2.0	Yes	12	2	8	46	10	1	3	5	1	4	1	5	32
24	Children's Memorial Hospital, Chicago	36.5	1.8	8	2	6	207	84	3.2	Yes	12	2	8	72	10	1	2	5	1	4	1	5	28
25	University of Iowa Children's Hospital, Iowa City	34.7	3.5	8	3	3	148	58	3.5	Yes	8	3	8	19	10	0	1	5	1	4	0	5	4
26	Univ. of Minn. Amplatz Children's Hosp., Minneapolis	33.8	1.8	7	2	4	157	62	3.0	Yes	8	3	8	50	10	0	3	5	0	4	1	2	48
27	Yale-New Haven Children's Hospital, New Haven, Conn.	33.6	3.6	4	2	3	47	19	2.0	No	8	2	6	13	10	1	1	5	1	4	1	4	5
28	Duke Children's Hosp. and Health Center, Durham, N.C.	33.4	3.6	8	1	2	67	16	2.5	Yes	10	2	8	14	10	0	2	3	1	4	0	4	4
29	Children's Healthcare of Atlanta	33.1	0.0	8	1	7	1,514	107	2.4	No	11	3	8	124	10	0	3	5	1	4	1	5	39
30	Children's Hospital of Wisconsin, Milwaukee	32.7	1.8	8	1	3	191	51	2.6	Yes	10	2	8	10	10	0	2	5	1	4	1	5	13

Rankings are based on all of the above measures. Those **in bold** are displayed online and in the print magazine. Those *in italics* are only displayed online.

