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Methodology: U.S. News & World Report Best Hospitals 2015-16

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Executive Summary

U.S. News & World Report began publishing hospital rankings in 1990 to identify the best medical centers for the most difficult patients—those whose illnesses pose unusual challenges because of underlying conditions, procedure difficulty or other medical issues that add risk. More than one factor can be in play for particular patients. Originally named “America’s Best Hospitals” but now simply “Best Hospitals,” the rankings have appeared annually since 1990. The focus on the most difficult patients has not changed. U.S. News introduced a complementary set of ratings in May 2015, however, to evaluate hospital performance in five lower-acuity procedures and complications, “Best Hospitals for Common Care.” Additional cohorts are planned for future releases.)

For the Best Hospitals rankings, medical centers are assessed in 16 different specialties, from Cancer to Urology. For 12 of the 16 specialties, an extensive data-driven analysis combines measures of performance in three primary dimensions of healthcare: structure, process and outcomes. Rankings in the four remaining specialties are based on hospital reputation, determined by a physician survey.

Structural measures include hospital volume, technology and other resources that define the hospital environment. The source for the majority of structural measures is the American Hospital Association (AHA) Annual Survey, supplemented by additional resources such as the National Cancer Institute’s list of designated cancer centers.

Process is represented mostly by a hospital’s reputation for developing and sustaining a system that delivers high-quality care, determined by a survey of board-certified physicians. It also shares with the outcomes dimension an indicator of patient safety; the extent to which patients are safe is largely a function of process. The rationale is that harm to patients reflects both process performance and an outcomes result.

Outcomes performance relies mostly on survival (i.e., risk-adjusted mortality). These data come from the Medicare Provider Analysis and Review (MedPAR) database maintained by the Centers for Medicare & Medicaid Services (CMS). As noted above, patient safety is included in both outcomes and in process.

All community hospitals included in the AHA universe are automatically considered for ranking. Applying, submitting a request or performing another action is unnecessary.

Initial eligibility requires a hospital to meet at least one of four requirements: to be a teaching hospital, be affiliated with a medical school, have at least 200 beds, or have at least 100 beds as well as four or more medical technologies out of eight deemed significant for this patient population.

Eligibility in a particular specialty requires hospitals to meet a specialty-dependent volume/discharge threshold. Setting discharge minimums ensures that ranking-eligible hospitals have demonstrable experience in treating a set number of complex cases in a given specialty. A hospital that does not meet the minimum requirement in a specialty is still eligible if nominated by at least 1% of the physicians who responded to the survey.

Rankings in Ophthalmology, Psychiatry, Rehabilitation and Rheumatology do not depend on hard data. In these four specialties, hospitals are ranked solely on reputation as determined by the physician survey cited above.

For the 2015-16 rankings, 137 of the approximately 5,000 U.S. hospitals evaluated were ranked in at least one specialty. Fifteen of the 137 qualified for the Honor Roll by ranking very high in six or more specialties. In the 12 data-driven specialties, very high was defined as ranking among the top 20 hospitals. In the four reputation-driven specialties, very high was defined as ranking among the top 10.

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I. Introduction

For families facing a serious or complex medical problem, the choice of hospital can be critical. Yet decision tools beyond a doctor's recommendation to inform patients and families were unavailable until 1990, when U.S. News & World Report introduced "America's Best Hospitals." The initial assessment took the form of alphabetically ordered lists of hospitals that were rated – not ranked – in 12 specialties. In 1991 and thereafter, hospitals were ranked.

The 2015-16 Best Hospitals rankings were drawn from a universe of 4,716 facilities.* The basis for the defined universe was the American Hospital Association's (AHA's) Annual Survey of Hospitals, which also provided some rankings data. Under rare circumstances, two or more AHA hospitals were combined for ranking purposes because they function as one in one or more specialties but report separately to AHA.

In 12 of the 16 adult specialty rankings, hospitals received a composite score based on data from multiple sources. (Best Hospitals for Common Care,[†] which was launched in May 2015 and rates hospital performance in a set of frequently encountered procedures and conditions, and Best Children's Hospitals,[‡] which ranks hospitals in 10 pediatric specialties, are separate projects.) Both ranked and unranked hospitals, with substantial data, are published online at www.usnews.com/besthospitals/rankings. Ranked hospitals and somewhat lesser data are published in a print edition.

Central to understanding the rankings is that they were developed and the specialties chosen to help consumers determine which hospitals provide the best care for the *most serious or complicated* medical conditions and procedures—pancreatic cancer, for example, or replacement of a heart valve in an elderly patient with comorbidities. Relatively commonplace conditions and procedures, such as uncomplicated heart bypass surgery or knee replacement, are the focus of Best Hospitals for Common Care, not Best Hospitals.

The underlying methodology for the Best Hospitals rankings was created by the National Opinion Research Center (NORC) at the University of Chicago in the early 1990s. NORC collected the data and compiled the rankings from 1993 to 2004. RTI International[§] in Research Triangle Park, N.C., has produced the rankings from 2005 to the present. Over time, the methodology has

* Military installations, federal institutions, rehabilitation and acute long-term care facilities and institutional hospital units (e.g., prison hospitals, college infirmaries) are excluded from the data-driven specialties.

[†] More information available at www.usnews.com/besthospitals

[‡] More information available at www.usnews.com/besthospitals.

[§] RTI International is a trade name of Research Triangle Institute.

been refined and extended – by incorporating patient safety data in 2009, for example. Large-scale enhancements are always under consideration.

The roster of specialties has been revised over the years as well. AIDS care, for example, was among the specialties in the initial 1990 ratings, but it was dropped in 1998 because it was clear that most AIDS care had shifted to an outpatient setting. Pediatrics was moved out of the Best Hospitals universe in 2007 to establish separate Best Children’s Hospitals rankings. No specialties were added or removed for 2015-16.**

For 2015-16, hospitals were ranked in 16 adult specialties:

- | | |
|---------------------------------|----------------------------|
| • Cancer | • Neurology & Neurosurgery |
| • Cardiology & Heart Surgery | • Ophthalmology |
| • Diabetes & Endocrinology | • Orthopedics |
| • Ear, Nose & Throat | • Pulmonology |
| • Gastroenterology & GI Surgery | • Psychiatry |
| • Geriatrics | • Rehabilitation |
| • Gynecology | • Rheumatology |
| • Nephrology | • Urology |

A. Index of Hospital Quality

As in previous years, rankings in 12 of the 16 specialties were based largely on hard data. The data-driven rankings assign a score—the Index of Hospital Quality (IHQ)—to hospitals in all specialties other than Ophthalmology, Psychiatry, Rehabilitation and Rheumatology.

The IHQ reflects performance in three interlocked dimensions of healthcare: structure, process and outcomes. The relationship was described by Avedis Donabedian in 1966 in a model whose fundamentals have become widely accepted.¹⁻⁵

Structure refers to hospital resources related directly to patient care. Examples factored into the Best Hospitals rankings include intensity of nurse staffing, availability of desirable technologies and patient services and also special status conferred by a recognized external organization, such as designation as a Nurse Magnet hospital by the American Nurse Credentialing Center (ANCC) or as a National Cancer Institute (NCI) cancer center by the National Institutes of Health (NIH).

** Because the rankings are released in the middle of the year, U.S. News includes that year and the one following when referring to them. This applies to Best Children’s Hospitals as well.

Healthcare also is shaped by the *process* of delivering care, encompassing diagnosis, treatment, prevention and patient education. Process is represented by a hospital's reputation for developing and sustaining a system that delivers high-quality care.

Structure and process are related to *outcomes*. Death is self-evident. Outcomes have been extended in recent years, however, to include harm to patients, incidence of preventable readmissions and other consequences of inadequate care. Outcomes are typically measured by *risk-adjusted mortality* (the likelihood of death when the patient's condition and the complexity of the case are taken into account) and by related indicators such as complications, readmissions, patient safety and infection rates.

Available metrics do not always conform to a single dimension. Complications of care that compromise patient safety, for example, are outcomes that also reflect a flaw in the process of delivering care and may be affected by structural elements. In the Best Hospitals methodology, patient safety is therefore considered a fourth component, evaluated separately from structure, process and outcomes.

Many of the individual measures in the IHQ come from secondary data sources such as the AHA Annual Survey Database, which provides information about various structural hospital characteristics.

The four major components of the IHQ rankings are briefly described below and in more detail later.

Structure

These specialty-specific elements represent volume (i.e., discharges), technology and other features that characterize the hospital environment. The source for many of these data elements in the 2015-16 rankings was the most recent AHA Annual Survey Database from fiscal year (FY) 2013. Volume data were taken from the Medicare Provider Analysis and Review (MedPAR) database maintained by the Centers for Medicare & Medicaid Services (CMS). This database contains information on all fee-for-service Medicare beneficiaries who use hospital inpatient services.

Process

The process component of the IHQ score is represented by a hospital's reputation. For these rankings, the concept of reputation speaks to an institutional ability to develop and sustain a system that delivers high-quality care to especially challenging patients.

A hospital's reputational score is based on the average of responses from the three most recent annual surveys of board-certified physicians conducted for the Best Hospitals rankings, which for the 2015-16 rankings were conducted in 2013, 2014 and 2015.

Prior to the 2014, a random sample of 3,200 board-certified physicians was selected each year from the American Medical Association (AMA) Physician Masterfile, a database of more than 850,000 physicians.^{††} In 2014, the sample was increased to over 50,000 and in 2015 to over 85,000. The 2015 sample was drawn from the Doximity Masterfile. Similar to the AMA Physician Masterfile, Doximity's comprehensive Physician Database includes every U.S. physician. More information on the changes to the sampling approach for the physician survey can be found in **Section II.D**.

The physician sample was stratified by census region—West, Northeast, South and Midwest (http://www.census.gov/geo/maps-data/maps/pdfs/reference/us_regdiv.pdf)—and by specialty to ensure appropriate representation. The final aggregated sample included both federal and nonfederal medical and osteopathic physicians in all 50 states and the District of Columbia.

The surveyed physicians were asked to nominate the hospitals in their specific field of care, irrespective of expense or location, they consider best for patients with serious or difficult conditions. Up to five hospitals could be listed. (The 2015-16 questionnaire and associated contact materials are shown in **Appendix A**.)

Outcomes

The primary outcomes measure in the 12 data-driven rankings is mortality 30 days after admission. Like the volume indicator, the mortality measure is based on MedPAR data. For each hospital and specialty, Truven Health Analytics (formerly the Healthcare Division of Thomson Reuters) computed an adjusted mortality rate based on observed and expected mortality rates using the All Patient Refined Diagnosis Related Group (APR-DRG) and Medicare Severity (MS) Grouper software created by 3M Health Information Systems.⁶ APR-DRGs and MS-DRGs use the patient's principal and secondary diagnoses to adjust the value for expected deaths by severity of illness. The method was applied to the three most recent fiscal years (FY2011, FY2012 and FY2013) of Medicare claims submitted for reimbursement to CMS.

Patient Safety

Patient safety is related to the process of healthcare delivery and is used to determine instances where patients may be harmed or put at risk but do not die. The data source for the Best

^{††} The database does not include medical students, residents, retirees or deceased physicians.

Hospitals patient safety measure was the same 3-year sample from the MedPAR data set that was used for volume and mortality analyses in the Best Hospitals rankings. For the 2015-16 rankings, the MedPAR files used were for federal FY 2011, 2012 and 2013 files. The patient safety score was developed by RTI using the framework described in the *Patient Safety Quality Indicators Composite Measure Workshop Final Report*,⁷ with project-specific modifications. Data were analyzed using the AHRQ PSI grouper software version 4.5a.

Weighting

When the data-driven methodology was created, structure, process and outcomes received equal weight. When the patient safety measure was introduced in 2009, its weight was evenly split between outcomes and process. Because the number of patient safety elements rose over time, however, their collective weight was increased for 2014-15 to give patient safety more (and reputation less) of the overall weight. Weightings did not change in the 2015-16 methodology. They are shown in *Table 1*.

Table 1. 2015-16 Overall Weight by Component

Component	Weight (%)
Outcomes	32.5
Structure	30.0
Process	27.5
Patient Safety	10.0

B. Reputation-Only Rankings

In 4 of the 16 specialties—Ophthalmology, Psychiatry, Rehabilitation and Rheumatology—the rankings reflect the results of the reputational survey alone. Many structural and outcomes measures are not applicable, because care is largely delivered on an outpatient basis and poses a very small risk of death. For this report, these specialties are referred to as *reputation-only specialties* and the associated rankings as *reputation-only rankings*.

C. Report Outline

The remainder of this report is structured as follows:

- *Section II* describes the IHQ components in detail. (For a more detailed review of the foundation, development and use of the individual measures and the composite index, see “Best Hospitals: A Description of the Methodology for the Index of Hospital Quality.”¹⁰)

- **Section III** describes the process used to develop the rankings for the four reputation-only specialties.
- **Section IV** presents the Honor Roll, an additional classification that denotes excellence across a broad range of specialties.
- **Section V** summarizes changes in the methodology from 2005 to the present.
- **Section VI** describes improvements under consideration.

II. Index of Hospital Quality

This section describes hospital eligibility criteria and the procedures used to derive the IHQ for the 12 IHQ-driven specialties. Hospitals ranked in 2015-16 as a result of new or merged corporate entities in the AHA database are treated as single units and are listed as such in this report.

A. Eligibility

All 4,716 community hospitals included in the FY2013 AHA universe were automatically considered for ranking;^{##} no request, application or other action was necessary. For the IHQ-driven specialties, the methodology involved two stages of eligibility criteria; hospitals had to satisfy the requirements of each stage to be eligible in a given specialty.

Stage 1. A hospital was initially eligible if it met any of the following criteria:

- Member, Council of Teaching Hospitals (COTH);
- Medical school affiliation (AMA or American Osteopathic Association);
- At least 200 hospital beds set up and staffed;
- Availability of at least four of eight important key technologies (see **Technology**) *and* at least 100 hospital beds set up and staffed.

Hospitals that met a Stage 1 requirement and responded to the AHA Annual Survey of Hospitals in 2011 and 2012 but not in 2013 remained eligible. For such hospitals, we used survey data from 2012. Nonresponders lacking data from the current survey and one of the previous two surveys were evaluated without AHA data. A total of 2,265 hospitals successfully passed the first stage of the eligibility process.

^{##} Military installations, federal institutions, rehabilitation and acute long-term care facilities and also institutional hospital units (e.g., prison hospitals, college infirmaries) were excluded.

Stage 2. To be eligible for ranking in a particular specialty, hospitals needed a specified number of discharges in a defined list of specialty-specific diagnoses submitted for CMS reimbursement in FY2011, FY2012 and FY2013 combined. If the calculated minimum total discharge value for a specialty was lower than 25, then 25 was set as the minimum for that specialty to ensure a sufficient number of discharges.^{§§} Since 2002, specific proportions of medical and surgical discharges have been specified for Cancer; Gastroenterology & GI Surgery; Ear, Nose & Throat; Gynecology; Neurology & Neurosurgery; Orthopedics, and Urology. For these specialties, we calculated the median ratio of surgical-to-total discharges for hospitals meeting the total discharge threshold. In each specialty, the median ratio was multiplied by the calculated minimum total discharge threshold to determine the minimum surgical discharges needed to be considered eligible.

Setting discharge minimums involving complex care ensures that ranking-eligible hospitals have demonstrable experience in treating adequate numbers of challenging cases in a given specialty. As in past years, the discharge minimums this year included only cases that met the minimum severity of illness thresholds set by the project using APR-DRGs. Minimums for all specialties will be reviewed for future rankings and adjusted as needed.

A hospital with below-minimum volume was considered eligible for a specialty if it had a reputation score of 1% or greater. **Table 2** presents discharge volumes and numbers of hospitals meeting volume criteria for the IHQ-driven specialties. **Table 2** also shows the total number of hospitals in each specialty that did not meet the volume eligibility but became eligible because they had a reputation score that was 1% or higher.

^{§§} Prior to RTT's involvement in the rankings in 2005, the minimum number of surgical discharges in Cardiology & Heart Surgery was set to 500. For hospitals meeting the minimum, a ratio of total-to-surgical discharges was calculated. The median of this ratio was then multiplied by 500 to determine a minimum number for all discharges.

Table 2. Minimum Discharges by Specialty

Specialty	Minimum Discharges, Total (Surgical)	Number of Eligible Hospitals Based on Minimum Discharges	Additional Hospitals with $\geq 1\%$ Reputation Score	Final Total Eligible
Cancer	241 (44)	901	1	902
Cardiology & Heart Surgery ^a	1349 (500)	694	0	694
Diabetes & Endocrinology	177 (0)	1,113	1	1,114
Ear, Nose & Throat	25 (3)	736	2	738
Gastroenterology & GI Surgery	567 (145)	1,572	0	1,572
Geriatrics ^b	2465 (0)	1,537	1	1,538
Gynecology	25 (8)	1,056	3	1,059
Nephrology	214 (0)	1,669	0	1,669
Neurology & Neurosurgery	322 (44)	1,359	0	1,359
Orthopedics	337 (310)	1,646	0	1,646
Pulmonology	1083 (0)	1,671	3	1,674
Urology	43 (19)	1,535	1	1,536
Total (unique hospitals) ^c	Not Applicable	1,895	2	1,897

^a In addition to discharge- or reputation-based eligibility, a hospital must offer cardiac intensive care, adult interventional cardiac catheterization and adult cardiac surgery to be considered.

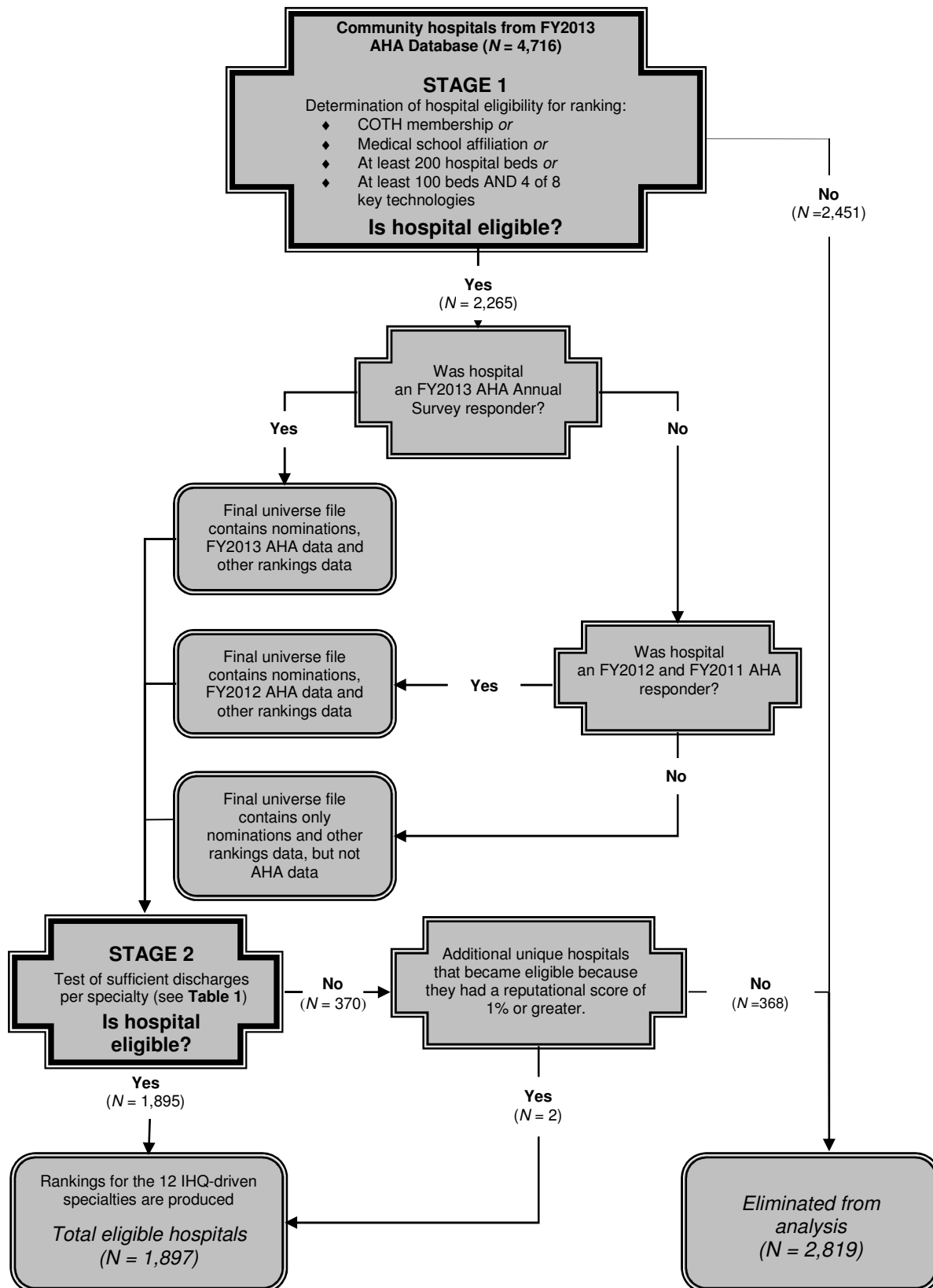
^b In addition to discharge- or reputation-based eligibility, a hospital must offer at least one of the following services to be considered: arthritis treatment center, adult day care program, patient representative services, geriatric services, meals on wheels, assisted living, transportation to health facility or Alzheimer's center service.

^c The total values are not sums. The same hospitals may be eligible for multiple specialties. This line represents the total unique hospitals in each category across all specialties.

A total of 1,895 hospitals met the volume criteria in at least one specialty, and 2 other hospitals that were previously not eligible in any specialty became eligible because they had a 1% or higher reputation score in at least one specialty. In all, 1,897 unique hospitals were deemed eligible for at least 1 of the 12 IHQ-driven specialties under the full criteria.

We then conducted separate analyses for each specialty to rank the top 50 hospitals in each IHQ specialty and provide IHQ scores for all evaluated hospitals. **Figure 1** illustrates the eligibility and analysis process for the IHQ-driven specialties, as described in the steps above.

Figure 1. Eligibility and Analysis Process, IHQ-Driven Specialties



B. Structure

The structural dimension defines the tools, human and otherwise, available at hospitals for treating patients. Healthcare research overwhelmingly supports the use of a structural measure to assess quality of care. However, no prior research has identified a structural indicator that summarizes all others or that adequately represents the structural dimension construct on its own. Therefore, the structural component is represented by a composite variable consisting of different specialty-specific measures with different weights.

For the 2015-16 rankings, the FY2013 AHA Annual Survey Database was the source of most structural elements. Additional components came from external organizations including NCI, ANCC, Foundation for the Accreditation of Cellular Therapy (FACT), National Institute on Aging (NIA), National Association of Epilepsy Centers (NAEC) and CMS.

AHA Annual Survey

AHA has surveyed hospitals annually since 1946. The AHA Annual Survey of Hospitals is the most comprehensive and dependable database of information on institutional healthcare,¹¹ with an average annual response rate of 85 percent. The database contains hospital-specific data items for more than 6,500 hospitals and healthcare systems. More than 700 data fields cover organizational structure, personnel, hospital facilities and services and financial performance. (For the specific mapping of Best Hospitals variables to AHA data elements, see *Appendix B*.)

Hospitals that did not respond to the 2013 AHA annual survey but did respond to the 2012 survey were evaluated using their 2012 responses. Hospitals that did not respond to the AHA survey in either year were evaluated without AHA data, receiving no points for measures in the AHA annual survey.

The following items from the AHA Annual Survey Database provided most of the structural score for the IHQ specialties.

Advanced Technologies

The elements in this index are reviewed every year in each specialty to remain consistent with the key technologies and advanced care expected from a “best hospital.” In the 2015-16 rankings, credit was awarded to hospitals that either (1) own or provide a specified service at the hospital or its subsidiaries, (2) provide the service through their health system (in their local community) or (3) provide the service through formal arrangements with local institutions not in their health system.

Of the 15 technologies that are relevant in one or more specialties, 8 comprise the Technology index that is one of the eligibility doorways: hospitals that provide at least 4 of the 8 relevant technologies and have 100 beds or more are eligible for ranking (see ***Section II.A. Eligibility***).

Brief descriptions of the technologies in the 2015-16 index follow. The definitions are taken largely from the AHA Annual Survey, expanded as necessary:

- **Ablation of Barrett’s esophagus.** A premalignant condition that can lead to adenocarcinoma of the esophagus. The nonsurgical ablation of premalignant tissue in Barrett’s esophagus is done by the application of thermal energy or light through an endoscope passed from the mouth into the esophagus.
- **Computer-assisted orthopedic surgery).** A group of orthopedic devices that produce three-dimensional images to assist in surgical procedures.
- **Diagnostic radioisotope services.** A procedure that uses radioactive isotopes (radiopharmaceuticals) as tracers to detect abnormal conditions or diseases.
- **Endoscopic retrograde cholangiopancreatography.** A procedure in which a catheter is introduced through an endoscope into the bile and pancreatic ducts. Injection of contrast material permits detailed x-ray of these structures. The procedure is used diagnostically as well as therapeutically to relieve obstruction or remove stones.
- **Endoscopic ultrasound.** A specially designed endoscope that incorporates an ultrasound transducer to obtain detailed images of organs in the chest and abdomen. The endoscope can be passed through the mouth or anus. Combined with needle biopsy, the procedure can assist in diagnosis of disease and staging of cancer.
- **Full-field digital mammography.** A procedure that combines x-ray generators and tubes used in analog screen-film mammography with a detector plate that converts the x-rays into a digital signal to help diagnose breast cancer.
- **Image-guided radiation therapy.** An automated system that provides high-resolution x-ray images to pinpoint tumor sites adjusts patient positioning as necessary and completes treatment within the standard treatment time slot, allowing for more effective cancer treatments.
- **Intensity-modulated radiation therapy (IMRT).** A type of radiation therapy used to treat tumors. IMRT manipulates beams of radiation to the shape of the tumor. Beams of varying intensity can be used to radiate the tumor with precision. By using IMRT, physicians can focus on the tumor and avoid exposing healthy tissue to radiation, which causes a variety of negative treatment side effects.

- **Multislice spiral computed tomography (CT).** A procedure that uses x-rays and data processing to produce multiple narrow slices that can be recombined into detailed three-dimensional pictures of the internal anatomy.^{***}
- **PET/CT scanner.** A machine that combines positron emission tomography (PET) and CT capabilities in one device to provide metabolic functional information and images of physical structures in the body for diagnostics and monitoring chemotherapy, radiotherapy and surgical planning.
- **Robotic surgery.** The use of computer-guided imaging and manipulative devices to perform surgery without the surgeon's direct intervention.
- **Shaped-beam radiation.** A noninvasive procedure that delivers a therapeutic dose of radiation to a defined area of a tumor to shrink or destroy cancerous cells.
- **Single-photon-emission CT.** A nuclear medicine imaging technology that combines radioactive material with CT imaging to highlight blood flow to tissues and organs.
- **Stereotactic radiosurgery.** A radiotherapy modality that delivers a high dosage of radiation to a discrete treatment area in as few as one treatment session. Variants include Gamma knife and Cyberknife.
- **Transplant services.** Includes Medicare-approved organ transplant programs in heart, liver, lung or kidney transplant recognized by CMS. In addition, hospitals listed as bone marrow and tissue transplant centers by AHA are recognized. Transplant services are specific to the specialty. In the Cancer specialty, transplant services include bone marrow and other tissue transplants; Gastroenterology & GI Surgery includes liver transplant; Cardiology & Heart Surgery includes heart transplant and tissue transplant; Nephrology includes kidney transplant; Pulmonology includes lung transplant; Orthopedics includes tissue transplant.

Specialty-specific mixes of key technologies are used in computing the U.S. News scores (see *Section II.F. Calculation of the Index of Hospital Quality*). *Table 3* presents the complete list of key technologies considered for each specialty in 2015-16.

^{***} The indicator for multislice spiral CT includes both standard (less than 64 slices) and advanced (64 or more slices) versions of the technology. Hospitals can receive credit for either version.

Table 3. Technologies by Specialty

Technology	Technology Index	Cancer	Cardiology & Heart Surgery ^{†††}	Diabetes & Endocrinology	Ear, Nose & Throat	Gastroenterology & GI Surgery	Geriatrics	Gynecology	Nephrology	Neurology & Neurosurgery	Orthopedics	Pulmonology	Urology
Ablation of Barrett's esophagus						•							
Computer-assisted orthopedic surgery											•		
Diagnostic radioisotope services	•			•		•			•	•		•	•
Endoscopic retrograde cholangiopancreatography						•							
Endoscopic ultrasound						•							
Full-field digital mammography	•	•						•					
Image-guided radiation therapy	•	•		•		•		•	•	•		•	•
Intensity-modulated radiation therapy		•											•
Multislice spiral CT	•		•						•			•	
PET/CT scanner	•	•	•	•				•	•	•		•	•
Robotic surgery	•	•	•					•	•				•
Shaped-beam radiation		•											
Single-photon-emission CT	•		•							•			
Stereotactic radiosurgery	•	•		•	•	•		•	•	•		•	•
Transplant services		•	•			•			•		•	•	
Total Elements	8	8	6	4	1	7	0	5	7	5	2	6	6

• Included in the index for the specialty.

^{†††} Five measures are listed, but hospitals can receive up to six points in Cardiology & Heart Surgery because two points are possible for transplant services—one point for heart transplant services, and one point for tissue transplant services.

Patient Volume

The volume measure reflects medical and surgical discharges in indicated specialty-specific MS-DRG groupings submitted for CMS reimbursement in FY2011, FY2012 and FY2013 combined. The list of MS-DRGs in each specialty is displayed in **Appendix C**. Volume is part of the structural score in all 12 IHQ-driven specialties. Volumes include all cases, including transfers, that appeared in MedPAR for the specified MS-DRGs that met the minimum severity thresholds (see **Appendix C**).

To reduce the effect of outliers, we adjusted raw specialty volumes with values above the 75th percentile. Hospitals with volumes at or above the 75th percentile in each specialty (see **Table 4**) were assigned an *adjusted volume*, created from a weighted average of the hospital's observed volume and the volume for all hospitals at or under the 75th percentile. This adjustment factor was equal to the average volume for all hospitals at or below the 75th percentile. For each percentile above the 75th, the weight applied to the adjustment factor was increased by a value of .01. Therefore if:

a=amount over the 75th percentile (.01, .02... .25),
b=average volume for hospitals at or under the 75th percentile, and
c=an individual hospital's raw volume,

Then the volume for the rankings = $a*b + (1-a)*c$.

The raw volume is the value displayed in print, regardless of adjustment.

Table 4. Discharge Distribution by Specialty

Specialty	Minimum Volume	75th Percentile Volume	Maximum Volume
Cancer	192	817	6,838
Cardiology & Heart Surgery	1,352	4,888	18,900
Diabetes & Endocrinology	166	416	1,859
Ear, Nose & Throat	11	73	525
Gastroenterology & GI Surgery	568	2,096	12,886
Geriatrics	1,921	9,363	45,861
Gynecology	16	132	723
Nephrology	214	868	5,747
Neurology & Neurosurgery	328	1,788	8,453
Orthopedics	337	1,669	9,952
Pulmonology	864	3,586	14,385
Urology	36	245	1,957

Nursing Intensity

The nurse staffing index is a ratio that reflects the combined intensity of inpatient and outpatient nursing. The numerator is the total number of on-staff registered nurses (RNs), expressed as full-time equivalents (FTEs), for example, two half-time nurses are the equivalent of one FTE. Only nurses with an RN degree from an approved nursing school and current state registration are considered.

The denominator is the adjusted average daily census of patients.

The measure estimates the total amount of care devoted to both inpatients and outpatients by reflecting days of inpatient care plus the estimated volume of outpatients. This index gives more weight to inpatient care while recognizing that outpatient care represents most hospital visits. The components of this index are derived from the AHA database. As with volume, extreme values (i.e., the top 25%) were adjusted to reduce the influence of wide variation.

Trauma Center

In a U.S. News survey of board-certified physicians, respondents ranked the presence of an emergency room and status as a Level 1 or Level 2 trauma care provider high on a list of hospital quality indicators. Physicians in nine specialties ranked trauma center status as one of the top five indicators of quality. Their recommendations and the resulting high factor loadings supported inclusion of a trauma measure in Ear, Nose & Throat, Gastroenterology & GI Surgery, Cardiology & Heart Surgery, Nephrology; Neurology & Neurosurgery, Orthopedics, Pulmonology and Urology.

Two variables in the AHA Annual Survey Database provide the required data. Both must be answered. One variable indicates the presence of a state-certified trauma center in the hospital (as opposed to trauma services provided only as part of a health system or joint venture). The second variable indicates trauma center level. The trauma center indicator is dichotomous. To receive credit of 1 point, a hospital must be a Level 1 or Level 2 trauma center^{###}. The AHA defines Level 1 as “a regional resource trauma center, which is capable of providing total care for every aspect of injury and plays a leadership role in trauma research and education.”¹¹ Level 2 is “a community trauma center, which is capable of providing trauma care to all but the most severely injured patients who require highly specialized care.”¹¹

^{###} The top two levels of this designation are equivalent to the top two levels of the American College of Surgeons trauma center certification and may be used by hospitals in states that do not have state-certified trauma centers.

Patient Services

Patient services encompass major conveniences for patients. Among others, they include translators, advanced or especially sophisticated care, and services either considered clinically essential in a comprehensive, high-quality hospital, such as cardiac rehabilitation, or reflective of forward thinking and sensitivity to community needs, such as genetic testing or counseling. All items are taken from the AHA Annual Survey.

Brief descriptions of patient services included in the 2015-16 index follow. The definitions are taken from the AHA Annual Survey of Hospitals (and expanded as necessary).

- **Alzheimer's center.** A facility that cares for individuals with Alzheimer's disease and the patients' families through an integrated program of clinical services, research and education. As with all items in this survey, each hospital determines whether the service is offered, based on the AHA description. This index differs from designation as an NIA Alzheimer's center. That is a higher-order designation and is treated as a separate structural measure in Geriatrics and in Neurology & Neurosurgery.
- **Arthritis treatment center.** A center specifically equipped and staffed for diagnosing and treating arthritis and other joint disorders.
- **Cardiac rehabilitation.** A medically supervised program to help heart patients recover quickly and improve their overall physical and mental functioning in order to reduce risk of another cardiac event or to keep a current heart conditions from worsening.
- **Fertility clinic.** A specialized program set in an infertility center that provides counseling and education, as well as advanced reproductive techniques.
- **Genetic testing/counseling.** A service equipped with adequate laboratory facilities and directed by a qualified physician to advise parents and prospective parents on potential problems in cases of genetic defects.
- **Hospice.** A program that provides care (including pain relief) and supportive services for the terminally ill and their families.
- **Infection isolation room.** A single-occupancy room designed to minimize the possibility of infectious transmission, typically through the use of controlled ventilation, air pressure and filtration.
- **Pain-management program.** A program that provides specialized care, medications or therapies for the management of acute or chronic pain.
- **Palliative care.** A program that provides care by specially trained physicians and other clinicians for relief of acute or chronic pain or to control symptoms of illness.
- **Patient-controlled analgesia.** A system that allows the patient to control intravenously administered pain medicine.

- **Psychiatry–geriatric service.** A psychiatric service that specializes in the diagnosis and treatment of geriatric medical patients.
- **Translators.** A service provided by the hospital to assist patients who do not speak English.
- **Wound-management services.** Services for patients with chronic and non-healing wounds that often result from diabetes, poor circulation, sitting or reclining improperly and immunocompromising conditions. The goals are to progress chronic wounds through stages of healing, reduce and eliminate infections, increase physical function to minimize complications from current wounds and prevent future chronic wounds. Wound-management services are provided on an inpatient or outpatient basis, depending on the intensity of service needed.

From seven to nine services are included in each specialty. Hospitals receive 1 point for each specified service provided on- or off-site either (1) by the hospital or its subsidiaries, (2) by the hospital's health system (in their local community), or (3) by another institution in their local community through some formal arrangement or joint venture. **Table 5** presents the list of patient services by specialty.

Intensivist on Staff

Intensivists are board-certified physicians with subspecialty or fellowship training in critical-care medicine. They specialize in managing critically ill patients in hospital intensive care units (ICUs). Recent research indicates that better outcomes are associated with the presence of intensivists.^{12,13} The intensivist on staff measure was added in 2009. Hospitals received 1 point for having at least one FTE intensivist assigned to medical-surgical intensive care, cardiac intensive care or other intensive care (excluding neonatal and pediatric intensive care). Values were derived from the FY2013 AHA Annual Survey.

External Organizations

Sources and organizations other than AHA and CMS provided additional structural measures.

NCI-Designated Cancer Center

This indicator was added in 2002. The National Cancer Institute, an arm of the National Institutes of Health, is the principal federal agency tasked with conducting and sponsoring cancer research and training and promoting research and standards of care by various means, including certification as an NCI-designated cancer center. Such a center is committed to advancing cancer research and, ultimately, reducing cancer incidence and increasing the effectiveness of treatment.¹⁴

Table 5. Patient Services by Specialty

Service	Cancer	Cardiology & Heart Surgery	Diabetes & Endocrinology	Ear, Nose & Throat	Gastroenterology & GI Surgery	Geriatrics	Gynecology	Nephrology	Neurology & Neurosurgery	Orthopedics	Pulmonology	Urology
1. Alzheimer's center						•			•			
2. Arthritis treatment center						•				•		
3. Cardiac rehabilitation		•										
4. Fertility clinic							•					•
5. Genetic testing/counseling	•		•	•	•		•	•	•		•	•
6. Hospice	•	•	•	•	•	•	•	•	•	•	•	•
7. Infection isolation room	•		•	•	•		•	•	•		•	•
8. Pain-management program	•	•	•	•	•	•	•	•	•	•	•	•
9. Palliative care	•	•	•	•	•	•	•	•	•	•	•	•
10. Patient-controlled analgesia	•	•	•	•	•	•	•	•	•	•	•	•
11. Psychiatry-geriatric service						•						
12. Translators	•	•	•	•	•	•	•	•	•	•	•	•
13. Wound-management services	•	•	•	•	•	•	•	•	•	•	•	•
Total Elements	8	7	8	8	8	9	9	8	9	7	8	9

• Included in the index for the specialty.

NCI-designated centers have three classification levels. The lowest is “cancer center,” denoting a facility that conducts a high volume of advanced federally funded laboratory research. Credit is not awarded for this designation. A “clinical cancer center,” the second level, adds clinical (“bench-to-bedside”) research. “Comprehensive cancer center,” the highest level, adds prevention research, community outreach and service activities.¹⁴

Hospitals designated as NCI clinical or comprehensive cancer centers as of March 1, 2015, were awarded 1 point. Hospitals designated “cancer centers” did not receive credit. NCI updates the list throughout the year. The current list is at <http://cancercenters.cancer.gov/Center/CCList>.

Nurse Magnet Recognition

The Nurse Magnet measure, added in all specialties in 2004, is a formal designation by the Magnet Recognition Program®. The Magnet Recognition Program was developed by the American Nurses Credentialing Center (ANCC) to recognize health care organizations that meet certain quality indicators on specific standards of nursing excellence. The list of Magnet-recognized facilities is updated throughout the year as organizations apply for designation and redesignation status. Hospitals received credit based on their Magnet Recognition status as of February 1, 2015. The current list of Magnet-recognized organizations is shown at <http://www.nursecredentialing.org/Magnet/FindaMagnetFacility>.

NAEC-Designated Epilepsy Center

This index was added to Neurology & Neurosurgery in 2004. One point was awarded to hospitals designated by NAEC as Level 4 epilepsy centers as of March 1, 2015. A Level 4 epilepsy center serves as a regional or national referral facility. These centers provide more complex forms of intensive neurodiagnostic monitoring, as well as more extensive medical, neuropsychological and psychosocial treatment. Level 4 centers also offer a complete evaluation for epilepsy; surgery, including intracranial electrodes; and a broad range of surgical procedures for epilepsy.¹⁵ The list of hospitals is updated throughout the year. The current list is shown at <http://www.naec-epilepsy.org/find.htm>.

NIA-Designated Alzheimer's Center

NIA Alzheimer's center certification was added to Geriatrics in 2007 and to Neurology & Neurosurgery in 2008. Evaluation and certification are conducted by NIA, an arm of NIH that translates research advances into improved diagnosis and care of Alzheimer's disease and conducts research on prevention and cures. Recognition means that a hospital provides a high level of care for Alzheimer's patients. Hospitals designated as an NIA Alzheimer's center as of March 1, 2015, received 1 point. Hospitals listed as affiliated centers did not receive credit. The current list of NIA Alzheimer's centers can be accessed at www.nia.nih.gov/Alzheimers/ResearchInformation/ResearchCenters/.

FACT-Accredited for BMT and Tissue Transplant

FACT accreditation was added to Cancer in 2007. This designation indicates that as of March 1, 2015, a hospital met standards set by FACT for transplanting bone marrow or other cellular tissue to treat cancer. One point was given if accreditation was only for *autologous transplants*, in which a patient's own cells are removed and then returned following radiation therapy. Two

points were given if accreditation was for *allogeneic transplants*, involving cells donated by another person (allowing for a greater number and more kinds of cell transplants), or for both autologous and allogeneic transplants. The current list of FACT-accredited hospitals can be accessed at www.factwebsite.org.

Normalization

Starting with the 2012-13 rankings, all structural measure values were normalized prior to weighting. Normalization transforms index values into a distribution between 0 and 1 based on the range of possible values for a given measure. Equation (1) is the formula for normalization:

$$\text{Normalized Value} = (X_i - \text{Minimum}_i) / (\text{Maximum}_i - \text{Minimum}_i), \quad (1)$$

where

X_i = the value for measure i ,

Maximum_i = the highest possible value for measure i and

Minimum_i = the lowest possible value for measure i .

For example, the Technology index for Cancer is worth a maximum of 8 points. If a given hospital received 5 out of 8 points, the normalized value for the Technology index in Cancer would be $(5-0)/(8-0) = 0.63$. For all structural measures, the lowest *possible* value is 0 even when the lowest *observed* value is greater than 0.

Weighting

In 2012, we convened an expert panel to determine appropriate weights for each of the measures. The evaluation was done both across specialties for consistency in weighting and within specialties to identify key measures of quality in a particular specialty. Overall, weights were determined based on the importance of each measure in defining the overall structural attributes of care within hospitals. **Table 6** shows the relative weight for each of the measures that make up the structural component of the rankings, by specialty. For all specialties, the sum of the weights is 30%, the overall weight for the structural component of the IHQ.

Table 6. Structural Elements and Percentages (%) of Total Score by Specialty

Item	Cancer	Cardiology & Heart Surgery	Diabetes & Endocrinology	Ear, Nose & Throat	Gastroenterology & GI Surgery	Geriatrics	Gynecology	Nephrology	Neurology & Neurosurgery	Orthopedics	Pulmonology	Urology
Advanced technologies	4.3	5.0	5.3	5.0	5.0		5.3	5.0	4.1	5.0	5.0	5.0
FACT-accredited	2.9											
Intensivist on staff	2.9	3.3	3.5	3.3	3.3	3.5	3.5	3.3	2.7	3.3	3.3	3.3
NAEC-designated epilepsy center									2.7			
NCI-designated cancer center	2.9											
NIA-designated Alzheimer's center						5.3			2.7			
Nurse Magnet recognition	2.9	3.3	3.5	3.3	3.3	3.5	3.5	3.3	2.7	3.3	3.3	3.3
Nursing intensity	5.7	6.7	7.1	6.7	6.7	7.1	7.1	6.7	5.5	6.7	6.7	6.7
Patient services	2.9	3.3	3.5	3.3	3.3	3.5	3.5	3.3	2.7	3.3	3.3	3.3
Patient volume	5.7	6.7	7.1	6.7	6.7	7.1	7.1	6.7	5.5	6.7	6.7	6.7
Trauma center		1.7		1.7	1.7			1.7	1.4	1.7	1.7	1.7

NOTE: Percentages may not sum to 30 due to rounding.

C. Outcomes

The correlation between quality of care and risk-adjusted mortality is both self-evident and supported by the literature.¹⁶⁻²⁵ We calculated specialty-specific, risk-adjusted mortality rates for each hospital as an outcomes measure for the IHQ, taking volume of cases and severity of illness into account. Mortality is worth 32.5% of the overall IHQ score.