Pediatric Rankings 2009-- Neonatal Care

2009 Rank	Hospital	U.S. News Score	Reputation (%)	Bloodstream infection index (lower is better)	Infection prevention index (higher is better)	Patient volume	Neonatal ICU nurse staffing	Nurse Magnet hospital	Advanced clinical services	Key technologies (of 8)	Patient and family services (of 8)	Specialized clinics and programs (of 5)	CDC infection control - reporting (of 4)	Clinical Support Services	ECMO Services	Fellowships	NICU research network participation	Parent and family involvement	Pediatric trauma center	Physician specialists	Public reporting of performance	Quality Improvement Activities
1	Children's Hospital of Philadelphia	100.0	50.6	2	6	691	3.4	Yes	10	7	8	5	4	7	3	12	4	5	1	11	1	3
2	Rainbow Babies, Cleveland	77.1	34.9	1	4	141	2.3	Yes	11	8	8	5	4	7	3	7	4	5	1	11	1	3
3	Children's Hospital Boston	73.9	32.3	1	5	161	3.7	Yes	11	8	8	5	4	7	3	11	2	5	1	11	1	3
4	Cincinnati Children's Hospital Medical Center	62.7	24.5	1	4	127	3.0	Yes	10	8	7	5	3	6	3	11	4	5	1	11	1	3
5	Packard Children's Hosp., Palo Alto, Calif.	61.0	23.0	1	4	261	3.9	No	11	6	8	5	4	7	2	7	4	5	1	11	1	3
6	NY-Presbyterian Morgan Stanley-Komansky Children's Hosp.	59.6	22.4	2	4	510	2.6	No	11	7	8	5	3	7	3	9	3	5	1	11	1	3
7	Texas Children's Hospital, Houston	49.0	14.9	2	6	425	4.6	Yes	11	6	8	4	2	7	2	11	3	5	0	11	1	3
8	Children's Hospital, Denver	45.0	11.5	2	5	251	3.0	Yes	12	6	8	5	4	7	2	8	3	5	1	11	1	3
9	Johns Hopkins Children's Center, Baltimore	39.9	9.1	1	2	155	2.3	Yes	10	8	8	5	2	7	3	9	3	5	1	11	0	3
10	Children's National Medical Center, Washington, D.C.	39.8	8.0	1	4	471	3.4	No	11	8	8	5	3	7	3	5	2	5	1	11	1	3
11	St. Louis Children's Hospital-Washington University	39.4	7.4	2	6	230	2.5	Yes	11	8	8	5	3	7	2	8	3	5	1	11	1	3
12	UCSF Children's Hospital, San Francisco	39.3	9.6	NR	4	220	3.0	No	8	8	7	5	1	7	2	8	3	3	0	11	1	3
13	Monroe Carell Jr. Children's Hospital, Nashville	36.5	5.6	2	4	336	2.8	Yes	11	7	8	5	3	7	3	9	3	5	0	11	1	3
14	Riley Hospital for Children, Indianapolis	35.8	5.0	2	3	264	2.9	Yes	11	6	8	5	2	7	3	8	4	5	1	11	1	3
15	Miami Children's Hospital	35.3	6.3	2	4	63	2.0	Yes	12	6	8	5	3	7	3	0	3	5	1	11	1	3
16	Seattle Children's Hospital	34.5	5.5	2	5	154	5.1	Yes	9	6	7	5	3	7	2	7	2	5	0	11	1	3
17	Children's Hospital Los Angeles	33.6	3.4	1	4	127	3.6	Yes	8	7	8	5	3	7	3	6	4	5	1	11	1	3
18	Children's Memorial Hospital, Chicago	33.5	3.7	1	5	170	2.8	Yes	11	6	8	5	3	7	2	9	3	5	1	11	1	3
19	Nationwide Children's Hospital, Columbus, Ohio	33.0	2.5	1	5	291	2.6	Yes	12	6	8	5	3	7	3	9	3	5	1	11	1	3
20	Children's Hospital of Pittsburgh of UPMC	32.9	3.6	1	2	276	3.0	No	11	7	8	5	3	7	2	8	2	5	1	11	1	3
21	Mattel Children's Hospital UCLA, Los Angeles	32.7	3.0	1	4	103	2.7	Yes	10	6	8	5	4	7	2	11	3	5	1	11	1	3
22	Children's Medical Center, Dallas	32.6	3.1	3	4	142	3.4	Yes	11	6	8	5	3	7	2	10	3	5	1	11	1	3
23	Holtz Children's Hospital, Miami	32.5	3.8	2	3	244	1.4	No	11	6	8	5	2	7	2	7	4	4	1	11	1	3
24	Univ. of Mich. C.S. Mott Children's Hospital, Ann Arbor	32.5	3.1	2	5	140	2.6	No	11	8	8	5	2	7	3	9	2	5	1	11	1	3
25	Children's Hospital at Montefiore, New York	32.2	1.8	1	6	237	2.3	No	10	8	8	5	4	7	3	8	3	5	1	11	1	3
26	Children's Hospitals and Clinics of Minnesota, Minneapolis	32.0	4.3	1	3	346	3.7	Yes	10	7	8	4	0	6	3	2	3	5	0	10	1	3
27	Rady Children's Hospital, San Diego	31.9	2.3	1	4	274	3.5	No	9	6	8	5	3	7	3	7	3	5	1	11	1	3
28	Duke Children's Hosp. and Health Center, Durham, N.C.	31.8	3.6	2	2	261	2.7	Yes	9	6	8	5	2	7	3	6	4	3	1	11	0	3
29	Children's Hospital of Wisconsin, Milwaukee	31.5	2.5	1	2	211	2.6	Yes	12	6	8	5	3	7	3	6	2	5	1	11	1	3
30	Univ. of Chicago Comer Children's Hospital	31.5	3.1	1	2	155	2.3	Yes	11	6	7	5	4	7	3	6	3	3	1	11	1	3

Rankings are based on all of the above measures. Those **in bold** are displayed online and in the print magazine. Those *in italics* are only displayed online.

Pediatric Rankings 2009-- Neurology & Neurosurgery

2009 Rank	Hospital	U.S. News Score	Reputation (%)	Surgical-mortality index (lower is better)	Bloodstream-infection index (lower is better)	Surgical-infection index (lower is better)	New-patient volume (higher is better)	Nurse staffing	Nurse Magnet hospital	Advanced clinical services	Key technologies (of 3)	Patient and family services (of 8)	Specialized clinics and programs (of 8)	Clinical research consortium participation	Clinical Support Services	Epilepsy treatment services	Epilepsy Volume	Fellowships	Infection-prevention index (higher is better)	Parent and family involvement	Pediatric trauma center	Physician specialists	Public reporting of performance	Quality Improvement Activities	Surgical Volume
1	Children's Hospital Boston	100.0	57.7	3	2	5	High	4.2	Yes	11	3	8	9	1	10	5	6,419	2	6	5	1	5	1	5	382
2	Children's Hospital of Philadelphia	85.2	46.0	2	3	2	High	6.5	Yes	10	3	8	9	1	10	5	3,491	1	7	5	1	5	1	4	410
3	Johns Hopkins Children's Center, Baltimore	84.7	45.9	4	2	5	High	2.7	Yes	11	3	8	8	1	10	5	1,688	1	3	5	1	5	0	5	303
4	Children's Hospital Cleveland Clinic	59.9	23.2	3	2	4	High	2.5	Yes	11	3	8	9	1	10	5	3,000	1	6	5	0	5	1	5	233
5	Texas Children's Hospital, Houston	57.8	21.5	2	2	4	High	3.1	Yes	11	2	8	8	1	10	5	2,387	1	7	5	0	5	1	5	305
6	St. Louis Children's Hospital-Washington University	55.0	18.7	3	2	3	Med.	2.9	Yes	11	3	8	9	1	10	5	3,523	1	7	5	1	5	1	5	313
7	NY-Presbyterian Morgan Stanley-Komansky Children's Hosp.	47.8	12.2	3	2	5	High	3.0	No	11	3	8	9	1	10	5	2,026	2	5	5	1	5	1	4	152
8	Cincinnati Children's Hospital Medical Center	47.1	12.5	3	1	4	Med.	3.8	Yes	11	3	7	9	1	9	5	2,527	1	4	5	1	5	1	4	209
9	Seattle Children's Hospital	45.9	12.2	3	3	4	Med.	2.4	Yes	11	2	7	6	1	10	5	2,357	1	6	5	0	5	1	5	301
10	Mayo Children's Hospital Rochester, Minn.	45.9	12.6	2	2	5	High	3.2	Yes	11	3	8	9	1	10	1	1,013	1	2	5	1	4	1	4	130
11	Primary Children's Medical Center, Salt Lake City	45.7	11.6	3	3	5	High	4.3	No	10	2	8	9	0	10	3	1,411	1	5	5	1	5	1	5	463
12	Mattel Children's Hospital UCLA, Los Angeles	43.5	9.7	4	1	4	Med.	2.5	Yes	8	2	8	9	0	10	5	4,489	1	5	5	1	5	1	5	233
13	UCSF Children's Hospital, San Francisco	43.3	12.7	3	2	1	Med.	3.8	No	9	3	7	8	1	10	5	292	1	5	3	0	5	1	4	68
14	Children's National Medical Center, Washington, D.C.	43.3	8.1	2	1	5	High	2.3	No	10	3	8	9	1	10	5	3,679	1	5	5	1	5	1	5	509
15	Children's Hospital Los Angeles	43.3	8.4	3	1	5	High	1.8	Yes	11	2	8	9	1	10	4	2,746	1	5	5	1	5	1	5	320
16	Children's Memorial Hospital, Chicago	42.9	7.9	2	2	5	High	3.2	Yes	11	2	8	9	1	10	5	730	1	6	5	1	5	1	5	252
17	Children's Hospital of Pittsburgh of UPMC	42.4	8.2	4	2	5	High	3.2	No	6	3	8	9	1	10	5	2,910	1	3	5	1	5	1	5	250
18	Rainbow Babies and Children's Hospital, Cleveland	42.3	8.5	2	1	5	Med.	2.0	Yes	11	3	8	9	0	10	5	2,096	1	4	5	1	5	1	5	148
19	Miami Children's Hospital	41.5	8.6	2	2	5	High	2.1	Yes	10	2	8	8	0	10	2	13,083	0	5	5	1	5	1	5	268
20	Children's Hospital, Denver	38.1	4.0	3	2	4	Med.	2.6	Yes	11	2	8	9	1	10	5	2,419	1	6	5	1	5	1	5	314
21	Packard Children's Hosp., Palo Alto, Calif.	38.0	7.4	3	3	4	Med.	1.7	No	11	2	8	5	0	10	1	750	1	5	5	1	5	1	5	130
22	Children's Hospital at Montefiore, New York	36.7	2.5	3	2	5	Med.	1.6	No	11	3	8	9	1	10	5	1,885	1	7	5	1	5	1	5	450
23	Nationwide Children's Hospital, Columbus, Ohio	36.4	2.1	3	1	5	High	3.6	Yes	11	2	8	9	0	10	5	2,602	1	6	5	1	5	1	5	232
24	Mass. General Hospital for Children, Boston	36.3	6.2	3	1	4	Med.	1.9	Yes	6	2	8	9	0	10	4	655	1	5	5	1	5	1	0	75
25	Children's Medical Center, Dallas	35.5	1.6	1	3	4	High	2.0	Yes	10	2	8	9	0	10	5	3,274	2	5	5	1	5	1	5	223
26	Children's Healthcare of Atlanta	34.7	0.6	1	1	5	High	2.4	No	6	3	8	8	1	10	5	2,990	1	7	5	1	5	1	5	625
27	Cook Children's Medical Center, Fort Worth	34.1	1.1	2	2	5	High	4.1	Yes	10	3	8	8	0	10	5	4,342	0	5	5	0	5	1	5	276
28	Children's Hospital of Wisconsin, Milwaukee	34.1	1.5	2	1	5	Med.	2.6	Yes	11	2	8	9	0	10	5	1,870	0	3	5	1	5	1	5	201
29	Riley Hospital for Children, Indianapolis	34.0	1.0	2	2	3	High	1.8	Yes	11	2	8	8	1	10	5	2,567	1	3	5	1	5	1	5	221
30	Children's Hospital of Michigan, Detroit	33.8	0.5	1	2	5	High	2.2	Yes	9	2	8	8	0	10	5	2,400	1	5	5	1	5	1	5	362