A patient's medical condition (both the principal condition for which the patient is being treated as well as other comorbidities) strongly affects the chance of death while in the hospital. For a given condition, therefore, using raw mortality rates would unfairly penalize hospitals that treat high-risk patients.

Ideally, we would compare the mortality rates of a standardized set of patients across all hospitals in the Best Hospitals universe. This is unfeasible because hospitals vary in the mix of conditions, both principal and comorbid, for which they treat their patients. Instead, we construct an “expected” mortality rate. It is what the hospital’s mortality rate would be if all patients with the same diagnoses had the mortality risk of the Best Hospitals universe instead of their hospital’s mortality risk for those patients. Hospitals with observed mortality rates below the expected, case-mix-adjusted rate would, on this metric, be judged to have quality higher than average, and those hospitals with observed mortality rates above the expected rate would be judged to have quality lower than average.

Observed and expected mortality rates were provided by Truven Health Analytics using the pooled FY2011, FY2012 and FY2013 MedPAR data sets, the latest available for analysis. MedPAR data are derived from reimbursement claims submitted by hospitals to Medicare. The MedPAR file contains information on all fee-for-service Medicare patients’ diagnoses, procedures, length of stay in the hospital and discharge status. For the 2015-16 Best Hospitals rankings, these data were “grouped” using the 3M Health Information Systems APR-DRGs and MS Grouper software version 29.0, which aggregates tens of thousands of possible diagnosis and procedure combinations into roughly 1,000 clinically coherent groupings. Defined by APR-DRGs, severity-of-illness level and mortality risk, the groups take into account the severity of the patient’s illness, risk of death and hospital resources used.^{6,26,27}

The MedPAR record includes the CMS DRG assigned to each case for Medicare payment. Each MedPAR record is based on the patient’s diagnosis, surgery (or other medical procedure), age, sex and discharge destination.²⁸ DRGs classify the more than 10,000 *International Classification of Diseases, Ninth Revision, Clinical Modification* (ICD-9-CM) diagnosis codes into more meaningful patient groups based on clinical and cost similarity. The ICD-9-CM is the official system used by the National Center for Health Statistics and CMS to assign codes to diagnoses and procedures associated with U.S. hospital utilization.²⁹

Because MS-DRGs are generally relatively homogeneous groups of diagnoses and procedures, we use MS-DRGs as the basic unit for defining cases to be included in each specialty’s mortality and volume measures. The MS-DRG groupings developed are based on the DRG groupings used in previous years of the study. We reviewed the CMS DRG to CMS MS-DRG crosswalk available from the CMS website to identify all of the different mappings of DRGs to MS-DRGs. On reviewing the APR-DRG threshold assignments for CMS DRGs in the U.S. News & World Report 2010-11 Best Hospitals Ranking Methodology Report and examining how this mapped to the MS-DRGs, we assigned thresholds to the MS-DRGs based on the assumption that

the MS-DRG system is a more refined measure of severity (see **Appendix C** for the MS-DRGs used for 2015-16).^{§§§} The MS-DRG groupings are applied to each year of data included in the analysis.

For the Best Hospitals analysis, only MS-DRGs that represent challenging and/or critical procedures are included. For example, most inguinal hernia repairs pose relatively low risk and demand modest expertise, so all but the most serious cases are excluded. The process used to identify MS-DRGs is outlined below.^{****}

1. MS-DRGs for very-low-intensity cases were excluded.
2. MS-DRGs that generally do not apply to a Medicare or elderly population were excluded.
3. Excluded and included MS-DRGs were evaluated on their embedded diagnoses.
4. Excluded and included categorizations were refined based on within-MS-DRG variation in diagnostic complexity.
5. MS-DRGs not assigned to a specific specialty were evaluated to determine whether they should be categorized more specifically.
6. A final evaluation for clinical consistency was performed.
7. MS-DRGs were attributed to multiple specialties if patients assigned to the DRGs are commonly treated by physicians in multiple specialties, or specific diagnoses or procedures were assigned to specific specialties based on principal diagnosis or procedures.
8. The APR-DRG severity measure was included to refine cases further by taking severity of illness, as measured by comorbidities and interaction with the principal diagnosis, into account. A lower number would mean lower severity. Therefore if the severity of illness was 1, all cases would be included. If the severity of illness was 3, on the other hand, only cases with a severity of illness of 3 or 4 would be included.

Mortality Methodology

Changes over the years have addressed specific issues in calculating mortality. These changes have addressed either specialty-specific issues (such as defining a specific population to use in Geriatrics as opposed to using all cases) or more general issues that can affect mortality outcomes

^{§§§} The 2010/11 Best Hospitals Ranking Methodology Report is available at www.rti.org/besthospitals.

^{****} For a more detailed review of these procedures, see the 2005 Best Hospitals Ranking Methodology Report at www.rti.org/besthospitals.

(such as excluding transfers and switching from inpatient to 30-day mortality). Brief descriptions of these special considerations are provided below.

1. Redefining the Geriatrics patient population. Rankings in Geriatrics were omitted in 2006 but were reintroduced in 2007, using a new approach to identify the target population and account for their mortality rates. Rather than using a small subset of MS-DRGs typical of geriatric patients, we elected to focus on how well hospitals treat older patients across a wider range of MS-DRGs. Therefore, the Geriatrics specialty rankings now include all MS-DRGs generally appropriate to a Medicare or elderly population. In addition, since 2007 patients for the mortality analysis have been limited to those who are at least 75 years old. This better reflects the quality of inpatient hospital care received by older patients across different diagnoses. The basic mortality analyses of the data for this group followed the same procedures as for the other IHQ-driven specialties.

2. Excluding transfers from mortality calculations. Since 2007, all patient transfers into the hospital have been excluded from mortality calculations. This was done to help avoid mortality rates that might be inflated by transfers of severely ill patients (relative to their MS-DRG and APR-DRG severity level) to tertiary care hospitals. Research has shown that because of their location, some tertiary care hospitals are particularly vulnerable to “dumping.”³⁰ This change means that patients legitimately transferred for appropriate care are lost, but it is more important to ensure that each hospital’s mortality numbers are not affected by transfers of very sick patients from hospitals unable to properly care for them. Transfers were identified using the claim source of inpatient admission variable on the MedPAR files. Variable values of “4” (transfer from a hospital) or “A” (transfer from a critical access hospital) were used to identify transfers from acute hospitals or critical access hospitals.

3. Adjusting for hospitals in the top or bottom quartile of transfer-in rates. Based on reviews of hospital-level transfer data, we identified several “outlier” hospitals with respect to the proportion of cases labeled as transfers in to the facility. These cases might have been due to misclassification or coding error, but the presence of potentially misclassified transfers reduced confidence in the observed “transfer-free” mortality measure. Consistent with the adjustments made for mortality rates for low-volume hospitals, we now define the top and bottom quartiles of transfer-in rates as being extreme and appropriate for adjustment.

For hospitals with transfer-in rates in the top quartile (75th – 100th percentile) of transfer-in rates (see **Table 7**), we adjusted the observed transfer-free mortality rate by averaging the all-case mortality rate with a weight based on our confidence in the observed transfer-in rate. The weight placed on the all-case mortality rate varies from 0 to 0.5, with each increase of 1 percentage point in the transfer-in rate percentile increasing the weight by 2 percentage points. The maximum weight of

the all-case mortality is 0.5 so that, for most hospitals, the adjusted mortality rate has the observed transfer-free mortality rate as a majority component.

Table 7. Transfer Rate Distribution by Specialty

Specialty	Minimum	25th Percentile	75th Percentile	Maximum
Cancer	0.00	0.98	8.56	38.87
Cardiology & Heart Surgery	0.00	2.24	13.65	66.01
Diabetes & Endocrinology	0.00	0.24	3.83	30.00
Ear, Nose & Throat	0.00	0.61	7.00	40.91
Gastroenterology & GI Surgery	0.00	0.29	5.21	43.24
Geriatrics	0.00	0.47	6.85	69.56
Gynecology	0.00	0.24	3.18	44.12
Nephrology	0.00	0.23	4.38	55.79
Neurology & Neurosurgery	0.00	0.70	9.56	63.68
Orthopedics	0.00	0.25	3.16	33.96
Pulmonology	0.00	0.27	5.29	49.18
Urology	0.00	0.16	3.85	30.19

For hospitals in the bottom quartile (0-25th percentile) of transfer-in rates (see *Table 7*), we used the specialty average transfer-free mortality rate as the blending rate. We applied the same algorithm as for the top quartile transfer-in hospitals. However, to avoid unduly penalizing hospitals with lower-than-average mortality rates (or unduly helping those with above-average mortality rates), the maximum weight on the specialty average is 0.25.

4. Standardizing on 30-day mortality. Prior to 2007, mortality in the Best Hospitals methodology was defined as the rate of inpatient deaths (i.e., those occurring from admission to discharge). As inpatient hospital length of stay has decreased, inpatient mortality has generally decreased as well. Mortality over longer periods post-discharge, however, has not declined markedly.³¹ Quality of care in the inpatient setting can affect patients' health and functional status for many weeks following discharge. The Agency for Healthcare Research and Quality (AHRQ) states in *Refinements of the HCUP Quality Indicators Technical Summary* (2001) that "without 30-day mortality data (ascertained from death certificates), hospitals that have short lengths of stay may appear to have better patient outcomes than other hospitals with equivalent 30-day mortality."³²

Thirty-day mortality may reflect factors unrelated to care provided in the hospital (e.g., quality of postacute care and lack of patient compliance with treatment regimen). Inpatient mortality, on the other hand, omits factors that tend to manifest in full after patients have been

discharged. Inpatient mortality also does not account for hospital-to-hospital differences in length of stay for comparable patients and conditions.

To address these concerns, the 2007 rankings introduced 30-day mortality (i.e., 30 days postadmission) for all specialties except Cancer. This exception was out of concern that 30-day mortality might penalize hospitals that see cancer patients at the end of life—thus artificially inflating their mortality numbers. After further review of available data and research, however, we concluded that 30-day mortality should be consistent. Starting in 2008, 30-day mortality has been used for all IHQ-driven specialties.^{††††}

5. Adjusting mortality values for low-volume hospitals. To address instances in which a low-volume hospital with relatively few discharges had an inordinately low or high mortality score because of the low frequency of applicable cases associated with that hospital, we adjust mortality. For instance, a hospital treating only 75 Medicare patients in the last 3 years in a particular specialty might have an observed-versus-expected mortality ratio of zero or close to zero. With so few cases to examine, we are not confident that the mortality numbers for this hospital reflect a real measure of outcomes rather than an extreme value based on too few cases.

For a hospital with discharge volume below the 25th percentile (see *Table 8*), we adjust the observed transfer-free mortality rate based on our confidence in the hospital's observed mortality weight. First, we calculate a high-volume mortality rate based on the average mortality rate for all hospitals at or above the 25th percentile. We then combine the hospital's actual mortality rate with the average, high-volume mortality rate based. The weight of the high-volume mortality rate will vary from 0 to 0.25 based on the hospital's volume percentile. Each 1 percentage point decrease in the volume percentile will increase the high-volume mortality weight by 1 percentage point. For example, a hospital with volume in the 24th percentile has a high-volume mortality weight of 0.01. A hospital with a volume in the 20th percentile has an all-hospital weight of 0.05. The maximum weight on the all-hospital mortality is 0.25.

^{††††} Note that the mortality methodology does not exclude palliative care (V66.5) or hospice cases due to significant inconsistencies in the way in which palliative and hospice care services are documented, defined and coded across providers.

Table 8. Discharges Excluding Transfers and Distribution by Specialty

Specialty	Minimum Volume	25th Percentile Volume	Maximum Volume
Cancer	151	372	6,739
Cardiology & Heart Surgery	989	2,186	17,097
Diabetes & Endocrinology	140	223	1,826
Ear, Nose & Throat	11	49	518
Gastroenterology & GI Surgery	506	987	12,800
Geriatrics	1,475	4,102	45,433
Gynecology	16	49	708
Nephrology	107	363	5,727
Neurology & Neurosurgery	306	715	7,718
Orthopedics	315	646	9,875
Pulmonology	734	1,754	14,294
Urology	36	89	1,939

6. Adjusting MedPAR data to improve representativeness. MedPAR data represent frequencies of diagnoses in Medicare beneficiaries, and these data are the source of mortality and volume calculations. However, the distribution of conditions and procedures among Medicare patients differs somewhat from the distribution among all patients treated at U.S. hospitals. By relying on the distribution of diagnoses observed in the MedPAR data alone, the rankings would be somewhat biased toward providing readers with information on outcomes for Medicare patients, not for all patients needing care in the particular specialty.

To address this discrepancy, weights were applied starting in 2007 to the MedPAR data based on the relative over- or underrepresentation of the MS-DRGs among all patients. Ideally, we would use data on all patients to estimate case–mix–adjusted mortality outcomes. Unfortunately, no comprehensive national database of all-payer claims data exists. As a substitute, we instead used data from the AHRQ HCUP data set to produce adjustment factors (i.e., weights) for each diagnosis. The HCUP data set comes from a variety of sources and is the largest collection of U.S. all-payer hospital care data.³³

For the 2015-16 rankings, weights were calculated based on the most recently available HCUP National Inpatient Sample data sets. The MS-DRG-specific weights are equal to the relative frequency of the MS-DRG among all patients nationally versus among Medicare patients, applying the case restrictions described above. The weighted observed-versus-expected mortality rate was then calculated for each hospital in all specialties.

Risk-adjusted mortality ratios were computed by dividing the observed transfer-free mortality rate (including adjustments for hospitals in the top or bottom quartile of transfer-in rates as outlined above) by the expected transfer-free mortality rate after adjusting for case complexity using APR-DRG severity of illness and risk of mortality. The expected transfer-free mortality was an estimate of the hospital's mortality rate if its death rate for patients in each APR-DRG and severity level was equal to the national average for each specialty.

Mortality ratios greater than 1 mean more patients died than expected; mortality ratios less than 1 mean fewer died than expected. For calculating IHQ, mortality ratios were transformed into survival ratios by subtracting each specialty-specific mortality ratio from 1. A mortality ratio of 0.25 produced a survival ratio of 0.75, a mortality ratio of 0.05 produced a survival ratio of 0.95, and so on. This reverse scoring maintained the magnitude of the differences between scores. To lessen year-to-year fluctuations, we pooled 3 years of data to compute the survival ratios.

Survival Score

The survival score provides an alternative format for presenting information about hospital performance with regard to patient mortality. For display purposes in the rankings tables, the mortality ratio was transformed into a survival score representing survival of patients at 30 days after admission. Survival scores were based on the percentile distribution of the most recent 3-year mortality ratio for all hospitals. The closer the mortality score to 0, the higher the survival score. The mortality ratio cut-offs used to determine survival scores are shown in **Table 9**. Hospitals were assigned points based on the lowest cut-off value below which the mortality ratio fell. For example, a mortality ratio of 0.78 in Cancer would have been assigned a survival score of 8 because 0.78 is lower than the 0.82 cut-off value.

D. Process

The process dimension of the Donabedian paradigm reflects physicians' decisions made in the hospital setting, such as choices about admission, diagnostic tests, course of treatment, choice of medication and length of stay. It is extremely difficult to obtain national measurements of process; therefore, we used a proxy measure. We contend that an appropriately qualified physician who identifies a hospital as among the "best" is, in essence, endorsing the process choices made at that hospital and also that nomination of hospitals by board-certified specialists is, therefore, a reasonable process measure.

Table 9. Survival Scores based on Mortality Ratios

Specialty	Survival Score									
	1 if ratio ≥	2 if ratio <	3 if ratio <	4 if ratio <	5 if ratio <	6 if ratio <	7 if ratio <	8 if ratio <	9 if ratio <	10 if ratio <
Cancer	1.35	1.35	1.26	1.17	1.09	1.00	0.91	0.83	0.74	0.65
Cardiology & Heart Surgery	1.33	1.33	1.25	1.17	1.08	1.00	0.92	0.83	0.75	0.67
Diabetes & Endocrinology	1.55	1.55	1.41	1.28	1.14	1.00	0.86	0.72	0.59	0.45
Ear, Nose & Throat	1.60	1.60	1.45	1.30	1.15	1.00	0.85	0.70	0.55	0.40
Gastroenterology & GI Surgery	1.33	1.33	1.25	1.17	1.08	1.00	0.92	0.83	0.75	0.67
Geriatrics	1.33	1.33	1.25	1.17	1.08	1.00	0.92	0.83	0.75	0.67
Gynecology	1.65	1.65	1.49	1.33	1.16	1.00	0.84	0.67	0.51	0.35
Nephrology	1.48	1.48	1.36	1.24	1.12	1.00	0.88	0.76	0.64	0.52
Neurology & Neurosurgery	1.49	1.49	1.37	1.24	1.12	1.00	0.88	0.76	0.63	0.51
Orthopedics	1.54	1.54	1.40	1.27	1.13	1.00	0.87	0.73	0.60	0.46
Pulmonology	1.30	1.30	1.22	1.15	1.07	1.00	0.93	0.85	0.78	0.70
Urology	1.60	1.60	1.45	1.30	1.15	1.00	0.85	0.70	0.55	0.40

To collect these nominations, a survey of board-certified physicians across the country is conducted each year. As with past years, the 2015-16 rankings use nominations from the most recent 3 years of physician surveys (2013, 2014 and 2015). Scores were calculated separately in each year, and averaged such that each year's scores are given equal weighting in the final reputation score as shown in *Table 10*.

Table 10. 2013-2015 Reputation Weight by Survey Year

Sample Source	2013-2015 Reputation Weight (%)
2015 Physician Survey	33.3
2014 Physician Survey	33.3
2013 Physician Survey	33.3

The sections below describe the 2015 survey, which was conducted somewhat differently than in previous years. The approaches used for the 2013 and 2014 surveys are described in the corresponding methodology reports for those years, available at www.rti.org/besthospitals.

The reputation score was calculated in the same manner for both the IHQ-driven and reputation-only specialties in the rankings. Therefore, this section presents the methodology and results for both.

2015 Survey Approach

Sample Selection

Prior to 2014, a total of 3,200 specialists (200 in each of the 16 Best Hospitals specialties) were sampled each year, representing a total sample of 9,600. For the 2014 survey, the sample for the physician survey was expanded from 3,200 to over 50,000 and in 2015 to over 80,000^{###}. The significantly larger sample yielded a greater number of survey responses and improved precision of survey estimates. The increase was through adding physicians via the Web via the Doximity online panel of physicians in 2014 and 2015. Doximity is the largest online professional network of U.S. physicians.

The sample for the 2015 physician survey was selected from a database of all practicing U.S. physicians compiled by Doximity. Similar to the AMA Physician Masterfile, the sampling frame in previous years, Doximity's comprehensive Physician Database includes every U.S. physician, identified by National Provider Identifier (NPI) number. Sources from which Doximity compiles physician information include the U.S. Department of Health and Human Services NPI Registry, state medical boards and specialty boards (e.g., the American Board of Medical Specialties and the American Board of Surgery). Doximity's proprietary database is augmented by more than 400,000 registered and verified physician members who review and update their profiles to provide another set of primary data. **Table 11** provides the population counts of specialists in the Doximity database by those who are Doximity members and nonmembers as of October 2014, when the non-Doximity sample was selected.

^{###} Samples drawn each year are not unique and include physicians who were sampled in previous years.

Table 11. Population Counts by Best Hospitals Specialty, Doximity Members and Nonmembers

Specialty	Subspecialties Included	Doximity Members	Doximity Nonmembers
Cancer	Hematology, hematology/oncology, medical oncology, surgical oncology, gynecologic oncology, radiation oncology	6,843	8,039
Cardiology & Heart Surgery	Cardiovascular diseases, thoracic surgery	11,559	12,922
Diabetes & Endocrinology	Endocrinology, diabetes & metabolism	1,890	2,991
Ear, Nose & Throat	Otolaryngology	3,763	4,609
Gastroenterology & GI Surgery	Gastroenterology, colon and rectal surgery	4,858	7,811
Geriatrics	Geriatrics	2,189	5,160
Gynecology	Gynecology, obstetrics & gynecology	11,062	19,084
Nephrology	Nephrology	2,803	4,673
Neurology & Neurosurgery	Neurology, neurological surgery	6,255	7,979
Ophthalmology	Ophthalmology	6,331	9,326
Orthopedics	Orthopedic surgery	7,352	11,718
Psychiatry	Psychiatry	9,822	20,895
Pulmonology	Pulmonary diseases	3,385	4,275
Rehabilitation	Physical medicine & rehabilitation	2,651	4,436
Rheumatology	Rheumatology	1,453	2,711
Urology	Urology	3,207	4,929

Data Collection Procedures

In each of the 16 Best Hospitals specialties, we selected a stratified sample of Doximity members and nonmembers. Doximity members were surveyed separately from nonmembers as described below.

Member survey. The Doximity member survey was conducted with a sample of 85,423 physicians^{§§§§} across the 16 specialties from January to March 2015. Physicians received an initial

§§§§ Total population surveyed is higher than the sum of the specialties in Table 10 because additional Doximity members were determined to be eligible between the time that the initial population counts were gathered and the Doximity member survey was fielded.

email invitation with a link to the survey. The survey asked physicians to supply the names of up to 5 hospitals in their specialty that provide the best care to patients with serious conditions, without considering location or expense. Nonresponding physicians received up to three follow-up email reminders with links to the survey. In addition, eligible Doximity members received alerts when they logged on or used the Doximity app inviting them to participate. Members who registered during the survey period were permitted to provide nominations. It was later determined, however, that response bias affected many of these responses, and they were excluded from the final analysis.

Nonmember survey. The nonmember survey was conducted by randomly sampling 3,200 Doximity nonmembers—200 specialists in each of the 16 specialty areas. Stratifying by census region (http://www.census.gov/geo/www/us_regdiv.pdf), we selected physicians in each region proportional to the size of the population. For example, if 40% of all Doximity nonmembers in a specialty had been from the South, then 40% of our sample would have included physicians in that region. Sampling physicians proportional to population size allowed us to minimize the weights needed to produce reputation scores that are representative of the nation.

Sampled physicians were asked to complete a brief survey containing a single nomination element. The survey of nonmembers was identical to the survey of Doximity members and asked physicians to supply the names of up to 5 hospitals in their specialty that provide the best care to patients with serious conditions, without considering location or expense. A copy of the mailed survey is available in *Appendix A*.

For physicians with an available email address, a mixed-mode (mail and Web) methodology was employed. Physicians without an email address were able to respond by mail only. Up to four mailings and up to two email reminders were sent to sample members. Each mailing included a cover letter, questionnaire, and business reply envelope. The first survey mailing also included a \$2 bill as a token incentive. Reminder emails included a link to the Web version of the survey. The survey was conducted from January 5 through March 31, 2015.

Response Rates

The overall response rate for the 2013, 2014, and 2015 surveys was 23.2% using American Association of Public Opinion Research (AAPOR) standard response rate 6****, which treats undeliverables as ineligible. The 2015 combined response rate for the Doximity member and

***** Definitions are available online at
http://www.aapor.org/AAPORKentico/AAPOR_Main/media/publications/Standard-Definitions2015_8theditionwithchanges_April2015_logo.pdf

nonmember surveys was 14.6% using AAPOR standard response rate 6. Below we provide more detail on the response rates to the 2015 Doximity member survey and nonmember survey.

Member survey. Of the 85,423 Doximity members, 502 were deemed ineligible due to closed accounts, invalid contact information, or credentials that could not be verified by the launch of the survey. Of the remaining 84,921 Doximity members, 11,951 completed the web survey by March 2, 2015. The final response rate was 14.1% using AAPOR standard response rate 6. **Table 12** shows response rates by region and specialty.

Table 12. Member Survey Response Rates (%) by Region and Specialty, 2015

Specialty	Midwest (%)	Northeast (%)	South (%)	West (%)	Total (%)
Cancer	23.6	19.7	14.7	10.5	17.3
Cardiology & Heart Surgery	18.5	16.9	11.3	10.7	14.4
Diabetes & Endocrinology	24.5	16.9	13.2	7.7	15.7
Ear, Nose & Throat	22.2	20.4	14.0	14.6	17.5
Gastroenterology & GI Surgery	24.4	15.0	11.5	8.4	14.6
Geriatrics	9.8	13.2	10.6	6.2	10.4
Gynecology	9.7	10.8	5.0	4.6	7.4
Nephrology	20.8	23.2	15.3	6.4	17.0
Neurology & Neurosurgery	27.0	24.1	14.3	12.6	19.6
Ophthalmology	19.3	23.3	16.0	20.1	19.6
Orthopedics	15.0	17.3	9.5	9.1	12.6
Psychiatry	8.7	14.8	6.0	4.8	9.4
Pulmonology	21.4	16.5	12.2	9.2	14.8
Rehabilitation	21.4	22.8	17.0	11.9	18.8
Rheumatology	18.1	23.1	12.0	6.2	15.9
Urology	19.5	18.8	9.6	10.4	14.1
Overall Response Rate	17.8	17.6	11.0	9.5	14.1

Nonmember survey. Of the 3,200 physicians sampled for this year's report, 200 were deemed ineligible after determining that they were no longer actively practicing. Of the remaining 3,000 physicians, 911 returned the completed questionnaire by the deadline of April 1, 2015. The final response rate was 30.4% using AAPOR standard response rate 6. **Table 13** shows response rates by region and specialty.

Table 13. Nonmember Survey Response Rates (%) by Region and Specialty, 2015

Specialty	Midwest (%)	Northeast (%)	South (%)	West (%)	Total (%)
Cancer	51.4	31.9	34.3	22.5	34.5
Cardiology & Heart Surgery	35.1	30.4	27.9	45.7	33.3
Diabetes & Endocrinology	15.6	32.7	29.8	26.3	27.5
Ear, Nose & Throat	36.1	35.3	29.6	27.7	31.4
Gastroenterology & GI Surgery	12.1	35.4	28.4	36.8	29.0
Geriatrics	26.2	25.5	30.2	21.6	26.2
Gynecology	29.7	41.0	31.9	25.0	31.7
Nephrology	36.8	13.6	27.1	24.4	25.4
Neurology & Neurosurgery	34.2	40.9	36.8	25.6	34.9
Ophthalmology	44.1	37.8	28.6	29.5	33.9
Orthopedics	23.7	38.9	33.3	35.6	33.0
Psychiatry	25.0	29.6	21.8	22.0	24.7
Pulmonology	36.4	14.6	29.9	30.0	27.1
Rehabilitation	28.2	41.7	27.8	26.1	31.0
Rheumatology	23.7	38.8	29.5	15.6	27.5
Urology	27.8	51.6	30.7	35.0	34.6
Overall Response Rate	30.5	33.1	30.0	27.9	30.4

Survey Response Weighting

The weighting approach for the 2015 survey is described below. The approaches used for the 2013 and 2014 surveys are provided in the corresponding methodology reports for those years, which are available at www.rti.org/besthospitals.

For the 2015 Doximity member survey, we used post-stratification weights for age*gender (55+ male, <55 male, and female) as well as census region. Weights were constructed and applied to each physician's survey response to make nominations representative of Doximity members at the national level. Since all Doximity members were surveyed, weights were used only to adjust for differences in nonresponse by region and demographics.

In each specialty, the sample for the 2015 Nonmember physician survey was stratified only by census region (Midwest, Northeast, South and West). The sample size in each specialty was too

small to stratify by the demographic characteristics used in the Doximity sample. Weights were constructed and applied to each physician's survey response to make nominations representative of Doximity nonmembers at the national level. Weights were based on probability of selection within each unique specialty-region combination, and adjustments to account for nonresponders.

Reputation scores were tabulated separately for Doximity Members and Nonmembers, and then combined to create the 2015 reputation score. **Table 14** shows the reputation weight for Doximity members and nonmembers in each specialty for 2015. The weight is based on the proportion of Doximity members and nonmembers in the population so the reputation score is representative of all physicians in the nation. Reputation scores for each of the past three years were then averaged to create the final weighted reputation values that appear in the methodology report.

Table 14. 2015 Reputation Weights for Doximity Members and Nonmembers by Specialty

Best Hospitals Specialty	Reputation Weight	
	Doximity Member	Doximity Nonmember
Cancer	46.0	54.0
Cardiology & Heart Surgery	47.2	52.8
Diabetes & Endocrinology	38.7	61.3
Ear, Nose & Throat	44.9	55.1
Gastroenterology & GI Surgery	38.3	61.7
Geriatrics	29.8	70.2
Gynecology	36.7	63.3
Nephrology	37.5	62.5
Neurology & Neurosurgery	43.9	56.1
Ophthalmology	40.4	59.6
Orthopedics	38.6	61.4
Psychiatry	32.0	68.0
Pulmonology	44.2	55.8
Rehabilitation	37.4	62.6
Rheumatology	34.9	65.1
Urology	39.4	60.6

Log Transformation

The weighted 3-year reputation values are displayed in the ranking tables. However, before incorporating them into the IHQ scoring for the 12 data-driven specialties, we implemented a log transformation to adjust for the skewed distribution of reputation values. The log transformation was not applied to reputation values in the four reputation-only specialties.

By its nature, a survey that solicits recommendations for “bests” will result in data that do not follow a normal distribution. Relatively few hospitals will receive even one “best” recommendation, and of those that do, an even smaller number will receive a significant number of nominations. This produces a highly skewed distribution. Since the other ranking components, such as structural measures and mortality, are not similarly skewed, reputation would have a disproportionate impact if the extreme skewness was not taken into account.

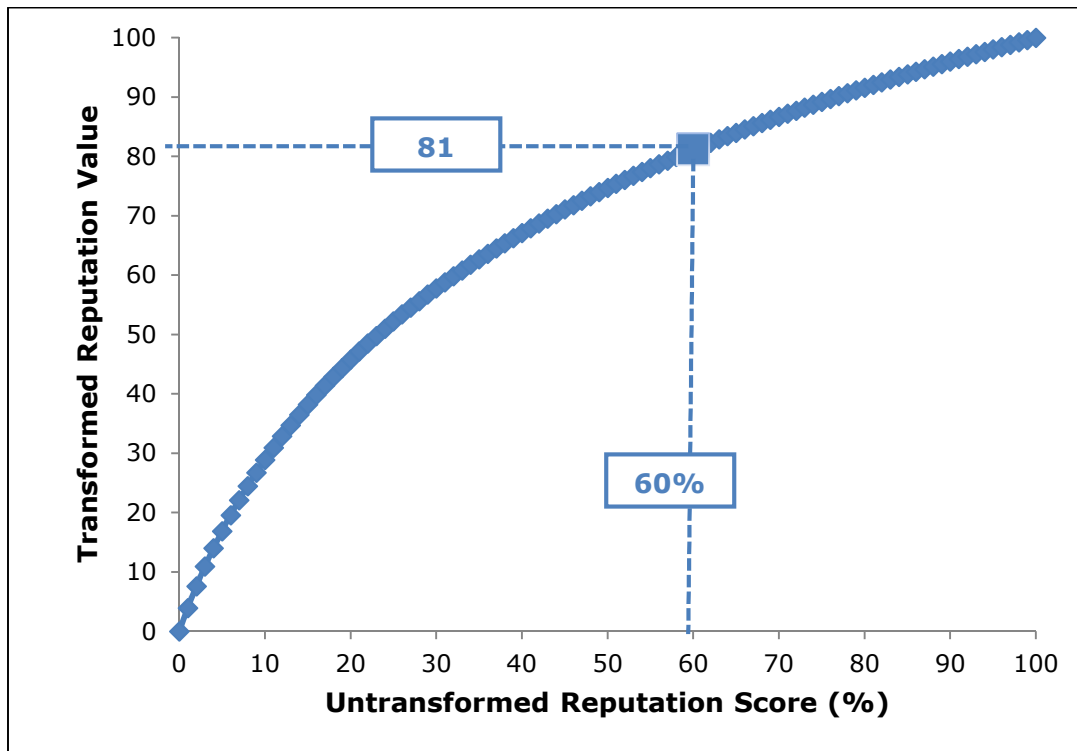
Log transformation reshapes the distribution to more closely match reputation data to those of the other components in the data-driven rankings. Transformation is applied to the weighted reputation data using the formula $\log(R_x + 10) - 1$, where R_x is the weighted reputation score for hospital X. A constant of 10 is applied to moderate the effect of the transformation.

The transformed data are then scaled to a minimum of 0 and maximum of 100. **Figure 2** demonstrates the impact of the log transformation reputation data. As is evident, the transformed reputation scores are higher than the untransformed scores, but the degree of inflation is greater for low scores than for high ones, as shown by the following examples:

- An untransformed reputation score of 1% has a transformed value of 4 (4 times greater),
- An untransformed reputation score of 10% has a transformed value of 29 (2.9 times greater) and
- An untransformed reputation score of 60% has a transformed value of 81 (1.35 times greater).

Skewness is thereby reduced, and the overall impact of the reputation score on hospitals’ final standing in the rankings is slightly diminished.

Figure 2. Reputation Data Before and After Log Transformation



Normalization and Weighting

Starting with the 2014-15 rankings, the weight of reputation in each data-driven specialty was reduced to 27.5% of the overall score compared with 32.5% in 2013-14.

As with the structural measures, reputation data were normalized before being combined with other metrics. Normalization transforms index values into a distribution between 0 and 1 based on a measure's range of *possible* values. The possible values for reputation score range from 0% (no surveyed physicians nominated the hospital) to 100% (every surveyed physician nominated the hospital). A hospital's normalized reputation score, after log transformation, determined the number of points the hospital received for reputation. If its normalized reputation score in a given specialty was 80, for example, it received 0.80×27.5 , or 22 points, for reputation.

E. Patient Safety Score

For the 2015-16 rankings, as in 2014-15, the weight of the patient safety score is worth 10% of the total score. Care that harms patients is an important aspect of both outcomes and process. It is a critical component in evaluating and determining the best hospitals.

The data source for the Best Hospitals patient safety score was the same 3-year sample from the MedPAR data set that is used for volume and mortality analyses in the Best Hospitals rankings. For the 2015-16 rankings, the MedPAR files used were for federal FY 2011, 2012 and 2013 files. Data were analyzed using the AHRQ PSI grouper software version 4.5a.

Background

Prior to the 2009 rankings, mortality was the sole outcome measure in the IHQ analysis. Death rates are key, but other adverse events befall hospitalized patients and may not result in death. In its 2000 report *To Err Is Human*,³⁴ the Institute of Medicine (IOM) identified three domains of quality: (1) safety, (2) practice consistent with current medical knowledge and (3) customizing care to patients' values and expectations.

The first of these domains, patient safety, was defined by the IOM as “freedom from accidental injury.” The IOM has identified preventable adverse events as a leading cause of death and injury and the principal challenge to patients' safety. Hospitals with high rates of adverse events are unlikely to be providing high-quality care to all of their patients.

In 2003, AHRQ released the first version of its Patient Safety Indicators (PSIs), a set of 20 provider-level and 7 area-level indicators of potentially adverse events.³⁵ As described below, we use a subset of these indicators to identify adverse outcomes likely associated with less-than-desirable quality of care.

Previous research indicates that PSIs are not strongly associated with other outcome and structural quality measures.³⁶⁻³⁸ However, we believe that PSIs incorporate important information separate from other measures used in the IHQ. Including PSIs in addition to mortality allows us to measure aspects of quality of care involving harm to patients and increased service utilization (for example, to correct such harm), but not causing patients' deaths. Hospital stays with patient safety events have been found to be more costly and longer in length than stays without patient safety events.³⁹⁻⁴³ Patient safety events have also been associated with higher 90-day readmission rates, compared to readmissions rates for patients without safety events.³⁹

Development of the Patient Safety Index

The patient safety score was developed by RTI using the framework described in the *Patient Safety Quality Indicators Composite Measure Workshop Final Report*,⁴⁴ with some project-specific modifications. Below we summarize the steps taken by AHRQ to construct an overall performance index that was reported in the annual *National Healthcare Quality Report* and *National Healthcare*

Disparities Report^{45,46}. We followed a similar process to develop the Patient Safety index for the Best Hospitals Project. The three basic steps include:

1. Choosing index components,
2. Weighting the index components and
3. Adjusting hospital-specific PSIs to account for measurement variance.

1. Choosing Index Components

AHRQ's PSI composite index includes the 11 PSIs checked in the second column of **Table 15**. These PSIs were chosen based on codes likely to be reported, not already part of existing composites, and not related to obstetric care.

Table 15. Comparison of AHRQ Patient Safety Index and Best Hospitals Patient Safety Score

All Patient Safety Indicators	Included in the AHRQ PSI Composite Index	Included in the Best Hospitals Patient Safety Score
PSI 03: Pressure ulcer	✓	✓
PSI 04: Death among surgical inpatients with serious treatable complications		✓
PSI 06: Iatrogenic pneumothorax	✓	✓
PSI 07: Central venous catheter-related blood stream infections rate	✓	
PSI 08: Postoperative hip fracture	✓	
PSI 09: Postoperative hemorrhage or hematoma	✓	✓
PSI 10: Postoperative physiological and metabolic derangement	✓	
PSI 11: Postoperative respiratory failure	✓	✓
PSI 12: Postoperative pulmonary embolism or deep vein thrombosis	✓	
PSI 13: Postoperative sepsis	✓	
PSI 14: Postoperative wound dehiscence	✓	✓
PSI 15: Accidental puncture or laceration	✓	✓

The Best Hospitals patient safety score includes six indicators in the AHRQ's PSI index as well as one additional indicator, PS04, that is not part of the composite AHRQ PSI measure.

PSI 04 was included because it identifies deaths generally deemed to be avoidable. Additional indicators may be added to the patient safety score as the measures become more refined.

PSI 02 (death in low mortality DRGs) was dropped from the Best Hospitals patient safety score in 2012 after additional analyses revealed large fluctuations in the observance of this PSI from year to year. For the 2015-16 rankings, PSI 08 was also dropped from the Best Hospitals patient safety score due to low incidence.

2. Weighting the Score Components

An index (or score) is generally a weighted sum or mean of its components. In the Best Hospitals methodology, the patient safety score is an aggregation of seven individual PSIs. Until the 2011-12 rankings, each PSI was weighted according to each hospital's population at risk, as is done for mortality. Subsequent analysis, however, revealed that this produced significant year-to-year variability in the weights assigned to individual PSIs. Therefore, starting in 2011-12, each PSI included in the score received equal weighting. The constant weighting reduces volatility and maintains consistency in the PSI calculation.

3. Controlling for the Influence of Hospital Case Mix on Measured PSIs

The more complex the medical condition or procedure, the more complex the care. Assuming the same quality of every "touch" by a hospital staff person, the more complex the care, the greater the likelihood of error. Therefore, patient safety score values for a hospital with a complex case mix cannot be compared fairly to those for a hospital with a simple case mix. The hospital with a simple case mix might have a better patient safety score but worse underlying quality. The Best Hospitals methodology controls for case mix by performing a simple linear regression of the individual patient safety measures on the Medicare case-mix index—the average MS-DRG weight of the Medicare patients treated in each hospital.

Construction of the Patient Safety Score

The patient safety score is calculated by regressing each patient safety measure on the Medicare case-mix index to control for the influence of hospital case-mix. The resulting values are trimmed so that values less than the 5th percentile are set to the 5th percentile and values greater than the 95th percentile are set to the 95th percentile. Values are standardized with a mean of 0 and standard deviation of 1 so they are on comparable scales for combination in the patient safety score.

The resulting values are multiplied by -1 to invert the distribution so that higher values reflect higher quality. Each year, there are a small number of hospitals (< 1%) with missing patient safety scores because they do not have enough data. For these cases, we substituted the median PSI value for all hospitals. This process essentially ranks these hospitals as if the patient safety score was not factored into the rankings for them, which allows for a more direct comparisons with other hospitals than if they received no points for this measure.

The patient safety score used in the rankings reflects the average of the inverted residual values. Higher values of the adjusted patient safety score indicate fewer adverse events than expected (higher quality); lower values indicate more adverse events than expected (lower quality).

For display purposes, the patient safety score is recoded into five equal groups based on quintiles (i.e., the cut points are at the 20th, 40th, 60th and 80th percentiles). Hospitals with score values below the 20th percentile receive a display score of 1, indicating lowest quality and hospitals with score values at or above the 80th percentile receive a display score of 5, indicating highest quality. The adjusted patient safety values relating to these scores are shown in **Table 16**. Note that the percentiles are used for display purposes only. For the 2015-16 rankings, the continuous PSI value was used in calculating a hospital's IHQ.

Table 16. Patient Safety Scores based on PSI Value

Indicator	1 if <	2 if <	3 if <	4 if <	5 if ≥
PSI 03: Pressure ulcer	-0.64	0.09	0.50	0.91	0.91
PSI 04: Death among surgical inpatients with serious treatable complications	-0.76	-0.12	0.18	0.77	0.77
PSI 06: Iatrogenic pneumothorax	-0.85	-0.15	0.38	0.92	0.92
PSI 09: Postoperative hemorrhage or hematoma	-0.83	-0.19	0.23	0.79	0.79
PSI 11: Postoperative respiratory failure	-0.82	-0.15	0.26	0.79	0.79
PSI 14: Postoperative wound dehiscence	-0.77	-0.06	0.46	0.93	0.93
PSI 15: Accidental puncture or laceration	-0.89	-0.19	0.32	0.86	0.86
Patient Safety Score	-0.39	-0.13	0.11	0.39	0.39

Switch to Risk-Adjusted Rates

Since introducing the Patient Safety Index in 2009, we have used smoothed rather than risk-adjusted rates in the PSI calculations. The risk-adjusted rates take into account age, sex, DRG, and comorbidity distribution of data in the reference population (AHRQ, September 2010). The smoothed rates are a weighted average of the risk-adjusted and observed rate in the reference population. Smoothing was designed to bring PSI rates toward the mean which can be useful when data are noisy (AHRQ, November 2013).

However, starting with the 2015-16 rankings, we moved to a risk-adjusted rate out of concern that the smoothed rates over-adjust and make differences between hospitals difficult to observe. Although we use three years of data, we pool all observations in our calculations. By pooling three years of data, we do take into account some of the potential year-to-year fluctuation that the smoothed rates are designed to adjust for.

F. Calculation of the Index of Hospital Quality

Prior to 2009, structure, process and outcomes each received one-third of the weight in IHQ scores. In 2009, weights were adjusted to integrate the patient safety index. For the 2015-16 rankings, the weights were further adjusted to increase the value of the patient safety index and reduce the weight for the process component. Currently, the outcomes component receives the most weight at 32.5%, with structure receiving 30%, process receiving 27.5% and patient safety receiving 10%.

The rankings for the top 50 hospitals in each specialty, by U.S. News score, are shown in **Appendix D**. The formula for calculating the U.S. News score is shown in Equation (2). The score can be thought of as a simple weighted sum of structural, process and outcome measures, as shown below:

$$IHQ_i = \{.3(\sum_{i=1}^{n_s} S_i) + .275\sum_{i=1}^{n_p} P_i + .325(\sum_{i=1}^{n_o} O_i) + .10PS_i\}, \quad (2)$$

where

- IHQ_i = index for hospital quality for specialty I ,
- S_i = normalized value for specialty structural measure i ,
- P_i = normalized value for specialty process measure i ,
- O_i = normalized value for specialty outcomes measure i and
- PS_i = normalized hospital-wide patient safety score.

Please note that the IHQ formula is meant for illustrative purposes only; it *cannot* be used to directly calculate a score for an individual hospital. 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 (3):

$$U.S. News Score = (score - minimum) / range. \quad (3)$$

III. Reputation-Only Specialties

Available data for the four reputation-only specialties are more limited than for the IHQ specialties. Mortality is irrelevant in Ophthalmology, Psychiatry and Rehabilitation; life-threatening conditions and procedures are rare. Inpatient volume in Rheumatology is extremely low, making it difficult to calculate reliable mortality measures. Reliable structural measures also are unavailable. Therefore, reputation alone—the process component—determines the rankings. This section describes the eligibility and procedures used to develop the rankings for these four specialties.