Rankings are based on all of the above measures. Those **in bold** are displayed online and in the print magazine. Those *in italics* are only displayed online.

Pediatric Rankings 2009--Orthopedics

2009 Rank	Hospital	U.S. News Score	Reputation (%)	Bloodstream infection index (lower is better)	Infection prevention index (higher is better)	Patient Volume	New-patient surgical volume	Nurse staffing	Nurse Magnet hospital	Advanced clinical services	Key technologies (of 4)	Patient and family services (of 8)	Specialized clinics and programs (of 7)	Clinical Support Services	Fellowships	Parent and family involvement	Pediatric trauma center	Physician specialists	POSNA members	Public reporting of performance	Quality Improvement Activities	Surgical infection prevention (higher is better)
1	Children's Hospital Boston	100.0	65.0	2	6	23,053	High	4.2	Yes	11	4	8	7	10	1	5	1	7	1	1	5	2
2	Children's Medical Center, Dallas	97.7	65.2	3	5	40,617	High	2.0	Yes	11	3	8	7	10	0	5	1	7	1	1	5	2
3	Children's Hospital of Philadelphia	95.1	60.3	3	7	44,677	High	6.5	Yes	11	4	8	7	10	1	5	1	7	1	1	5	1
4	Rady Children's Hospital, San Diego	71.0	36.9	1	5	62,546	High	3.3	No	11	3	8	7	10	0	5	1	7	1	1	5	2
5	Children's Healthcare of Atlanta	46.8	10.0	1	7	16,717	High	2.4	No	11	4	8	7	10	1	5	1	7	1	1	5	2
6	Cincinnati Children's Hospital Medical Center	46.7	12.3	1	4	17,726	Med.	3.8	Yes	8	4	7	7	9	1	5	1	7	1	1	5	2
7	Children's Hospital Los Angeles	46.7	13.2	1	5	26,202	Low	1.8	Yes	11	3	8	7	10	0	5	1	7	1	1	5	2
8	Children's Hospital, Denver	44.9	8.9	2	6	40,711	High	2.6	Yes	11	3	8	7	10	1	5	1	7	1	1	5	2
9	St. Louis Children's Hospital-Washington University	42.9	7.5	2	7	15,226	High	2.9	Yes	11	4	8	7	10	0	5	1	7	1	1	5	0
10	Johns Hopkins Children's Center, Baltimore	41.0	7.9	2	3	9,943	Med.	2.7	Yes	11	4	8	7	10	0	5	1	7	1	0	5	2
11	Univ. of Mich. C.S. Mott Children's Hospital, Ann Arbor	39.8	5.0	2	5	23,522	High	2.0	No	11	4	8	5	10	0	5	1	7	1	1	5	2
12	Children's Hospital Cleveland Clinic	39.5	4.0	2	6	17,697	High	2.5	Yes	11	4	8	7	10	0	5	0	7	1	1	5	2
13	Rainbow Babies, Cleveland	38.7	4.4	1	4	21,573	High	2.0	Yes	11	4	8	2	10	0	5	1	7	1	1	5	2
14	Texas Children's Hospital, Houston	38.6	3.2	2	7	9,603	High	3.1	Yes	11	3	8	7	10	1	5	0	7	1	1	4	2
15	Primary Children's Medical Center, Salt Lake City	38.5	4.5	3	5	9,383	High	4.3	No	11	3	8	6	10	1	5	1	7	1	1	2	2
16	Children's Hospital of Pittsburgh of UPMC	38.4	3.5	2	3	18,535	High	3.2	No	11	4	8	6	10	0	5	1	7	1	1	5	2
17	Seattle Children's Hospital	37.5	3.2	3	6	12,515	High	2.4	Yes	11	3	7	7	10	0	5	0	7	1	1	5	2
18	Gillette Children's Hospital, St. Paul, Minn.	37.2	4.1	1	5	9,675	Med.	3.8	Yes	8	4	8	7	9	0	4	0	7	1	1	5	2
19	Children's Memorial Hospital, Chicago	37.1	1.8	2	6	11,055	High	3.2	Yes	11	3	8	6	10	0	5	1	7	1	1	5	2
20	Mayo Children's Hospital Rochester, Minn.	37.0	3.8	2	2	5,288	Med.	3.2	Yes	11	4	8	7	10	0	5	1	6	1	1	5	2
21	Nationwide Children's Hospital, Columbus, Ohio	36.7	0.9	1	6	11,627	High	3.6	Yes	11	3	8	7	10	0	5	1	7	1	1	5	2
22	Monroe Carell Jr. Children's Hospital, Nashville	36.2	1.3	2	5	17,909	High	3.0	Yes	10	4	8	7	10	0	5	0	7	1	1	5	1
23	NY-Presbyterian Morgan Stanley-Komansky Children's Hosp.	36.1	1.3	2	5	16,590	High	3.0	No	10	4	8	6	10	0	5	1	7	1	1	5	1
24	Children's National Medical Center, Washington, D.C.	34.4	0.0	1	5	21,586	Low	2.3	No	11	4	8	6	10	0	5	1	7	1	1	5	2
25	University of Rochester Medical Center, N.Y.	34.4	1.3	3	5	32,393	High	2.2	Yes	11	3	8	3	10	0	5	1	7	1	1	2	2
26	Mattel Children's Hospital UCLA, Los Angeles	34.4	1.3	1	5	2,645	Low	2.5	Yes	10	3	8	2	10	1	5	1	7	1	1	4	2
27	Children's Mercy Hospitals, Kansas City, Mo.	34.2	0.9	3	7	13,140	High	2.8	Yes	10	3	7	7	9	0	5	1	7	1	0	5	1
28	Riley Hospital for Children, Indianapolis	34.0	0.9	2	3	6,024	High	1.8	Yes	11	3	8	6	10	0	5	1	7	1	1	4	2
29	UCSF Children's Hospital, San Francisco	34.0	2.3	2	5	5,300	Low	3.8	No	11	4	7	6	10	0	3	0	7	1	1	5	0
30	Arkansas Children's Hospital, Little Rock	33.8	0.9	1	3	15,807	High	2.2	No	11	4	8	1	10	0	5	0	7	1	1	5	0

Rankings are based on all of the above measures. Those **in bold** are displayed online and in the print magazine. Those *in italics* are only displayed online.

Pediatric Rankings 2009--Respiratory Disorders

2009 Rank	Hospital	U.S. News Score	Reputation (%)	Cystic fibrosis outcomes (higher is better)	Bloodstream-infection index (lower is better)	Infection-prevention index (higher is better)	Respiratory-procedure volume	Nurse staffing	Nurse Magnet hospital	Advanced clinical services	Key technologies (of 1)	Patient and family services (of 8)	Specialized clinics and programs (of 7)	Asthma Patient Volume	Clinical Support Services	Cystic Fibrosis Volume	ECMO Services	Fellowships	Lung transplant survival index (higher is better)	Parent and family involvement	Pediatric trauma center	Physician specialists	Public reporting of performance	Quality Improvement Activities	Research network participation	UNOS Lung Transplant Program
1	Children's Hospital of Philadelphia	100	53.6	4	3	7	684	6.5	Yes	16	1	8	7	22,048	10	280	2	2	3	5	1	5	1	5	2	2
2	Texas Children's Hospital, Houston	92.3	49.6	3	2	7	192	3.1	Yes	14	1	8	7	2,202	10	268	1	1	1	5	0	5	1	5	2	2
3	Cincinnati Children's Hospital Medical Center	88	46.1	4	1	4	1,963	3.8	Yes	14	1	7	7	1,780	9	218	2	1	0	5	1	5	1	5	3	0
4	Children's Hospital Boston	83	39.1	7	2	6	382	4.2	Yes	15	1	8	7	10,109	10	531	2	1	2	5	1	5	1	5	2	2
5	Children's Hospital, Denver	76.3	36	3	2	6	415	2.6	Yes	14	1	8	7	1,178	10	499	1	1	0	5	1	5	1	5	2	0
6	Johns Hopkins Children's Center, Baltimore	61.6	22.4	5	2	3	106	2.7	Yes	13	1	8	7	6,275	10	233	2	2	0	5	1	5	0	5	2	1
7	Children's Hospital of Pittsburgh of UPMC	60.5	19.6	6	2	3	568	3.2	No	15	1	8	7	9,109	10	280	1	2	3	5	1	5	1	5	2	2
8	St. Louis Children's Hospital-Washington University	60	17.7	3	2	7	448	2.9	Yes	15	1	8	7	3,341	10	237	1	2	2	5	1	5	1	5	3	2
9	Seattle Children's Hospital	59.7	22.1	5	3	6	444	2.4	Yes	15	1	7	5	1,404	10	205	1	1	0	5	0	5	1	5	2	0
10	Rainbow Babies, Cleveland	57.2	18.5	3	1	4	153	2.0	Yes	16	1	8	6	2,400	10	336	2	1	0	5	1	5	1	5	2	0
11	Univ. of N. Carolina Children's Hosp., Chapel Hill, N.C.	55.3	19.4	3	2	2	741	2.0	No	12	1	8	6	1,313	9	281	1	1	3	4	1	4	0	5	2	2
12	Children's Hospital Los Angeles	55.2	14.4	2	1	5	477	1.8	Yes	12	1	8	7	4,483	10	332	2	1	3	5	1	5	1	5	3	2