A. Eligibility

Hospitals ranked solely by reputation did not have to meet the same eligibility standards as the IHQ-driven specialties. In previous years, a hospital was eligible if it received one or more physician nominations in the past 3 years. In 2015-16 a hospital was eligible in these four specialties if it had a reputation score of 1% or greater, which equates to about three nominations in the past 3 years. This change was made to restrict eligibility to hospitals that are more consistently nominated. Hospitals nominated by at least 5% of responding physicians in a specialty are ranked.

B. Process

The IHQ-driven specialties and the reputation-only specialties share the same process component (see *Section II.D. Process* for more information).

C. Calculation of the Rankings

As mentioned above, scores for the reputation-only specialties of Ophthalmology, Psychiatry, Rehabilitation and Rheumatology must be calculated differently from scores for the IHQ-driven specialties because of the unavailability of structural and outcomes measures. Thus, we rank hospitals in these specialties solely by reputation (see *Appendix E*).

IV. Honor Roll

This year, 137 different hospitals were ranked in at least one specialty. The Honor Roll recognizes excellence across a broad range of specialties. In previous years, the methodology for assigning Honor Roll points was based on the number of standard deviations above the mean of a hospital's score. Since the number of eligible hospitals varied significantly by specialty, there was variability across specialties in the number of hospitals that received points. In some specialties, twice as many hospitals received points as other hospitals. Starting with the 2012-13 rankings, the methodology was revised to assign points based on position in the rankings. This allowed an equal number of hospitals to receive points in each of the data-driven specialties and in each of the reputation-only specialties.

For the 12 data-driven specialties, hospitals received 2 points if ranked among the top 10 hospitals in a specialty and 1 point for being ranked in the next 10 (i.e., 11-20). For the four reputation-only specialties, hospitals received 2 points if ranked among the top five hospitals in a specialty and 1 point if ranked among the next five. Hospitals were included in the final Honor Roll only if they received points in at least six specialties. *Appendix F* lists this year's 15 Honor Roll hospitals.

V. History of Methodology Changes by RTI

RTI began working with *U.S. News* on the Best Hospitals rankings in 2005. The methodological changes introduced to the rankings for each project year since then are described below. For complete information on the project, we recommend reviewing the project methodology reports, which are available online at www.rti.org/besthospitals.

Summary of 2015-16 Changes

- **Technology and Patient Services.** Due to changes to the AHA annual survey, there are now three categories instead of four categories for receiving credit for providing technology and patient services to patients. These services can be provided (1) by the hospital or its subsidiaries, (2) by the hospital's health system (in local network), or (3) by another institution outside of the health system, but in the local network, through a formal contractual arrangement or joint venture.
- **Patient Safety Score.**
 - PSI08 was removed from the patient safety score due to low prevalence.

- A risk-adjusted rather than a smoothed rate is used, to address concerns that the smoothed rate might over-adjust for differences between hospitals.

Summary of 2014-15 Changes

- **Component weighting.** The weight for the process component was reduced from 32.5% to 27.5% and the weight for the patient safety score was increased from 5% to 10%. This was done in recognition of the increased importance of patient safety to the quality of care provided by hospitals.
- **Technology.** Cardiac ICU was removed in Cardiology & Heart Surgery, as it already served as a requirement for hospitals to be eligible for ranking in this specialty. IMRT was added as a new technology to the Cancer and Urology specialties, recognizing the importance of this treatment modality to care in both specialties.
- **Patient Safety Score.** Two patient safety indicators were added to the patient safety score due to the availability of the POA indicator in the MedPAR dataset. Additionally, for display purposes, PSIs were converted from a 3-point scale to a 5-point scale to provide more nuanced information to consumers on the differences in patient safety performance between hospitals. For scoring, the IHQ now uses a continuous value for PSI rather than a discrete value shown in the ranking tables.
- **MS-DRG deletions.** MS-DRG 689 (Kidney and Urinary Tract Infections with MCC) was removed from the Urology specialty due to not reflecting the quality of care of a urology service. A review of hospital data showed that the code is frequently used by other specialties within the institution to identify significant medical comorbidities rather than for identifying performance by the institution's urology service.
- **Eligibility for reputation-only specialties.** In previous years, a hospital was eligible if it received one or more physician nominations in the past 3 years. In 2014-15, a hospital was eligible for a reputation-only specialty only if it had a reputation score of 1% or greater, which equates to about 3 nominations in the past 3 years. This change was made to restrict eligibility to hospitals that are more consistently nominated.

Summary of 2013-14 Changes

- **“Present on admission” data included in patient safety calculations.** Starting with the 2013-14 rankings, patient safety data were analyzed using the AHRQ PSI grouper software version 4.3. This version of the software incorporates POA data found in Medicare claims. This allows the software to remove cases where POA is indicated so that they do not count against a hospital in the assessment of patient safety events.

- **Neurology & Neurosurgery MS-DRG deletions.** Several procedures involving spinal fusion (MS-DRGs 028, 029, 030, 453, 453, 455, 456, 457, 458, 459, 460, 471, 472, 473, 490 and 491) were removed from the Neurology & Neurosurgery but retained in the Orthopedic specialty. The change was made to reflect the specialty that patients typically turn to when seeking spinal fusion procedures. This change also eliminated a redundancy in the coverage of these procedures in the rankings. As a result, these procedures are covered in the orthopedic specialty regardless of whether the surgery was performed by an orthopedic surgeon or neurosurgeon.

Summary of 2012-13 Changes

- **Surgical volume discharge minimums.** If the minimum total discharge value for a specialty was lower than 25, then 25 was set as the minimum for that specialty to ensure a sufficient number of discharges.
- **Normalization.** Normalization is the process of transforming index values into a distribution between 0 and 1 based on the range of possible values for a given measure. Individual measures were normalized before incorporating into the IHQ. In previous years, standardization was used instead of normalization.
- **New weighting procedures for structural measures.** In previous years, factor analysis determined the relative weights of the structural measures. Starting in 2012-13, weights are based on the relative significance of each measure.
- **Reputation.** In previous years, the hospital with the highest reputation score received the full point total (i.e., 32.5 points) for the reputation component. Starting in 2012-13, hospitals received a normalized reputation score. For example, if the highest reputation score in a given specialty is 80%, the hospital receives a normalized score of 0.80. Since reputation is worth 32.5% of the overall score, the hospital receives 0.80×32.5 , or 26 points, for reputation instead of the full 32.5 points possible.
- **Survey response weighting.** Beginning in 2012-13, we calculated reputation values for each year of the survey independently and averaged the 3 years rather than pooling nominations across years. This was done to reduce the year-to-year fluctuation of reputation scores within specialties.
- **Honor Roll.** The methodology for assigning Honor Roll points was revised. For data-driven specialties, hospitals now receive 2 points for ranking among the top 10 hospitals and 1 point for ranking in the next 10 (i.e., 11-20). For reputation-only specialties, hospitals receive 2 points for ranking in among the top 5 and 1 point for ranking in the next 5 (i.e., 6-10).

Summary of 2011-12 Changes

- **Ties allowed.** For 2011-12, we instituted a new rule that allows for ranking ties for hospitals with the same IHQ score. Previously, ties were not allowed and were broken by examining the scores out to 3 decimal points.
- **Cutoffs for reputation-only specialties.** In previous years, hospitals representing 3% or more of the total nominations in a specialty were published in print for the reputation-only specialties. For the 2011-12 rankings, this was revised to 5% to be more discerning.
- **Mortality displayed as survival scores.** The values displayed in the rankings tables for mortality were changed from mortality ratios to decile-based survival scores. The top 10% of hospitals—with the lowest relative mortality and highest 30-day survival—received a survival score value of 10, the next 10% of hospitals received a value of 9, and so on. The method for using the mortality scores to calculate the IHQ score did not change from what was used in 2010.
- **Updated scoring for the patient safety index.** The patient safety index has been revised to include 6 rather than 7 indicators (PSI 02: Death in low-mortality DRGs is no longer included). The approach to weighting individual PSIs also changed from the population at risk to equal weighting. The index scoring was also updated from the quintile scoring used in 2009-10 to a new 3-point scale that represents ≥ 75 th percentile, 25th-74th percentile and < 25 th percentile.

Summary of 2010-11 Changes

- **Reputation scores transformed.** Implemented a new log transformation of the reputation survey data prior to standardization. This change will allow reputation scores to cluster more, reducing the overall impact of this component on the final hospital ranking.
- **MS-DRGs incorporated.** The 3M Health Information Systems MS Grouper software was run on all 3 years of data included in the analyses, and we revised the assignment of cases to specialties using the MS-DRGs.
- **Change in structural volume measure.** The criteria used to determine volume for the structural variable have now changed to include only those cases meeting the minimum severity of illness thresholds set by the project using APR-DRGs and includes transfers; previously, this measure focused on all discharges for DRGs used by the project and excluded transfers. This change will allow the volume measure to more accurately reflect the actual volume of cases according to the specialty definitions.

- **Codes identifying transfers for mortality calculation revised.** As in previous years, transfers were identified using the claim source of inpatient admission variable on the MedPAR files. In past years, transfers were identified based on the value “4” for transfer from an acute hospital. This year the variable value “A” for transfer from critical access hospital was also used.
- **Low-discharge hospitals adjustment changed.** The method for adjusting the scores for hospitals with low discharges on both volume and mortality was revised. In previous years, we used an inverse-logit transformation. Starting in 2010, for hospitals with a discharge volume below the 25th percentile, we adjusted the observed volume score and transfer-free mortality rate by creating an average weight based on the hospitals observed score and the score for all hospitals at or above the 25th percentile in volume.
- **“Outlier” transfer data adjusted.** We adjusted the observed transfer-free mortality rate for hospitals in the top and bottom quartiles of transfer-in rates to account for the fact that some hospitals may have had too many or too few cases included in the mortality calculations due to poor or inaccurate coding of administrative data.

Summary of 2009 Changes

- **Eligibility criteria updated.** Hospitals with a minimum number of hospital beds may now be eligible for the rankings (see *Section II.A*).
- **Key technologies updated.** The elements in this index were updated for a few specialties to remain consistent with the key technologies expected from a best hospital (see *Section II.B*).
- **Intensivist on staff added.** Hospitals now receive credit in all data-driven specialties for having intensivists on staff (see *Section II.B*).
- **Patient safety index added.** A Best Hospitals patient safety index was created and applied to all data-driven specialties (see *Section II.E*).
- **DRG groupings updated.** DRG groupings were updated for all data-driven specialties, consistent with typical year-to-year changes (see *Section II.C*).
- **Physician survey.** The following instruction was removed from the physician survey: “Please do not list any hospital where you currently practice.” Physicians likely choose to work at a certain hospital because it is a best hospital. Therefore, it was deemed acceptable for them to vote for their own hospital.

Summary of 2008 Changes

- **Advanced technologies updated.** The elements in this index were updated for a few specialties to remain consistent with the advanced technologies expected from a best hospital.
- **Patient services updated.** The elements in these services were updated for a few specialties to remain consistent with the patient services expected from a best hospital.
- **Trauma center certification dropped.** Trauma center certification was dropped from the Gynecology specialty.
- **Alzheimer's disease center added.** This element was added to the Neurology & Neurosurgery specialty.
- **30-day mortality rates added for Cancer.** Thirty-days-from-admission mortality rates were introduced in all IHQ-driven specialties except Cancer in 2007. For 2010-11, 30-day mortality was used in Cancer as well.

Summary of 2007 Changes

Changes for 2007 were more substantial but still in keeping with the goal of maintaining consistency and continuity. Many of the changes were discussed at length at a day-long meeting convened by *U.S. News* in fall 2006 to solicit the views of a Best Hospitals advisory panel of approximately 40 invitees. The panelists represented top hospitals and brought expertise in areas such as clinical care, healthcare data analyses and quality research. Several representatives from key trade/industry organizations also participated.

- **External organizations added.** Hospitals in the Cancer specialty now receive points for accreditation by FACT as a Cellular Therapy Facility. Hospitals in Geriatrics now receive points if they are recognized by NIA for having an Alzheimer's center.
- **DRG groupings updated.** DRG groupings were updated for all specialties, consistent with typical year-to-year changes.
- **Transfers excluded.** Patients transferred into a hospital from another hospital are excluded from mortality and volume calculations to reduce the likelihood of either benefiting or suffering from "dumping" of patients.

- **30-day mortality introduced.** Thirty-days-from-admission mortality rates were introduced in all IHQ-driven specialties (except Cancer) instead of death-at-discharge mortality rates.
- **Mortality data weighted.** Weights were applied to the MedPAR data based on the relative over- or underrepresentation of the cases' DRGs among all patients, as identified in the HCUP data.
- **Neonatologists moved.** Neonatologists were removed from the Gynecology sample and included in the Pediatrics sample instead.
- **Physician survey.** An additional instruction was added to the physician survey: "Please do not list any hospital where you currently practice."

Summary of 2005-06 Changes

To maintain consistency in the previous ranking process, RTI replicated the preexisting methodology in the 2005 rankings and implemented only minor operational improvements in 2006.

VI. Future Improvements

The Best Hospitals methodology is reexamined and refined each year. As always, RTI will closely monitor the potential of new data sources and measures. Several methodological improvements being considered follow:

- **Reevaluate process component.** We will continue to evaluate potential new process measures that might enhance the physician survey proxy measure. For example, the Hospital Consumer Assessment of Health Care Providers and Systems survey of hospital inpatients, implemented by CMS in 2008, obtains patient feedback on the quality of care received during a recent hospital stay. The Hospital Compare website has also introduced new process measures that might offer useful data.
- **Add structural data to reputation-only specialties.** We are examining resources and measures that would add structural data to the current reputation-only specialties to strengthen and improve the rankings for these specialties.
- **Review external data sources.** We will investigate additional and new sources of data that offer quality measures for all hospitals. Data sources under consideration include quality indicators from AHRQ, AHA, CMS and the Joint Commission.

Contact Information

We welcome suggestions and questions. Readers and users are encouraged to contact the Best Hospitals research team at the address listed below. This report, as well as all others from 2005 forward, can be viewed or downloaded from the RTI International website at www.rti.org/BestHospitals. Specific questions or comments about this report can be sent to BestHospitals@rti.org.

VII. 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. Clinical Research and Documentation Departments of 3M Health Information Systems. *All Patient Refined Diagnosis Related Groups (APR-DRGs): Methodology overview, version 20.0*. Wallingford, CT: 3M Health Information Systems; 2003.
7. Agency for Healthcare Research and Quality (AHRQ). *Patient Safety Indicators (PSI) composite measure workgroup final report*. Rockville, MD: Agency for Healthcare Research and Quality. Available at http://www.qualityindicators.ahrq.gov/psi_download.htm.
8. Agency for Healthcare Research and Quality (AHRQ). *National healthcare quality report*. Rockville, MD: Agency for Healthcare Research and Quality. Available at www.ahrq.gov/qual/measurix.htm.
9. Agency for Healthcare Research and Quality (AHRQ). *National healthcare disparities report*. Rockville, MD: Agency for Healthcare Research and Quality. Available at www.ahrq.gov/qual/measurix.htm.
10. Hill CA, Winfrey KL, Rudolph BA. "Best Hospitals: A description of the methodology for the index of hospital quality." *Inquiry*. 1997; 34:80–90.
11. American Hospital Association (AHA). *Annual Survey of Hospitals Database documentation manual*. Chicago, IL: American Hospital Association; 2005.
12. Pronovost PJ, Holzmueller CG, Clattenburg L, Berenholtz S, Martinez EA, Paz JR, Needham DM. "Team care: beyond open and closed intensive care units." *Current Opinion in Critical Care*. 2006; 12(6):604-8.
13. Sapirstein A, Needham DM, Pronovost PJ. "24-hour intensivist staffing: balancing benefits and costs." *Critical Care Medicine*. 2008; 36(1):367-8.

14. Cancer Centers Branch of the National Cancer Institute. *Policies and guidelines relating to the cancer-center support grant*. Washington, DC: National Cancer Institute; 2000.
15. National Association of Epilepsy Centers. "Guidelines for essential services, personnel, and facilities in specialized epilepsy centers in the United States." *Epilepsia*. 2001; 42(6).
16. U.S. Department of Health and Human Services. *Medicare hospital mortality information* (HCFA publication 01-002). Report prepared by Otis R. Bowen and William L. Roper. Washington, DC: U.S. Government Printing Office; 1987.
17. Blumberg MS. "Comments on HCFA hospital death rate statistical outliers." *HSR: Health Services Research*. 1987; 21:715–740.
18. Dubois RW, Brook RH, Rogers WH. "Adjusted hospital death rates: A potential screen for quality of medical care." *American Journal of Public Health*. 1987; 77:1162–1166.
19. Gillis KD, Hixson JS. "Efficacy of statistical outlier analysis for monitoring quality of care." *Journal of Business and Economic Statistics*. 1991; 9:241–252.
20. Green J, Wintfield N, Sharkey P, Passman LJ. "The importance of severity of illness in assessing hospital mortality." *Journal of the American Medical Association*. 1990; 263:241–246.
21. Green J, Passman LJ, Wintfield N. "Analyzing hospital mortality: The consequences of diversity in patient mix." *Journal of the American Medical Association*. 1991; 265:1849–1853.
22. Greenfield S, Aronow HU, Elashoff RM, Watanabe D. "Flaws in mortality data: The hazards of ignoring comorbid disease." *Journal of the American Medical Association*. 1988; 260:2253–2257.
23. Rosen HM, Green BA. "The HCFA excess mortality lists: A methodological critique." *Hospital and Health Services Administration*. 1987; 2:119–124.
24. Flood AB, Scott WR. "Conceptual and methodological issues in measuring the quality of care in hospitals." In *Hospital structure and performance*. Baltimore, MD: Johns Hopkins University Press; 1987.
25. Iezzoni LI, Ash AS, Coffman GA, Moskowitz MA. "Predicting in-hospital mortality: A comparison of severity measurement approaches." *Medical Care*. 1992; 30:347–359.
26. De Marco MF, Lorenzoni L, Addari P, Nante N. "Evaluation of the capacity of the APR-DRG classification system to predict hospital mortality." *Epidemiol Prev*. 2002; 26(4):183–190.
27. Ciccone G, Lorenzoni L, Ivaldi C, Ciccarelli E, Piobbici M, Arione R. "Social class, mode of admission, severity of illness and hospital mortality: An analysis with 'all patient

- refined DRG' of discharges from the Molinette Hospital in Turin." *Epidemiol Prev.* 1999; 23(3):188–196.
28. Centers for Medicare & Medicaid Services (CMS). *Medicare Provider Analysis and Review (MEDPAR)*. Baltimore, MD: Centers for Medicare & Medicaid Services. Available at <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/MedicareFeeforSvcPartsAB/MEDPAR.html>. Accessed on April 30, 2013.
 29. National Center for Health Statistics. *The international classification of diseases, ninth revision, clinical modification (ICD-9-CM)*. Hyattsville, MD: National Center for Health Statistics; 2013. Available at <http://www.cdc.gov/nchs/icd.htm>. Accessed on April 30, 2013.
 30. Cromwell J, Adamache WO, Bernard S, Greenwald LM, Drozd EM, Root ED, Kane NM, Devers KJ. *Specialty hospital evaluation*. Final report prepared for the Centers for Medicare & Medicaid Services (CMS Contract No. 500-00-0024, T.O. 12). Waltham, MA: RTI International; 2005.
 31. Medicare Payment Advisory Commission. *A data book: Healthcare spending and the Medicare program, June 2006*. Washington, DC: Medicare Prospective Payment Commission; 2006.
 32. Davies GM, Geppert J, McClellan M, et al. *Refinement of the HCUP quality indicators*. Prepared by UCSF-Stanford Evidence-based Practice Center for the Agency for Healthcare Research and Quality (AHRQ Publication No. 01-0035). Rockville, MD: Agency for Healthcare Research and Quality; 2001. Available at <http://www.ncbi.nlm.nih.gov/books/NBK43831/>.
 33. Agency for Healthcare Research and Quality (AHRQ). *Healthcare Cost and Utilization Project (HCUP)*. Rockville, MD: Agency for Healthcare Research and Quality; 2014. Available at www.hcup-us.ahrq.gov/databases.jsp.
 34. Institute of Medicine (IOM). *To err is human: Building a safer health system*. Washington, DC: National Academy Press; 2000.
 35. Agency for Healthcare Research and Quality (AHRQ). *Guide to patient safety indicators, version 3.1*. Rockville, MD: Agency for Healthcare Research and Quality; 2007. Available at http://www.qualityindicators.ahrq.gov/Downloads/Modules/IQI/V31/iqi_guide_v31.pdf.
 36. Isaac T, Jha AK. "Are Patient Safety Indicators related to widely used measures of hospital quality?" *Journal of General Internal Medicine*, 2008; 23 (9):1373-1378.
 37. Thornlow DK, Stukenborg GJ. "The association between hospital characteristics and rates of preventable complications and adverse events." *Medical Care*, 2006; 44(3):265-9.

38. Miller MR, Pronovost P, Donithan M, Zeger, S, Zhan, C, Morlock, L, Meyer, GS. "Relationship between performance measurement and accreditation: implications for quality of care and patient safety." *American Journal of Medical Quality*, 2005; 20(5):239-252.
39. Encinosa WE, Hellinger FJ. "The impact of medical errors on ninety-day costs and outcomes: An examination of surgical patients." *Health Services Research*, 2008; 43(6), 2067-2085.
40. Paradis AR, Stewart, VT, Bayley KB, Brown A, Bennett AJ. "Excess cost and length of stay associated with voluntary patient safety event reports in hospitals." *American Journal of Medical Quality*, 2009; 24(1), 53-60.
41. Rivard PE, Luther SL, Christiansen, CL, Zhao SB, Loveland S, Elixhauser A, et al. "Using patient safety indicators to estimate the impact of potential adverse events on outcomes." *Medical Care Research and Review*, 2008; 65(1), 67-87.
42. Rosen AK, Rivard P, Zhao SB, Loveland S, Tsilimingras D, Christiansen CL, et al. "Evaluating the Patient Safety Indicators—How well do they perform on Veterans Health Administration data?" *Medical Care*, 2005; 43(9), 873-884.
43. Zhan C, Miller MR. "Excess length of stay, charges, and mortality attributable to medical injuries during hospitalization." *Journal of the American Medical Association*, 2003; 290, 1868-1874.

Appendix A

2015-16 Physician Survey Materials

Prenotification Letter A

January 13, 2015

«Full name»
«addr2»
«addr1»
«city», «st» «zip»

Dear Dr. «last name»,

I am writing to ask for your help with U.S. News & World Report's annual rankings of Best Hospitals. As a distinguished individual with interest in «specialty», your response is highly valued. You are one of a select group of board-certified specialists being asked to nominate hospitals in «specialty». **Your response is not only important, but needed to help us identify the hospitals in the United States that provide the best inpatient care for the most serious or difficult medical conditions associated with «specialty».**

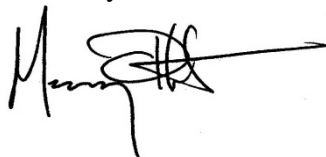
In the next few days, we will send you an email from Best Hospitals with a link to the online survey where you can provide your responses.

Survey results will be combined with quality indicators from the Centers for Medicare & Medicaid Services, the American Hospital Association, and other data sources to produce the 2015-16 Best Hospitals rankings. Your responses will be kept confidential and will be released only as part of a summary of the overall responses from our national sample.

If you have any questions, please feel free to contact us at (866) 309-4561 or at BestHospitals@rti.org. The enclosed two-dollar bill is a small token of our appreciation for your help.

The survey is being conducted by RTI International on behalf of U.S. News.
Thank you for your time and expertise.

Sincerely,

A handwritten signature in black ink, appearing to read 'Murrey Olmsted', with a long horizontal stroke extending to the right.

Dr. Murrey Olmsted
Project Director, Best Hospitals
RTI International

Prenotification Letter B

January 13, 2015

«Full name»
«addr2»
«addr1»
«city», «st» «zip»

Dear Dr. «last>>,

You likely have strong views about which hospitals are best for the sickest patients in «specialty». That is why we are asking you, as part of a select group of specialists in «specialty», to name them for the annual U.S. News & World Report Best Hospitals rankings. With your help, we will identify the hospitals that provide the highest quality of care for adult patients with the most challenging conditions and/or surgical procedures associated with «specialty».

In the next few days, we will send you an email from Best Hospitals with a link to the online survey where you can provide your responses.

Survey results will be combined with quality indicators from the Centers for Medicare & Medicaid Services, the American Hospital Association, and other data sources to produce the 2015-16 Best Hospitals rankings. Your responses will be kept confidential and will be released only as part of a summary of the overall responses from our national sample.

If you have any questions about the study, please feel free to contact us at (866) 309-4561 or at BestHospitals@rti.org. The enclosed two-dollar bill is a small token of our appreciation for your help.

The survey is being conducted by RTI International on behalf of *U.S. News*.

Thank you for your time and expertise.

Sincerely,

A handwritten signature in black ink, appearing to read 'Murrey Olmsted', with a long horizontal stroke extending to the right.

Dr. Murrey Olmsted
Best Hospitals Project Director
RTI International

Initial email

Dear Dr. «Last»,

You have been randomly selected to represent «specialty» specialists in identifying the hospitals that provide the highest quality of care for the sickest adult patients in «specialty». We will weigh your nominations, along with quality indicators from the Centers for Medicare & Medicaid Services, the American Hospital Association, and other data sources to produce the 2015-16 Best Hospitals rankings.

To submit your nominations, please visit: «Custom_URL_Link»

This survey is being conducted by RTI International on behalf of *U.S. News & World Report*. Your responses to the survey will be kept confidential. If you have any questions, please feel free to contact us at (866) 309-4561 or at BestHospitals@rti.org.

Please submit responses by January 31, 2015. Thank you in advance for your time, and especially for your input.

Sincerely,

Dr. Murrey Olmsted
Best Hospitals Project Director
RTI International



Best Hospitals

Your nominations will be reflected in the 2015-16
U.S. News & World Report <<SPECIALTY>>
 rankings.

Please name up to five U.S. hospitals that you believe provide the best care in <<specialty>> for patients who have the most challenging conditions or who need particularly difficult procedures. *Do not consider location or cost. Individual hospitals should be listed, not hospital systems or medical schools.*

	Hospital	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"/>

Fax response to (800) XXX-XXXX
or return in postpaid envelope.



Conducted by:

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

Appendix B

Structural Variable Map

The following variables used to construct structural elements of the 2015-16 IHQ were taken from the 2013 Annual Survey of Hospitals Database published by the American Hospital Association, unless otherwise specified. Hospitals did not receive more than one point for any one service.

Key Technologies (8 points possible)

1 point awarded if...
DRADFHOS, DRADFSYS or DRADFVEN=1
FFDMHOS, FFDMSYS or FFDMVEN=1
IGRTHOS, IGRTSYS or IGRTVEN=1
MSCTHOS, MSCTSYS, MSCTVEN, MSCTGHOS, MSCTGSYS or MSCTGVEN=1
PETCTHOS, PETCTSYS or PETCTVEN=1
ROBOHOS, ROBOSYS or ROBOVEN=1
SPECTHOS, SPECTSYS or SPECTVEN=1
SRADHOS, SRADSYS or SRADVEN=1

Cancer Advanced Technologies (8 points possible)

1 point awarded if...
FFDMHOS, FFDMSYS or FFDMVEN=1
IGRTHOS, IGRTSYS or IGRTVEN=1
IMRTHOS, IMRTSYS or IMRTVEN=1
ROBOHOS, ROBOSYS or ROBOVEN=1
PETCTHOS, PETCTSYS or PETCTVEN=1
BEAMHOS, BEAMSYS or BEAMVEN=1
SRADHOS, SRADSYS or SRADVEN=1
OTBONHOS, OTBONSYS or OTBONVEN=1

Cardiology & Heart Surgery Advanced Technologies (6 points possible)

1 point awarded if...
MSCTHOS, MSCTSYS, MSCTVEN, MSCTGHOS, MSCTGSYS or MSCTGVEN=1
PETCTHOS, PETCTSYS or PETCTVEN=1
ROBOHOS, ROBOSYS or ROBOVEN=1
SPECTHOS, SPECTSYS, SPECTVEN=1
TISUHOS, TISUSYS or TISUVEN=1
CMS Heart Transplant Center=1

Diabetes & Endocrinology Advanced Technologies (4 points possible)

1 point awarded if...
DRADFHOS, DRADFSYS or DRADFVEN=1
IGRTHOS, IGRTSYS or IGRTVEN=1
PETCTHOS, PETCTSYS or PETCTVEN=1
SRADHOS, SRADSYS or SRADVEN=1

Ear, Nose, & Throat Advanced Technologies (1 point possible)

1 point awarded if...
SRADHOS, SRADSYS or SRADVEN=1

Gastroenterology & GI Surgery Advanced Technologies (7 points possible)

1 point awarded if...
DRADFHOS, DRADFSYS or DRADFVEN=1
ENDOAHOS, ENDOASYS or ENDOAVEN=1
ENDORHOS, ENDORSYS or ENDORVEN=1
ENDOUHOS, ENDOUSYS or ENDOUVEN=1
IGRTHOS, IGRTSYS or IGRTVEN=1
SRADHOS, SRADSYS or SRADVEN=1
CMS Liver Transplant Center=1

Gynecology Advanced Technologies (5 points possible)

1 point awarded if...
FFDMHOS, FFDMSYS or FFDMVEN=1
IGRTHOS, IGRTSYS or IGRTVEN=1
PETCTHOS, PETCTSYS or PETCTVEN=1
ROBOHOS, ROBOSYS or ROBOVEN=1
SRADHOS, SRADSYS or SRADVEN=1

Nephrology Advanced Technologies (7 points possible)

1 point awarded if...
DRADFHOS, DRADFSYS or DRADFVEN=1
IGRTHOS, IGRTSYS or IGRTVEN=1
MSCTHOS, MSCTSYS, MSCTVEN, MSCTGHOS, MSCTGSYS or MSCTGVEN=1
PETCTHOS, PETCTSYS or PETCTVEN=1
ROBOHOS, ROBOSYS or ROBOVEN=1
SRADHOS, SRADSYS or SRADVEN=1
CMS Kidney Transplant Center=1

Neurology & Neurosurgery Advanced Technologies (5 points possible)

1 point awarded if...
DRADFHOS, DRADFSYS or DRADFVEN=1
IGRTHOS, IGRTSYS or IGRTVEN=1
PETCTHOS, PETCTSYS or PETCTVEN=1
SPECTHOS, SPECTSYS or SPECTVEN=1
SRADHOS, SRADSYS or SRADVEN=1

Orthopedics Advanced Technologies (2 points possible)

1 point awarded if...
CAOSHOS, CAOSSYS or CAOSVEN=1
TISUHOS, TISUSYS or TISUVEN=1

Pulmonology Advanced Technologies (6 points possible)

1 point awarded if...
DRADFHOS, DRADFSYS or DRADFVEN=1
IGRTHOS, IGRTSYS or IGRTVEN=1
MSCTHOS, MSCTSYS, MSCTVEN, MSCTGHOS, MSCTGSYS or MSCTGVEN=1
PETCTHOS, PETCTSYS or PETCTVEN=1
SRADHOS, SRADSYS or SRADVEN=1
CMS Lung Transplant Center=1

Urology Advanced Technologies (6 points possible)

1 point awarded if...
DRADFHOS, DRADFSYS or DRADFVEN=1
IGRTHOS, IGRTSYS or IGRTVEN=1
IMRTHOS, IMRTSYS or IMRTVEN=1
PETCTHOS, PETCTSYS or PETCTVEN=1
ROBOHOS, ROBOSYS or ROBOVEN=1
SRADHOS, SRADSYS or SRADVEN=1

Nursing Intensity

Index equals:
Full-time Equivalent Registered Nurses (FTEN where available, FTERN otherwise) divided by Adjusted Average Daily Census (ADJADC)

Trauma Center

"Yes" if...
TRAUML90=1 or 2 and TRAUMHOS=1

Cancer Patient Services (8 points possible)

1 point awarded if...
GNTCHOS, GNTCSYS or GNTCVEN=1
HOSPCCHOS, HOSPCSYS or HOSPCVEN=1
PAINHOS, PAINSYS or PAINVEN=1
PALHOS, PALSYS or PALVEN=1
PCAHOS, PCASYS or PCAVEN=1
LINGHOS, LINGSYS or LINGVEN=1
AIRBHOS, AIRBSYS or AIRBVEN=1
WMGTHOS, WMGTSYS or WMGTVEN=1

Cardiology & Heart Surgery Patient Services (7 points possible)

1 point awarded if...
CHABHOS, CHABSYS or CHABVEN=1
HOSPCCHOS, HOSPCSYS or HOSPCVEN=1
PAINHOS, PAINSYS or PAINVEN=1
PALHOS, PALSYS or PALVEN=1
PCAHOS, PCASYS or PCAVEN=1
LINGHOS, LINGSYS or LINGVEN=1
WMGTHOS, WMGTSYS or WMGTVEN=1

Diabetes & Endocrinology Patient Services (8 points possible)

1 point awarded if...
GNTCHOS, GNTCSYS or GNTCVEN=1
HOSPCCHOS, HOSPCSYS or HOSPCVEN=1
PAINHOS, PAINSYS or PAINVEN=1
PALHOS, PALSYS or PALVEN=1
PCAHOS, PCASYS or PCAVEN=1
LINGHOS, LINGSYS or LINGVEN=1
AIRBHOS, AIRBSYS or AIRBVEN=1
WMGTHOS, WMGTSYS or WMGTVEN=1

Ear, Nose, & Throat Patient Services (8 points possible)

1 point awarded if...
GNTCHOS, GNTCSYS or GNTCVEN=1
HOSPCCHOS, HOSPCSYS or HOSPCVEN=1
PAINHOS, PAINSYS or PAINVEN=1
PALHOS, PALSYS or PALVEN=1
PCAHOS, PCASYS or PCAVEN=1
LINGHOS, LINGSYS or LINGVEN=1
AIRBHOS, AIRBSYS or AIRBVEN=1
WMGTHOS, WMGTSYS or WMGTVEN=1

Gastroenterology & GI Surgery Patient Services (8 points possible)

1 point awarded if...
GNTCHOS, GNTCSYS or GNTCVEN=1
HOSPCCHOS, HOSPCSYS or HOSPCVEN=1
PAINHOS, PAINSYS or PAINVEN=1
PALHOS, PALSYS or PALVEN=1
PCAHOS, PCASYS or PCAVEN=1
LINGHOS, LINGSYS or LINGVEN=1
AIRBHOS, AIRBSYS or AIRBVEN=1
WMGTHOS, WMGTSYS or WMGTVEN=1

Geriatric Care Patient Services (9 points possible)

1 point awarded if...
ALZHOS, ALZSYS or ALZVEN=1
ARTHCHOS, ARTHCSYS or ARTHCVEN=1
HOSPCCHOS, HOSPCSYS or HOSPCVEN=1
PAINHOS, PAINSYS or PAINVEN=1
PALHOS, PALSYS or PALVEN=1
PCAHOS, PCASYS or PCAVEN=1
PSYGRHOS, PSYGRSYS or PSYGRVEN=1
LINGHOS, LINGSYS or LINGVEN=1
WMGTHOS, WMGTSYS or WMGTVEN=1

Gynecology Patient Services (9 points possible)

1 point awarded if...
FRTCHOS, FRTCSYS or FRTCVEN=1
GNTCHOS, GNTCSYS or GNTCVEN=1
HOSPCCHOS, HOSPCSYS or HOSPCVEN=1
PAINHOS, PAINSYS or PAINVEN=1
PALHOS, PALSYS or PALVEN=1
PCAHOS, PCASYS or PCAVEN=1
LINGHOS, LINGSYS or LINGVEN=1
AIRBHOS, AIRBSYS or AIRBVEN=1
WMGTHOS, WMGTSYS or WMGTVEN=1

Nephrology Patient Services (8 points possible)

1 point awarded if...
GNTCHOS, GNTCSYS or GNTCVEN=1
HOSPCCHOS, HOSPCSYS or HOSPCVEN=1
PAINHOS, PAINSYS or PAINVEN=1
PALHOS, PALSYS or PALVEN=1
PCAHOS, PCASYS or PCAVEN=1
LINGHOS, LINGSYS or LINGVEN=1
AIRBHOS, AIRBSYS or AIRBVEN=1
WMGTHOS, WMGTSYS or WMGTVEN=1

Neurology & Neurosurgery Patient Services (9 points possible)

1 point awarded if...
ALZHOS, ALZSYS or ALZVEN=1
GNTCHOS, GNTCSYS or GNTCVEN=1
HOSPCCHOS, HOSPCSYS or HOSPCVEN=1
PAINHOS, PAINSYS or PAINVEN=1
PALHOS, PALSYS or PALVEN=1
PCAHOS, PCASYS or PCAVEN=1
LINGHOS, LINGSYS or LINGVEN=1
AIRBHOS, AIRBSYS or AIRBVEN=1
WMGTHOS, WMGTSYS or WMGTVEN=1

Orthopedics Patient Services (7 points possible)

1 point awarded if...
ARTHCHOS, ARTHCSYS or ARTHCVEN=1
HOSPCCHOS, HOSPCSYS or HOSPCVEN=1
PAINHOS, PAINSYS or PAINVEN=1
PALHOS, PALSYS or PALVEN=1
PCAHOS, PCASYS or PCAVEN=1
LINGHOS, LINGSYS or LINGVEN=1
WMGTHOS, WMGTSYS or WMGTVEN=1

Pulmonology Patient Services (8 points possible)

1 point awarded if...
GNTCHOS, GNTCSYS or GNTCVEN=1
HOSPCCHOS, HOSPCSYS or HOSPCVEN=1
PAINHOS, PAINSYS or PAINVEN=1
PALHOS, PALSYS or PALVEN=1
PCAHOS, PCASYS or PCAVEN=1
LINGHOS, LINGSYS or LINGVEN=1
AIRBHOS, AIRBSYS or AIRBVEN=1
WMGTHOS, WMGTSYS or WMGTVEN=1

Urology Patient Services (9 points possible)

1 point awarded if...
FRTCHOS, FRTCSYS or FRTCVEN=1
GNTCHOS, GNTCSYS or GNTCVEN=1
HOSPCCHOS, HOSPCSYS or HOSPCVEN=1
PAINHOS, PAINSYS or PAINVEN=1
PALHOS, PALSYS or PALVEN=1
PCAHOS, PCASYS or PCAVEN=1
LINGHOS, LINGSYS or LINGVEN=1
AIRBHOS, AIRBSYS or AIRBVEN=1
WMGTHOS, WMGTSYS or WMGTVEN=1

Intensivists

1 point awarded if...
FTEMSI, FTECIC or FTEOIC > 0

Appendix C

2015-16 Diagnosis Related Group (DRG)

Groupings by Specialty

Cancer

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
014	S	Allogeneic bone marrow transplant	Include all	1	2.2780
016	S	Autologous bone marrow transplant w CC/MCC	Include all	1	1.9078
017	S	Autologous bone marrow transplant w/o CC/MCC	Include all	1	2.2780
023	S	Cranio w major dev impl/acute complex CNS PDX w MCC or chemo implant	Include procedures: 0010	1	0.7342
054	M	Nervous system neoplasms w MCC	Include all	1	0.9432
055	M	Nervous system neoplasms w/o MCC	Include all	2	1.0198
146	M	Ear, nose, mouth & throat malignancy w MCC	Include all	1	1.0839
147	M	Ear, nose, mouth & throat malignancy w CC	Include all	2	1.1292
148	M	Ear, nose, mouth & throat malignancy w/o CC/MCC	Include all	2	1.3507
180	M	Respiratory neoplasms w MCC	Include all	1	0.7700
181	M	Respiratory neoplasms w CC	Include all	2	0.8310
182	M	Respiratory neoplasms w/o CC/MCC	Include all	2	0.8423
374	M	Digestive malignancy w MCC	Include all	1	0.8585
375	M	Digestive malignancy w CC	Include all	2	0.8990
376	M	Digestive malignancy w/o CC/MCC	Include all	2	0.8762
435	M	Malignancy of hepatobiliary system or pancreas w MCC	Include all	1	0.8679
436	M	Malignancy of hepatobiliary system or pancreas w CC	Include all	2	0.9015
437	M	Malignancy of hepatobiliary system or pancreas w/o CC/MCC	Include all	2	0.8988
456	S	Spinal fus exc cerv w spinal curv/malig/infec or 9+ fus w MCC	Include diagnoses: 1702, 1985, 20973	1	0.8913
457	S	Spinal fus exc cerv w spinal curv/malig/infec or 9+ fus w CC	See MS-DRG 456	2	1.1992
458	S	Spinal fus exc cerv w spinal curv/malig/infec or 9+ fus w/o CC/MCC	See MS-DRG 456	2	1.0080
542	M	Pathological fractures & musculoskelet & conn tiss malig w MCC	Exclude diagnoses: 4463-4, 7331, 73310-6, 73319, 73393-8	1	0.8510
543	M	Pathological fractures & musculoskelet & conn tiss malig w CC	See MS-DRG 542	2	0.9417
544	M	Pathological fractures & musculoskelet & conn tiss malig w/o CC/MCC	See MS-DRG 542	2	1.0193
582	S	Mastectomy for malignancy w CC/MCC	Include all	2	1.1012
583	S	Mastectomy for malignancy w/o CC/MCC	Include all	2	1.4929
595	M	Major skin disorders w MCC	Include diagnoses: 1720, 1722-9, 20931-6	1	1.1392
596	M	Major skin disorders w/o MCC	See MS-DRG 595	2	1.1775
597	M	Malignant breast disorders w MCC	Include all	1	1.0532
598	M	Malignant breast disorders w CC	Include all	2	1.1626
599	M	Malignant breast disorders w/o CC/MCC	Include all	2	0.9974
656	S	Kidney & ureter procedures for neoplasm w MCC	Include all	1	0.7656
657	S	Kidney & ureter procedures for neoplasm w CC	Include all	2	0.9518
658	S	Kidney & ureter procedures for neoplasm w/o CC/MCC	Include all	2	1.0961
686	M	Kidney & urinary tract neoplasms w MCC	Include all	2	0.8071
687	M	Kidney & urinary tract neoplasms w CC	Include all	2	0.8083
688	M	Kidney & urinary tract neoplasms w/o CC/MCC	Include all	3	0.6988
715	S	Other male reproductive system O.R. proc for malignancy w CC/MCC	Include all	2	0.9588
716	S	Other male reproductive system O.R. proc for malignancy w/o CC/MCC	Include all	2	1.0694
722	M	Malignancy, male reproductive system w MCC	Include all	1	0.7279
723	M	Malignancy, male reproductive system w CC	Include all	2	0.7725