13	NY-Presbyterian Morgan Stanley-Komansky Children's Hosp.	44	3.8	7	2	5	231	3.0	No	14	1	8	7	5,450	10	194	2	2	0	5	1	5	1	5	3	2
14	Riley Hospital for Children, Indianapolis	43.7	6.3	4	2	3	826	1.8	Yes	14	1	8	7	2,748	10	377	2	1	0	5	1	5	1	5	2	0
15	Packard Children's Hosp., Palo Alto, Calif.	43.1	5.6	4	3	5	150	1.7	No	14	1	8	7	3,424	10	380	1	0	2	5	1	5	1	5	2	2
16	Nationwide Children's Hospital, Columbus, Ohio	41.8	2.1	3	1	6	324	3.6	Yes	15	1	8	7	2,114	10	458	2	1	3	5	1	5	1	5	2	2
17	Children's Healthcare of Atlanta	41.2	2.5	6	1	7	1,291	2.4	No	14	1	8	7	29,286	10	348	2	1	0	5	1	5	1	5	1	1
18	Children's Memorial Hospital, Chicago	40.1	1.9	5	2	6	762	3.2	Yes	15	1	8	5	5,054	10	212	1	1	0	5	1	5	1	5	3	0
19	National Jewish Health, Denver	39.9	18.3	NA	4	2	51	13.8	No	7	1	3	1	2,780	4	276	0	0	0	0	0	0	0	2	2	0
20	Univ. of Mich. C.S. Mott Children's Hospital, Ann Arbor	39.9	1.5	7	2	5	324	2.0	No	15	1	8	6	4,436	10	244	2	2	0	5	1	5	1	5	1	1
21	Mass. General Hospital for Children, Boston	39.5	3.1	3	1	5	471	1.9	Yes	16	1	8	7	2,200	10	115	2	0	0	5	1	5	1	5	1	0
22	Rady Children's Hospital, San Diego	38.7	1.1	5	1	5	295	3.3	No	14	1	8	7	13,790	10	92	2	0	0	5	1	5	1	5	3	0
23	Children's Hospital Cleveland Clinic	38.5	1	1	2	6	252	2.5	Yes	15	1	8	7	12,404	10	100	2	0	3	5	0	5	1	5	1	2
24	Children's Medical Center, Dallas	38.4	2.2	1	3	5	264	2.0	Yes	13	1	8	6	3,891	10	400	1	0	0	5	1	5	1	5	2	0
25	Children's Hospital of Wisconsin, Milwaukee	38.4	1.3	7	1	3	473	2.6	Yes	14	1	8	6	2,869	10	191	2	1	0	5	1	5	1	5	1	1
26	Children's National Medical Center, Washington, D.C.	38.4	1.5	6	1	5	637	2.3	No	14	1	8	4	5,465	10	121	2	1	0	5	1	5	1	5	2	0
27	Cook Children's Medical Center, Fort Worth	37.2	0.8	4	2	5	374	4.1	Yes	13	1	8	7	5,903	10	195	2	0	0	5	0	5	1	5	1	0
28	Schneider Children's Hospital, New Hyde Park, N.Y.	36.9	0.5	7	2	6	135	2.1	No	14	1	8	6	1,810	10	178	2	1	0	4	1	5	1	4	2	0
29	Children's Mercy Hospitals, Kansas City, Mo.	36.7	0.4	5	3	7	419	2.8	Yes	13	1	7	7	8,220	9	284	2	0	0	5	1	5	0	5	2	0
30	Kosair Children's Hospital, Louisville, Ky.	36.5	3.3	5	1	5	605	2.2	Yes	13	1	7	0	5,500	9	134	2	0	0	5	0	5	1	4	1	0