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
724	M	Malignancy, male reproductive system w/o CC/MCC	Include all	2	0.8530
736	S	Uterine & adnexa proc for ovarian or adnexal malignancy w MCC	Include all	1	0.9424
737	S	Uterine & adnexa proc for ovarian or adnexal malignancy w CC	Include all	2	1.2889
738	S	Uterine & adnexa proc for ovarian or adnexal malignancy w/o CC/MCC	Include all	2	1.6336
739	S	Uterine,adnexa proc for non-ovarian/adnexal malig w MCC	Include all	1	0.8576
740	S	Uterine,adnexa proc for non-ovarian/adnexal malig w CC	Include all	2	1.0989
741	S	Uterine,adnexa proc for non-ovarian/adnexal malig w/o CC/MCC	Include all	2	1.1672
754	M	Malignancy, female reproductive system w MCC	Include all	1	0.9386
755	M	Malignancy, female reproductive system w CC	Include all	2	1.0185
756	M	Malignancy, female reproductive system w/o CC/MCC	Include all	2	1.2955
808	M	Major hematol/immun diag exc sickle cell crisis & coagul w MCC	Include diagnoses: 99685	1	1.9688
809	M	Major hematol/immun diag exc sickle cell crisis & coagul w CC	See MS-DRG 809	2	2.2780
810	M	Major hematol/immun diag exc sickle cell crisis & coagul w/o CC/MCC	See MS-DRG 809	2	2.2780
820	S	Lymphoma & leukemia w major O.R. procedure w MCC	Include all	1	0.9469
821	S	Lymphoma & leukemia w major O.R. procedure w CC	Include all	2	1.0691
822	S	Lymphoma & leukemia w major O.R. procedure w/o CC/MCC	Include all	2	1.0685
823	S	Lymphoma & non-acute leukemia w other O.R. proc w MCC	Include all	1	0.8658
824	S	Lymphoma & non-acute leukemia w other O.R. proc w CC	Include all	2	0.9851
825	S	Lymphoma & non-acute leukemia w other O.R. proc w/o CC/MCC	Include all	2	1.0115
826	S	Myeloprolif disord or poorly diff neopl w maj O.R. proc w MCC	Exclude diagnoses: v100-9, v1000-9, v1011-2, v1020-2, v1029, v1040-9, v1050-3, v1059, v1060-3, v1069, v1071-2, v1079, v1081-8, v1090-1, v1322	1	1.1651
827	S	Myeloprolif disord or poorly diff neopl w maj O.R. proc w CC	See MS-DRG 826	2	1.1399
828	S	Myeloprolif disord or poorly diff neopl w maj O.R. proc w/o CC/MCC	See MS-DRG 826	2	1.0405
829	S	Myeloprolif disord or poorly diff neopl w other O.R. proc w CC/MCC	See MS-DRG 826	2	1.4967
830	S	Myeloprolif disord or poorly diff neopl w other O.R. proc w/o CC/MCC	See MS-DRG 826	2	1.0867
834	M	Acute leukemia w/o major O.R. procedure w MCC	Include all	1	1.1032
835	M	Acute leukemia w/o major O.R. procedure w CC	Include all	2	1.1264
836	M	Acute leukemia w/o major O.R. procedure w/o CC/MCC	Include all	2	1.4311
837	M	Chemo w acute leukemia as sdx or w high dose chemo agent w MCC	Include all	1	1.6857
838	M	Chemo w acute leukemia as sdx w CC or high dose chemo agent	Include all	2	2.2780
839	M	Chemo w acute leukemia as sdx w/o CC/MCC	Include all	2	2.2780
840	M	Lymphoma & non-acute leukemia w MCC	Include all	1	0.8123
841	M	Lymphoma & non-acute leukemia w CC	Include all	2	0.8395
842	M	Lymphoma & non-acute leukemia w/o CC/MCC	Include all	2	0.9355
843	M	Other myeloprolif dis or poorly diff neopl diag w MCC	Exclude diagnosis: v10, v711	3	0.8741
844	M	Other myeloprolif dis or poorly diff neopl diag w CC	See MS-DRG 844	3	0.9184
845	M	Other myeloprolif dis or poorly diff neopl diag w/o CC/MCC	See MS-DRG 844	3	0.8839
846	M	Chemotherapy w/o acute leukemia as secondary diagnosis w MCC	Include all	3	1.4667
847	M	Chemotherapy w/o acute leukemia as secondary diagnosis w CC	Include all	3	1.7738
848	M	Chemotherapy w/o acute leukemia as secondary diagnosis w/o CC/MCC	Include all	3	2.2780

Cardiology & Heart Surgery

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
001	S	Heart transplant or implant of heart assist system w MCC	Include all	1	1.4947
002	S	Heart transplant or implant of heart assist system w/o MCC	Include all	1	1.7663
163	S	Major chest procedures w MCC	Include procedures: 3712, 3724, 3731, 3791, 3805, 3815, 3835, 3845, 3855, 3865, 3885, 3954	1	1.8731
164	S	Major chest procedures w CC	See MS-DRG: 163	2	1.7126
165	S	Major chest procedures w/o CC/MCC	See MS-DRG: 164	2	1.7030
215	S	Other heart assist system implant	Include all	1	1.4931
216	S	Cardiac valve & oth maj cardiothoracic proc w card cath w MCC	Include all	1	1.0845
217	S	Cardiac valve & oth maj cardiothoracic proc w card cath w CC	Include all	2	1.1308
218	S	Cardiac valve & oth maj cardiothoracic proc w card cath w/o CC/MCC	Include all	2	1.1722
219	S	Cardiac valve & oth maj cardiothoracic proc w/o card cath w MCC	Include all	1	1.1562
220	S	Cardiac valve & oth maj cardiothoracic proc w/o card cath w CC	Include all	2	1.1990
221	S	Cardiac valve & oth maj cardiothoracic proc w/o card cath w/o CC/MCC	Include all	2	1.2293
222	S	Cardiac defib implant w cardiac cath w AMI/HF/shock w MCC	Include all	1	1.2510
223	S	Cardiac defib implant w cardiac cath w AMI/HF/shock w/o MCC	Include all	1	1.1560
224	S	Cardiac defib implant w cardiac cath w/o AMI/HF/shock w MCC	Include all	3	1.5357
225	S	Cardiac defib implant w cardiac cath w/o AMI/HF/shock w/o MCC	Include all	3	0.8628
226	S	Cardiac defibrillator implant w/o cardiac cath w MCC	Include all	1	1.0544
227	S	Cardiac defibrillator implant w/o cardiac cath w/o MCC	Include all	1	1.0962
228	S	Other cardiothoracic procedures w MCC	Include all	1	1.9226
229	S	Other cardiothoracic procedures w CC	Include all	2	1.9226
230	S	Other cardiothoracic procedures w/o CC/MCC	Include all	2	1.9226
231	S	Coronary bypass w PTCA w MCC	Include all	1	1.4653
232	S	Coronary bypass w PTCA w/o MCC	Include all	2	1.7035
233	S	Coronary bypass w cardiac cath w MCC	Include all	2	1.2637
234	S	Coronary bypass w cardiac cath w/o MCC	Include all	3	1.3093
235	S	Coronary bypass w/o cardiac cath w MCC	Include all	2	1.2024
236	S	Coronary bypass w/o cardiac cath w/o MCC	Include all	3	1.2976
237	S	Major cardioasc procedures w MCC	Include all	1	1.2097
238	S	Major cardiovascular procedures w/o MCC	Include all	2	1.1556
242	S	Permanent cardiac pacemaker implant w MCC	Include all	2	0.8378
243	S	Permanent cardiac pacemaker implant w CC	Include all	2	0.8530
244	S	Permanent cardiac pacemaker implant w/o CC/MCC	Include all	3	0.8522
245	S	AICD Generator Procedures	Include all	2	0.9657
246	S	Perc cardioasc proc w drug-eluting stent w MCC or 4+ vessels/stents	Include all	2	1.1439
247	S	Perc cardioasc proc w drug-eluting stent w/o MCC	Include all	3	1.0989
248	S	Perc cardioasc proc w non-drug-eluting stent w MCC or 4+ ves/stents	Include all	2	1.1249
249	S	Perc cardioasc proc w non-drug-eluting stent w/o MCC	Include all	3	1.0748
250	S	Perc cardioasc proc w/o coronary artery stent w MCC	Include all	3	1.0886
251	S	Perc cardioasc proc w/o coronary artery stent or AMI w/o MCC	Include all	3	1.1546
252	S	Other vascular procedures w MCC	Include all	2	0.9423
253	S	Other vascular procedures w CC	Include all	2	1.0461
254	S	Other vascular procedures w/o CC/MCC	Include all	3	1.0161
260	S	Cardiac pacemaker revision except device replacement w MCC	Include all	1	0.9782

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
261	S	Cardiac pacemaker revision except device replacement w CC	Include all	2	1.0383
262	S	Cardiac pacemaker revision except device replacement w/o CC/MCC	Include all	2	1.0077
265	S	ACID lead procedures	Include all	2	1.0592
280	M	Acute myocardial infarction, discharged alive w MCC	Include all	1	0.8848
281	M	Acute myocardial infarction, discharged alive w CC	Include all	2	0.9848
282	M	Acute myocardial infarction, discharged alive w/o CC/MCC	Include all	2	1.0969
283	M	Acute myocardial infarction, expired w MCC	Include all	1	0.8776
284	M	Acute myocardial infarction, expired w CC	Include all	2	0.8508
285	M	Acute myocardial infarction, expired w/o CC/MCC	Include all	2	0.8628
286	M	Circulatory disorders except AMI, w card cath w MCC	Include all	2	1.1069
287	M	Circulatory disorders except AMI, w card cath w/o MCC	Include all	3	1.2343
288	M	Acute & subacute endocarditis w MCC	Include all	1	1.3467
289	M	Acute & subacute endocarditis w CC	Include all	2	1.6096
290	M	Acute & subacute endocarditis w/o CC/MCC	Include all	2	1.8539
291	M	Heart failure & shock w MCC	Include all	1	0.8849
292	M	Heart failure & shock w CC	Include all	2	0.9353
293	M	Heart failure & shock w/o CC/MCC	Include all	2	0.8980
306	M	Cardiac congenital & valvular disorders w MCC	Include all	1	0.9292
308	M	Cardiac arrhythmia & conduction disorders w MCC	Include all	1	0.9117
309	M	Cardiac arrhythmia & conduction disorders w CC	Include all	2	0.9936
314	M	Other circulatory system diagnoses w MCC	Include all	2	1.1011
315	M	Other circulatory system diagnoses w CC	Include all	2	1.3681
316	M	Other circulatory system diagnoses w/o CC/MCC	Include all	3	1.5011

Diabetes & Endocrinology

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
614	S	Adrenal & pituitary procedures w CC/MCC	Include all	2	1.9067
615	S	Adrenal & pituitary procedures w/o CC/MCC	Include all	2	1.6358
619	S	O.R. procedures for obesity w MCC	Include all	1	1.3377
620	S	O.R. procedures for obesity w CC	Include all	2	2.1831
621	S	O.R. procedures for obesity w/o CC/MCC	Include all	2	2.2028
622	S	Skin grafts & wound debrid for endoc, nutrit & metab dis w MCC	Include all	1	0.7698
623	S	Skin grafts & wound debrid for endoc, nutrit & metab dis w CC	Include all	2	1.1090
624	S	Skin grafts & wound debrid for endoc, nutrit & metab dis w/o CC/MCC	Include all	2	1.4587
625	S	Thyroid, parathyroid & thyroglossal procedures w MCC	Include all	1	0.7484
626	S	Thyroid, parathyroid & thyroglossal procedures w CC	Include all	2	1.4888
627	S	Thyroid, parathyroid & thyroglossal procedures w/o CC/MCC	Include all	2	1.3049
628	S	Other endocrine, nutrit & metab O.R. proc w MCC	Include all	1	0.7426
629	S	Other endocrine, nutrit & metab O.R. proc w CC	Include all	2	1.0169
630	S	Other endocrine, nutrit & metab O.R. proc w/o CC/MCC	Include all	2	1.2192
637	M	Diabetes w MCC	Include all	3	0.9276
638	M	Diabetes w CC	Include all	3	1.0778
639	M	Diabetes w/o CC/MCC	Include all	3	1.0140
640	M	Misc disorders of nutrition, metabolism, fluids/electrolytes w MCC	Exclude diagnosis: 77934	3	0.7431
643	M	Endocrine disorders w MCC	Include all	3	0.7437
644	M	Endocrine disorders w CC	Include all	3	0.8070

Ear, Nose & Throat

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
011	S	Tracheostomy for face,mouth & neck diagnoses w MCC	Include all	1	1.0079
012	S	Tracheostomy for face,mouth & neck diagnoses w CC	Include all	1	1.0729
013	S	Tracheostomy for face,mouth & neck diagnoses w/o CC/MCC	Include all	1	1.2441
129	S	Major head & neck procedures w CC/MCC or major device	Include all	2	0.9346
130	S	Major head & neck procedures w/o CC/MCC	Include all	2	0.8403
131	S	Cranial/Facial Procedures w CC/MCC	Include all	3	1.8847
132	S	Cranial/Facial Procedures w/o CC/MCC	Include all	3	2.4297
133	S	Other ear, nose, mouth & throat O.R. procedures w CC/MCC	Include all	3	1.6773
134	S	Other ear, nose, mouth & throat O.R. procedures w/o CC/MCC	Include all	3	2.4297
139	S	Salivary gland procedures	Include all	3	0.8430
146	M	Ear, nose, mouth & throat malignancy w MCC	Include all	1	0.9678
147	M	Ear, nose, mouth & throat malignancy w CC	Include all	2	1.0083
148	M	Ear, nose, mouth & throat malignancy w/o CC/MCC	Include all	2	1.2061
152	M	Otitis media & URI w MCC	Include all	3	0.9794
154	M	Other ear, nose, mouth and throat diagnosis w MCC	Include all	3	0.7055
155	M	Other ear, nose, mouth and throat diagnosis w CC	Include all	3	0.6839
156	M	Other ear, nose, mouth and throat diagnosis w/o CC/MCC	Include all	3	0.7047

Gastroenterology & GI Surgery

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
326	S	Stomach, esophageal & duodenal proc w MCC	Include all	2	1.0558
327	S	Stomach, esophageal & duodenal proc w CC	Include all	2	1.2710
328	S	Stomach, esophageal & duodenal proc w/o CC/MCC	Include all	3	1.2266
329	S	Major small & large bowel procedures w MCC	Include all	1	0.9422
330	S	Major small & large bowel procedures w CC	Include all	2	1.1410
331	S	Major small & large bowel procedures w/o CC/MCC	Include all	2	1.2349
332	S	Rectal resection w MCC	Include all	1	0.8782
333	S	Rectal resection w CC	Include all	1	1.1675
334	S	Rectal resection w/o CC/MCC	Include all	2	1.3676
335	S	Peritoneal adhesiolysis w MCC	Include all	1	0.8508
336	S	Peritoneal adhesiolysis w CC	Include all	2	1.1473
337	S	Peritoneal adhesiolysis w/o CC/MCC	Include all	2	1.3071
344	S	Minor small & large bowel procedures w MCC	Include procedures: 4500, 4502-3, 4515, 4526, 4534, 4549, 465, 4650-2, 466, 4660-4, 4791, 480, 4825, 5783	2	0.9521
345	S	Minor small & large bowel procedures w CC	Include procedures: 4502-3, 4515, 4526, 4534, 4549, 465, 4650-2, 466, 4660-4, 4791, 480, 4825, 5783	2	1.2940
346	S	Minor small & large bowel procedures w/o CC/MCC	See MS-DRG 345	3	0.8622
356	S	Other digestive system O.R. procedures w MCC	Include all	2	0.8615
357	S	Other digestive system O.R. procedures w CC	Include all	2	1.0566
358	S	Other digestive system O.R. procedures w/o CC/MCC	Include all	3	0.9281

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
368	M	Major esophageal disorders w MCC	Include all	1	1.0267
369	M	Major esophageal disorders w CC	Include all	2	1.1723
370	M	Major esophageal disorders w/o CC/MCC	Include all	2	1.3249
371	M	Major gastrointestinal disorders & peritoneal infections w MCC	Include all	1	0.7821
372	M	Major gastrointestinal disorders & peritoneal infections w CC	Include all	2	0.8730
373	M	Major gastrointestinal disorders & peritoneal infections w/o CC/MCC	Include all	2	1.1132
374	M	Digestive malignancy w MCC	Include all	1	0.9565
375	M	Digestive malignancy w CC	Include all	2	1.0017
376	M	Digestive malignancy w/o CC/MCC	Include all	2	0.9762
377	M	G.I. hemorrhage w MCC	Include all	1	0.7365
378	M	G.I. hemorrhage w CC	Include all	2	0.7701
379	M	G.I. hemorrhage w/o CC/MCC	Include all	2	0.8270
380	M	Complicated peptic ulcer w MCC	Include all	1	0.8712
381	M	Complicated peptic ulcer w CC	Include all	2	0.9410
382	M	Complicated peptic ulcer w/o CC/MCC	Include all	2	1.1952
383	M	Uncomplicated peptic ulcer w MCC	Include all	3	0.8794
385	M	Inflammatory bowel disease w MCC	Include all	1	1.4985
386	M	Inflammatory bowel disease w CC	Include all	2	1.8550
387	M	Inflammatory bowel disease w/o CC/MCC	Include all	2	1.8550
388	M	G.I. obstruction w MCC	Include all	3	0.7418
389	M	G.I. obstruction w CC	Include all	3	0.7430
391	M	Esophagitis, gastroent & misc digest disorders w MCC	Include all	3	0.8725
393	M	Other digestive system diagnoses w MCC	Include all	1	0.8724
394	M	Other digestive system diagnoses w CC	Include all	2	0.9247
405	S	Pancreas, liver & shunt procedures w MCC	Include all	1	1.2202
406	S	Pancreas, liver & shunt procedures w CC	Include all	1	1.3209
407	S	Pancreas, liver & shunt procedures w/o CC/MCC	Include all	2	1.4532
408	S	Biliary tract proc except only cholecyst w or w/o c.d.e. w MCC	Include all	2	1.0540
409	S	Biliary tract proc except only cholecyst w or w/o c.d.e. w CC	Include all	2	1.1605
410	S	Biliary tract proc except only cholecyst w or w/o c.d.e. w/o CC/MCC	Include all	3	1.8550
411	S	Cholecystectomy w c.d.e. w MCC	Include all	1	0.9767
412	S	Cholecystectomy w c.d.e. w CC	Include all	2	1.1009
413	S	Cholecystectomy w c.d.e. w/o CC/MCC	Include all	2	1.3439
414	S	Cholecystectomy except by laparoscope w/o c.d.e. w MCC	Include all	1	0.9125
415	S	Cholecystectomy except by laparoscope w/o c.d.e. w CC	Include all	2	1.1143
417	S	Laparoscopic cholecystectomy w/o c.d.e. w MCC	Include all	3	0.9369
418	S	Laparoscopic cholecystectomy w/o c.d.e. w CC	Include all	3	1.1280
420	S	Hepatobiliary diagnostic procedures w MCC	Include all	1	1.1707
421	S	Hepatobiliary diagnostic procedures w CC	Include all	2	1.1653
422	S	Hepatobiliary diagnostic procedures w/o CC/MCC	Include all	2	1.1297
423	S	Other hepatobiliary or pancreas O.R. procedures w MCC	Include all	3	1.0254
424	S	Other hepatobiliary or pancreas O.R. procedures w CC	Include all	3	0.9744
425	S	Other hepatobiliary or pancreas O.R. procedures w/o CC/MCC	Include all	3	1.8291
432	M	Cirrhosis & alcoholic hepatitis w MCC	Include all	1	1.7000
433	M	Cirrhosis & alcoholic hepatitis w CC	Include all	2	1.8550
434	M	Cirrhosis & alcoholic hepatitis w/o CC/MCC	Include all	2	1.8550
435	M	Malignancy of hepatobiliary system or pancreas w MCC	Include all	1	0.9670
436	M	Malignancy of hepatobiliary system or pancreas w CC	Include all	2	1.0045
437	M	Malignancy of hepatobiliary system or pancreas w/o CC/MCC	Include all	2	1.0014
438	M	Disorders of pancreas except malignancy w MCC	Include all	1	1.2191
439	M	Disorders of pancreas except malignancy w CC	Include all	2	1.5488
440	M	Disorders of pancreas except malignancy w/o CC/MCC	Include all	2	1.6800

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
441	M	Disorders of liver except malig,cirr,alc hepa w MCC	Exclude diagnosis: 7948	1	1.2096
442	M	Disorders of liver except malig,cirr,alc hepa w CC	See MS-DRG 442	2	1.3403

Geriatrics

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
001	S	Heart transplant or implant of heart assist system w MCC	Include all	1	0.9595
002	S	Heart transplant or implant of heart assist system w/o MCC	Include all	1	1.1213
003	S	ECMO or trach w MV 96+ hrs or PDX exc face, mouth & neck w maj O.R.	Include all	1	1.0517
004	S	Trach w MV 96+ hrs or PDX exc face, mouth & neck w/o maj O.R.	Include all	1	1.0306
005	S	Liver transplant w MCC or intestinal transplant	Include all	1	1.1458
006	S	Liver transplant w/o MCC	Include all	1	0.9316
007	S	Lung transplant	Include all	1	0.9316
008	S	Simultaneous pancreas/kidney transplant	Include all	1	1.0000
010	S	Pancreas transplant	Include all	1	1.0000
011	S	Tracheostomy for face,mouth & neck diagnoses w MCC	Include all	1	1.0174
012	S	Tracheostomy for face,mouth & neck diagnoses w CC	Include all	1	1.0603
013	S	Tracheostomy for face,mouth & neck diagnoses w/o CC/MCC	Include all	1	0.9936
014	S	Allogeneic bone marrow transplant	Include all	1	1.1458
016	S	Autologous bone marrow transplant w CC/MCC	Include all	1	1.0526
017	S	Autologous bone marrow transplant w/o CC/MCC	Include all	1	0.9316
020	S	Intracranial vascular procedures w PDX hemorrhage w MCC	Include all	1	0.9834
021	S	Intracranial vascular procedures w PDX hemorrhage w CC	Include all	1	1.1176
022	S	Intracranial vascular procedures w PDX hemorrhage w/o CC/MCC	Include all	1	1.1458
023	S	Cranio w major dev impl/acute complex CNS PDX w MCC or chemo implant	Include all	1	1.0108
024	S	Cranio w major dev impl/acute complex CNS PDX w/o MCC	Include all	1	1.0045
025	S	Craniotomy & endovascular intracranial procedures w MCC	Include all	1	1.0174
026	S	Craniotomy & endovascular intracranial procedures w CC	Include all	1	1.0237
027	S	Craniotomy & endovascular intracranial procedures w/o CC/MCC	Include all	1	1.0210
028	S	Spinal procedures w MCC	Include all	1	1.0325
029	S	Spinal procedures w CC or spinal neurostimulators	Include all	2	1.0021
030	S	Spinal procedures w/o CC/MCC	Include all	2	1.0349
031	S	Ventricular shunt procedures w MCC	Include all	1	1.0122
032	S	Ventricular shunt procedures w CC	Include all	2	0.9785
033	S	Ventricular shunt procedures w/o CC/MCC	Include all	2	0.9998
034	S	Carotid artery stent procedure w MCC	Include all	1	0.9876
035	S	Carotid artery stent procedure w CC	Include all	2	0.9856
036	S	Carotid artery stent procedure w/o CC/MCC	Include all	2	0.9856
037	S	Extracranial procedures w MCC	Include all	2	1.0005
038	S	Extracranial procedures w CC	Include all	2	0.9990
039	S	Extracranial procedures w/o CC/MCC	Include all	3	0.9892
040	S	Periph & cranial nerve & other nerv syst proc w MCC	Include all	2	1.0081
041	S	Periph/cranial nerve & other nerv syst proc w CC or periph neurostim	Include all	2	1.0030
042	S	Periph & cranial nerve & other nerv syst proc w/o CC/MCC	Include all	3	0.9686
052	M	Spinal disorders & injuries w CC/MCC	Include all	2	1.0594
053	M	Spinal disorders & injuries w/o CC/MCC	Include all	2	1.0397
054	M	Nervous system neoplasms w MCC	Include all	1	1.0081