Rankings are based on all of the above measures. Those **in bold** are displayed online and in the print magazine. Those *in italics* are only displayed online.

Pediatric Rankings 2009--Urology

2009 Rank	Hospital	U.S. News Score	Reputation (%)	Bloodstream infection index (lower is better)	Infection prevention index (higher is better)	Patient volume	Surgical Volume	Nurse staffing	Nurse Magnet hospital	Key technologies (of 5)	Patient and family services (of 8)	Laparoscopic Surgery	Specialized clinics and programs (of 4)	Clinical Support Services	Fellowships	Parent and family involvement	Pediatric trauma center	Physician specialists	Public reporting of performance	Quality Improvement Activities	Stone Removal Volume
1	Children's Hospital of Philadelphia	100.0	78.9	3	7	2,096	High	6.5	Yes	5	8	Yes	4	10	1	5	1	5	1	5	53
2	Children's Hospital Boston	91.7	70.5	2	6	2,381	High	4.2	Yes	5	8	Yes	4	10	0	5	1	5	1	5	91
3	Riley Hospital for Children, Indianapolis	73.4	48.0	2	3	2,368	High	1.8	Yes	5	8	Yes	4	10	1	5	1	5	1	4	72
4	Johns Hopkins Children's Center, Baltimore	60.6	37.5	2	3	675	Med.	2.7	Yes	3	8	Yes	3	10	0	5	1	5	0	3	19
5	Cincinnati Children's Hospital Medical Center	53.9	23.5	1	4	2,445	High	3.8	Yes	5	7	Yes	3	9	1	5	1	5	1	5	49
6	Monroe Carell Jr. Children's Hospital, Nashville	53.8	22.2	2	5	1,636	High	3.0	Yes	5	8	Yes	4	10	1	5	0	5	1	5	36
7	Children's Memorial Hospital, Chicago	51.5	20.2	2	6	1,158	Med.	3.2	Yes	5	8	Yes	4	10	1	5	1	5	1	5	19
8	Seattle Children's Hospital	48.9	16.6	3	6	1,191	High	2.4	Yes	5	7	Yes	4	10	1	5	0	5	1	5	30
9	Texas Children's Hospital, Houston	46.8	14.6	2	7	1,672	Med.	3.1	Yes	5	8	Yes	3	10	1	5	0	5	1	4	30
10	Children's Medical Center, Dallas	38.8	4.0	3	5	1,631	High	2.0	Yes	5	8	Yes	4	10	1	5	1	5	1	5	79
11	St. Louis Children's Hospital-Washington University	38.2	5.3	2	7	1,240	Med.	2.9	Yes	5	8	Yes	4	10	0	5	1	5	1	5	21
12	Nationwide Children's Hospital, Columbus, Ohio	38.1	1.6	1	6	1,099	High	3.6	Yes	5	8	Yes	4	10	1	5	1	5	1	5	51
13	Rady Children's Hospital, San Diego	37.5	6.2	1	5	1,685	Med.	3.3	No	5	8	Yes	2	10	0	5	1	5	1	4	32
14	NY-Presbyterian Morgan Stanley-Komansky Children's Hosp.	37.0	4.3	2	5	1,553	High	3.0	No	5	8	Yes	4	10	0	5	1	5	1	5	18
15	Children's Hospital Cleveland Clinic	36.5	3.7	2	6	900	High	2.5	Yes	5	8	Yes	3	10	0	5	0	5	1	5	18
16	Mattel Children's Hospital UCLA, Los Angeles	36.1	6.6	1	5	572	Med.	2.5	Yes	5	8	No	2	10	0	5	1	5	1	0	66
17	Children's Hospital of Pittsburgh of UPMC	35.7	2.5	2	3	1,710	High	3.2	No	5	8	Yes	4	10	0	5	1	5	1	5	55
18	Children's Healthcare of Atlanta	35.1	4.0	1	7	3,538	High	2.4	No	5	8	Yes	2	10	0	5	1	5	1	0	26
19	Children's National Medical Center, Washington, D.C.	34.8	3.5	1	5	1,338	Med.	2.3	No	4	8	Yes	4	10	0	5	1	5	1	5	2
20	Children's Hospital of Wisconsin, Milwaukee	34.6	3.8	1	3	518	Low	2.6	Yes	5	8	Yes	4	10	0	5	1	5	1	4	6
21	Children's Mercy Hospitals, Kansas City, Mo.	34.5	1.6	3	7	1,046	High	2.8	Yes	5	7	Yes	4	9	0	5	1	5	0	5	27
22	All Children's Hospital, St. Petersburg, Fla.	34.0	1.6	3	4	1,591	Med.	3.3	No	5	7	Yes	4	10	0	5	1	5	1	5	94
23	Mayo Children's Hospital Rochester, Minn.	33.8	2.6	2	2	909	High	3.2	Yes	5	8	Yes	4	10	0	5	1	4	1	4	7
24	Children's Hospital Los Angeles	33.7	1.9	1	5	660	Med.	1.8	Yes	5	8	Yes	3	10	0	5	1	5	1	5	1
25	Schneider Children's Hospital, New Hyde Park, N.Y.	33.6	1.7	2	6	1,800	High	2.1	No	5	8	Yes	3	10	0	4	1	5	1	3	29
26	UCSF Children's Hospital, San Francisco	33.6	3.5	2	5	1,024	Med.	3.8	No	4.0	7	Yes	3	10	0	3	0	5	1	4	22
27	Primary Children's Medical Center, Salt Lake City	33.3	0.0	3	5	1,590	High	4.3	No	5	8	Yes	3	10	0	5	1	5	1	4	42
28	Children's Hospital, Denver	32.9	0.0	2	6	1,181	Low	2.6	Yes	5	8	Yes	4	10	0	5	1	5	1	5	11
29	Children's Hospital of Michigan, Detroit	32.8	0.9	2	5	590	Med.	2.2	Yes	5	8	Yes	2	10	0	5	1	5	1	5	16
30	Children's Hospital, Oklahoma City	32.8	2.4	1	4	1,575	High	1.4	No	5	5	Yes	3	10	0	4	1	5	1	2	60

Rankings are based on all of the above measures. Those **in bold** are displayed online and in the print magazine. Those *in italics* are only displayed online.

Appendix E

Honor Roll

Pediatric Honor Roll 2009

The following hospitals are listed in the honor roll for ranking in the top 30 in all 10 pediatric specialties. Hospitals are listed in alphabetical order.

Hospital
Children's Hospital, Denver
Children's Hospital Boston
Childrens Hospital Los Angeles
Children's Hospital of Philadelphia
Children's Medical Center, Dallas
Cincinnati Children's Hospital Medical Center
Johns Hopkins Children's Center, Baltimore
NY-Presbyterian Morgan Stanley-Komansky Children's Hosp.
St. Louis Children's Hospital-Washington University
Texas Children's Hospital, Houston