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
055	M	Nervous system neoplasms w/o MCC	Include all	2	1.0255
056	M	Degenerative nervous system disorders w MCC	Include all	1	1.0222
057	M	Degenerative nervous system disorders w/o MCC	Include all	2	1.0059
058	M	Multiple sclerosis & cerebellar ataxia w MCC	Include all	1	1.0332
059	M	Multiple sclerosis & cerebellar ataxia w CC	Include all	2	0.9920
060	M	Multiple sclerosis & cerebellar ataxia w/o CC/MCC	Include all	2	0.9853
061	M	Acute ischemic stroke w use of thrombolytic agent w MCC	Include all	1	1.0088
062	M	Acute ischemic stroke w use of thrombolytic agent w CC	Include all	2	1.0221
063	M	Acute ischemic stroke w use of thrombolytic agent w/o CC/MCC	Include all	2	1.0086
064	M	Intracranial hemorrhage or cerebral infarction w MCC	Include all	1	1.0152
065	M	Intracranial hemorrhage or cerebral infarction w CC	Include all	2	1.0052
066	M	Intracranial hemorrhage or cerebral infarction w/o CC/MCC	Include all	2	1.0160
067	M	Nonspecific cva & precerebral occlusion w/o infarct w MCC	Include all	1	1.0117
068	M	Nonspecific cva & precerebral occlusion w/o infarct w/o MCC	Include all	2	0.9978
069	M	Transient ischemia	Include all	3	0.9879
070	M	Nonspecific cerebrovascular disorders w MCC	Include all	2	0.9918
071	M	Nonspecific cerebrovascular disorders w CC	Include all	2	0.9941
072	M	Nonspecific cerebrovascular disorders w/o CC/MCC	Include all	3	0.9957
073	M	Cranial & peripheral nerve disorders w MCC	Include all	1	0.9817
074	M	Cranial & peripheral nerve disorders w/o MCC	Include all	2	0.9984
075	M	Viral meningitis w CC/MCC	Include all	2	1.0186
076	M	Viral meningitis w/o CC/MCC	Include all	2	0.9903
077	M	Hypertensive encephalopathy w MCC	Include all	1	1.0532
078	M	Hypertensive encephalopathy w CC	Include all	2	1.0075
079	M	Hypertensive encephalopathy w/o CC/MCC	Include all	2	1.0290
080	M	Nontraumatic stupor & coma w MCC	Include all	1	1.0147
081	M	Nontraumatic stupor & coma w/o MCC	Include all	2	1.0010
082	M	Traumatic stupor & coma, coma >1 hr w MCC	Include all	1	1.0625
083	M	Traumatic stupor & coma, coma >1 hr w CC	Include all	1	1.0615
084	M	Traumatic stupor & coma, coma >1 hr w/o CC/MCC	Include all	1	1.0626
085	M	Traumatic stupor & coma, coma <1 hr w MCC	Include all	1	1.0198
086	M	Traumatic stupor & coma, coma <1 hr w CC	Include all	2	1.0145
087	M	Traumatic stupor & coma, coma <1 hr w/o CC/MCC	Include all	2	1.0178
088	M	Concussion w MCC	Include all	3	1.0309
089	M	Concussion w CC	Include all	3	1.0195
090	M	Concussion w/o CC/MCC	Include all	3	0.9681
091	M	Other disorders of nervous system w MCC	Include all	3	1.0220
092	M	Other disorders of nervous system w CC	Include all	3	0.9937
093	M	Other disorders of nervous system w/o CC/MCC	Include all	3	1.0471
094	M	Bacterial & tuberculous infections of nervous system w MCC	Include all	1	1.0406
095	M	Bacterial & tuberculous infections of nervous system w CC	Include all	2	1.0219
096	M	Bacterial & tuberculous infections of nervous system w/o CC/MCC	Include all	2	1.0904
097	M	Non-bacterial infect of nervous sys exc viral meningitis w MCC	Include all	1	1.0061
098	M	Non-bacterial infect of nervous sys exc viral meningitis w CC	Include all	2	1.0757
099	M	Non-bacterial infect of nervous sys exc viral meningitis w/o CC/MCC	Include all	2	1.0680
100	M	Seizures w MCC	Include all	2	0.9958
101	M	Seizures w/o MCC	Include all	3	1.0044
102	M	Headaches w MCC	Include all	3	0.9909
103	M	Headaches w/o MCC	Include all	3	0.9924
113	S	Orbital procedures w CC/MCC	Include all	2	1.0428
114	S	Orbital procedures w/o CC/MCC	Include all	2	1.0240
115	S	Extraocular procedures except orbit	Include all	3	1.0470

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
116	S	Intraocular procedures w CC/MCC	Include all	3	1.1385
117	S	Intraocular procedures w/o CC/MCC	Include all	3	1.0000
121	M	Acute major eye infections w CC/MCC	Include all	2	0.9800
122	M	Acute major eye infections w/o CC/MCC	Include all	2	1.0161
123	M	Neurological eye disorders	Include all	3	0.9841
124	M	Other disorders of the eye w MCC	Include all	2	0.9711
125	M	Other disorders of the eye w/o MCC	Include all	3	1.0034
129	S	Major head & neck procedures w CC/MCC or major device	Include all	2	0.9821
130	S	Major head & neck procedures w/o CC/MCC	Include all	2	0.9607
131	S	Cranial/facial procedures w CC/MCC	Include all	3	1.0159
132	S	Cranial/facial procedures w/o CC/MCC	Include all	3	1.1458
133	S	Other ear, nose, mouth & throat O.R. procedures w CC/MCC	Include all	3	0.9847
134	S	Other ear, nose, mouth & throat O.R. procedures w/o CC/MCC	Include all	3	0.9316
135	S	Sinus & mastoid procedures w CC/MCC	Include all	2	1.0060
136	S	Sinus & mastoid procedures w/o CC/MCC	Include all	2	1.0723
137	S	Mouth procedures w CC/MCC	Include all	3	1.0017
138	S	Mouth procedures w/o CC/MCC	Include all	3	0.9316
139	S	Salivary gland procedures	Include all	3	0.9316
146	M	Ear, nose, mouth & throat malignancy w MCC	Include all	1	1.1458
147	M	Ear, nose, mouth & throat malignancy w CC	Include all	2	1.0709
148	M	Ear, nose, mouth & throat malignancy w/o CC/MCC	Include all	2	1.1458
149	M	Dysequilibrium	Include all	3	0.9962
150	M	Epistaxis w MCC	Include all	3	0.9776
151	M	Epistaxis w/o MCC	Include all	3	0.9910
152	M	Otitis media & URI w MCC	Include all	3	0.9957
153	M	Otitis media & URI w/o MCC	Include all	3	1.0008
154	M	Other Ear, Nose, Mouth, and Throat Diagnoses with MCC	Include all	3	0.9904
155	M	Other Ear, Nose, Mouth, and Throat Diagnoses with CC	Include all	3	0.9793
156	M	Other Ear, Nose, Mouth, and Throat Diagnoses without CC/MCC	Include all	3	0.9695
157	M	Dental & Oral Diseases w MCC	Include all	3	1.0374
158	M	Dental & Oral Diseases w CC	Include all	3	0.9812
159	M	Dental & Oral Diseases w/o CC/MCC	Include all	3	1.0584
163	S	Major chest procedures w MCC	Include all	1	0.9939
164	S	Major chest procedures w CC	Include all	2	1.0031
165	S	Major chest procedures w/o CC/MCC	Include all	2	1.0021
166	S	Other resp system O.R. procedures w MCC	Include all	2	0.9951
167	S	Other resp system O.R. procedures w CC	Include all	2	1.0023
168	S	Other resp system O.R. procedures w/o CC/MCC	Include all	3	0.9861
175	M	Pulmonary embolism w MCC	Include all	1	1.0088
176	M	Pulmonary embolism w/o MCC	Include all	1	0.9980
177	M	Respiratory infections & inflammations w MCC	Include all	1	0.9990
178	M	Respiratory infections & inflammations w CC	Include all	2	0.9941
179	M	Respiratory infections & inflammations w/o CC/MCC	Include all	2	1.0070
180	M	Respiratory neoplasms w MCC	Include all	1	1.0295
181	M	Respiratory neoplasms w CC	Include all	2	1.0372
182	M	Respiratory neoplasms w/o CC/MCC	Include all	2	1.1327
183	M	Major chest trauma w MCC	Include all	1	1.0722
184	M	Major chest trauma w CC	Include all	1	1.1363
185	M	Major chest trauma w/o CC/MCC	Include all	1	1.1458
186	M	Pleural effusion w MCC	Include all	3	0.9901
187	M	Pleural effusion w CC	Include all	3	0.9875
188	M	Pleural effusion w/o CC/MCC	Include all	3	0.9635

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
189	M	Pulmonary edema & respiratory failure	Include all	2	1.0300
190	M	Chronic obstructive pulmonary disease w MCC	Include all	3	0.9951
191	M	Chronic obstructive pulmonary disease w CC	Include all	3	0.9971
192	M	Chronic obstructive pulmonary disease w/o CC/MCC	Include all	3	1.0042
193	M	Simple pneumonia & pleurisy w MCC	Include all	3	0.9985
194	M	Simple pneumonia & pleurisy w CC	Include all	3	0.9954
195	M	Simple pneumonia & pleurisy w/o CC/MCC	Include all	3	1.0062
196	M	Interstitial lung disease w MCC	Include all	3	1.0088
197	M	Interstitial lung disease w CC	Include all	3	0.9924
198	M	Interstitial lung disease w/o CC/MCC	Include all	3	0.9938
199	M	Pneumothorax w MCC	Include all	1	1.0384
200	M	Pneumothorax w CC	Include all	2	1.0347
201	M	Pneumothorax w/o CC/MCC	Include all	2	1.0252
202	M	Bronchitis & asthma w CC/MCC	Include all	3	0.9877
203	M	Bronchitis & asthma w/o CC/MCC	Include all	3	0.9931
204	M	Respiratory signs & symptoms	Include all	3	0.9974
205	M	Other respiratory system diagnoses w MCC	Include all	3	1.0185
206	M	Other respiratory system diagnoses w/o MCC	Include all	3	1.0333
207	M	Respiratory system diagnosis w ventilator support 96+ hours	Include all	2	1.0159
208	M	Respiratory system diagnosis w ventilator support <96 hours	Include all	2	1.0110
215	S	Other heart assist system implant	Include all	1	1.1123
216	S	Cardiac valve & oth maj cardiothoracic proc w card cath w MCC	Include all	1	0.9953
217	S	Cardiac valve & oth maj cardiothoracic proc w card cath w CC	Include all	2	0.9848
218	S	Cardiac valve & oth maj cardiothoracic proc w card cath w/o CC/MCC	Include all	2	0.9857
219	S	Cardiac valve & oth maj cardiothoracic proc w/o card cath w MCC	Include all	1	0.9917
220	S	Cardiac valve & oth maj cardiothoracic proc w/o card cath w CC	Include all	2	1.0007
221	S	Cardiac valve & oth maj cardiothoracic proc w/o card cath w/o CC/MCC	Include all	2	0.9937
222	S	Cardiac defib implant w cardiac cath w AMI/HF/shock w MCC	Include all	1	1.0334
223	S	Cardiac defib implant w cardiac cath w AMI/HF/shock w/o MCC	Include all	1	1.0122
224	S	Cardiac defib implant w cardiac cath w/o AMI/HF/shock w MCC	Include all	3	1.0811
225	S	Cardiac defib implant w cardiac cath w/o AMI/HF/shock w/o MCC	Include all	3	1.1458
226	S	Cardiac defibrillator implant w/o cardiac cath w MCC	Include all	1	1.0068
227	S	Cardiac defibrillator implant w/o cardiac cath w/o MCC	Include all	1	0.9919
228	S	Other cardiothoracic procedures w MCC	Include all	1	1.0100
229	S	Other cardiothoracic procedures w CC	Include all	2	1.0563
230	S	Other cardiothoracic procedures w/o CC/MCC	Include all	2	0.9876
231	S	Coronary bypass w PTCA w MCC	Include all	1	0.9950
232	S	Coronary bypass w PTCA w/o MCC	Include all	2	0.9729
233	S	Coronary bypass w cardiac cath w MCC	Include all	2	1.0202
234	S	Coronary bypass w cardiac cath w/o MCC	Include all	3	1.0215
235	S	Coronary bypass w/o cardiac cath w MCC	Include all	2	1.0241
236	S	Coronary bypass w/o cardiac cath w/o MCC	Include all	3	1.0289
237	S	Major cardiovasc procedures w MCC	Include all	1	1.0093
238	S	Major cardiovascular procedures w/o MCC	Include all	2	0.9943
239	S	Amputation for circ sys disorders exc upper limb & toe w MCC	Include all	1	0.9925
240	S	Amputation for circ sys disorders exc upper limb & toe w CC	Include all	2	1.0087
241	S	Amputation for circ sys disorders exc upper limb & toe w/o CC/MCC	Include all	2	1.0206
242	S	Permanent cardiac pacemaker implant w MCC	Include all	2	0.9917
243	S	Permanent cardiac pacemaker implant w CC	Include all	2	0.9919
244	S	Permanent cardiac pacemaker implant w/o CC/MCC	Include all	3	1.0154

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
245	S	AICD generator procedures	Include all	2	0.9956
246	S	Perc cardiovasc proc w drug-eluting stent w MCC or 4+ vessels/stents	Include all	2	1.0033
247	S	Perc cardiovasc proc w drug-eluting stent w/o MCC	Include all	3	1.0047
248	S	Perc cardiovasc proc w non-drug-eluting stent w MCC or 4+ ves/stents	Include all	2	1.0007
249	S	Perc cardiovasc proc w non-drug-eluting stent w/o MCC	Include all	3	0.9995
250	S	Perc cardiovasc proc w/o coronary artery stent w MCC	Include all	3	0.9908
251	S	Perc cardiovasc proc w/o coronary artery stent w/o MCC	Include all	3	0.9993
252	S	Other vascular procedures w MCC	Include all	2	0.9937
253	S	Other vascular procedures w CC	Include all	2	0.9909
254	S	Other vascular procedures w/o CC/MCC	Include all	3	1.0024
255	S	Upper limb & toe amputation for circ system disorders w MCC	Include all	1	1.0058
256	S	Upper limb & toe amputation for circ system disorders w CC	Include all	2	0.9983
257	S	Upper limb & toe amputation for circ system disorders w/o CC/MCC	Include all	2	0.9672
258	S	Cardiac pacemaker device replacement w MCC	Include all	3	1.0201
259	S	Cardiac pacemaker device replacement w/o MCC	Include all	3	0.9773
260	S	Cardiac pacemaker revision except device replacement w MCC	Include all	1	0.9999
261	S	Cardiac pacemaker revision except device replacement w CC	Include all	2	0.9918
262	S	Cardiac pacemaker revision except device replacement w/o CC/MCC	Include all	2	1.0173
263	S	Vein ligation & stripping	Include all	3	0.9316
264	S	Other circulatory system O.R. procedures	Include all	2	0.9857
265	S	AICD lead procedures	Include all	2	0.9869
280	M	Acute myocardial infarction, discharged alive w MCC	Include all	1	0.9942
281	M	Acute myocardial infarction, discharged alive w CC	Include all	2	0.9994
282	M	Acute myocardia infarction, discharged alive w/o CC/MCC	Include all	2	1.0036
283	M	Acute myocardial infarction, expired w MCC	Include all	1	1.0126
284	M	Acute myocardial infarction, expired w CC	Include all	2	1.0180
285	M	Acute myocardial infarction, expired w/o CC/MCC	Include all	2	1.0514
286	M	Circulatory disorders except AMI, w card cath w MCC	Include all	2	0.9943
287	M	Circulatory disorders except AMI, w card cath w/o MCC	Include all	3	0.9958
288	M	Acute & subacute endocarditis w MCC	Include all	1	0.9947
289	M	Acute & subacute endocarditis w CC	Include all	2	1.0125
290	M	Acute & subacute endocarditis w/o CC/MCC	Include all	2	1.0566
291	M	Heart failure & shock w MCC	Include all	1	0.9951
292	M	Heart failure & shock w CC	Include all	2	0.9924
293	M	Heart failure & shock w/o CC/MCC	Include all	2	0.9967
294	M	Deep vein thrombophlebitis w CC/MCC	Include all	3	0.9465
295	M	Deep vein thrombophlebitis w/o CC/MCC	Include all	3	0.9316
296	M	Cardiac arrest, unexplained w MCC	Include all	1	1.0547
297	M	Cardiac arrest, unexplained w CC	Include all	2	1.0083
298	M	Cardiac arrest, unexplained w/o CC/MCC	Include all	2	1.0519
299	M	Peripheral vascular disorders w MCC	Include all	1	0.9940
300	M	Peripheral vascular disorders w CC	Include all	2	0.9927
301	M	Peripheral vascular disorders w/o CC/MCC	Include all	2	1.0023
302	M	Atherosclerosis w MCC	Include all	3	1.0133
303	M	Atherosclerosis w/o MCC	Include all	3	0.9961
304	M	Hypertension w MCC	Include all	3	1.0087
305	M	Hypertension w/o MCC	Include all	3	0.9874
306	M	Cardiac congenital & valvular disorders w MCC	Include all	1	0.9788
307	M	Cardiac congenital & valvular disorders w/o MCC	Include all	2	0.9997

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
308	M	Cardiac arrhythmia & conduction disorders w MCC	Include all	1	0.9887
309	M	Cardiac arrhythmia & conduction disorders w CC	Include all	2	0.9945
310	M	Cardiac arrhythmia & conduction disorders w/o CC/MCC	Include all	2	0.9963
311	M	Angina pectoris	Include all	3	0.9833
312	M	Syncope & collapse	Include all	2	0.9956
313	M	Chest pain	Include all	3	0.9964
314	M	Other circulatory system diagnoses w MCC	Include all	2	1.0046
315	M	Other circulatory system diagnoses w CC	Include all	2	1.0035
316	M	Other circulatory system diagnoses w/o CC/MCC	Include all	3	1.0146
326	S	Stomach, esophageal & duodenal proc w MCC	Include all	2	0.9939
327	S	Stomach, esophageal & duodenal proc w CC	Include all	2	1.0055
328	S	Stomach, esophageal & duodenal proc w/o CC/MCC	Include all	3	0.9642
329	S	Major small & large bowel procedures w MCC	Include all	1	0.9948
330	S	Major small & large bowel procedures w CC	Include all	2	0.9983
331	S	Major small & large bowel procedures w/o CC/MCC	Include all	2	0.9959
332	S	Rectal resection w MCC	Include all	1	0.9946
333	S	Rectal resection w CC	Include all	1	0.9913
334	S	Rectal resection w/o CC/MCC	Include all	2	1.0040
335	S	Peritoneal adhesiolysis w MCC	Include all	1	0.9912
336	S	Peritoneal adhesiolysis w CC	Include all	2	0.9870
337	S	Peritoneal adhesiolysis w/o CC/MCC	Include all	2	0.9870
338	S	Appendectomy w complicated principal diag w MCC	Include all	3	0.9949
339	S	Appendectomy w complicated principal diag w CC	Include all	3	0.9843
340	S	Appendectomy w complicated principal diag w/o CC/MCC	Include all	3	0.9316
341	S	Appendectomy w/o complicated principal diag w MCC	Include all	3	1.0125
342	S	Appendectomy w/o complicated principal diag w CC	Include all	3	0.9869
343	S	Appendectomy w/o complicated principal diag w/o CC/MCC	Include all	3	1.1458
344	S	Minor small & large bowel procedures w MCC	Include all	2	0.9887
345	S	Minor small & large bowel procedures w CC	Include all	2	0.9812
346	S	Minor small & large bowel procedures w/o CC/MCC	Include all	3	0.9316
347	S	Anal & stomal procedures w MCC	Include all	1	1.0103
348	S	Anal & stomal procedures w CC	Include all	2	1.0167
349	S	Anal & stomal procedures w/o CC/MCC	Include all	2	0.9823
350	S	Inguinal & femoral hernia procedures w MCC	Include all	3	1.0013
351	S	Inguinal & femoral hernia procedures w CC	Include all	3	1.0045
352	S	Inguinal & femoral hernia procedures w/o CC/MCC	Include all	3	1.0927
353	S	Hernia procedures except inguinal & femoral w MCC	Include all	1	1.0039
354	S	Hernia procedures except inguinal & femoral w CC	Include all	2	1.0050
355	S	Hernia procedures except inguinal & femoral w/o CC/MCC	Include all	2	1.0024
356	S	Other digestive system O.R. procedures w MCC	Include all	2	0.9943
357	S	Other digestive system O.R. procedures w CC	Include all	2	1.0040
358	S	Other digestive system O.R. procedures w/o CC/MCC	Include all	3	0.9316
368	M	Major esophageal disorders w MCC	Include all	1	1.0177
369	M	Major esophageal disorders w CC	Include all	2	0.9981
370	M	Major esophageal disorders w/o CC/MCC	Include all	2	1.0176
371	M	Major gastrointestinal disorders & peritoneal infections w MCC	Include all	1	0.9927
372	M	Major gastrointestinal disorders & peritoneal infections w CC	Include all	2	0.9821
373	M	Major gastrointestinal disorders & peritoneal infections w/o CC/MCC	Include all	2	0.9888
374	M	Digestive malignancy w MCC	Include all	1	1.0319
375	M	Digestive malignancy w CC	Include all	2	1.0404
376	M	Digestive malignancy w/o CC/MCC	Include all	2	1.0706
377	M	G.I. hemorrhage w MCC	Include all	1	0.9931

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
378	M	G.I. hemorrhage w CC	Include all	2	0.9918
379	M	G.I. hemorrhage w/o CC/MCC	Include all	2	0.9960
380	M	Complicated peptic ulcer w MCC	Include all	1	1.0013
381	M	Complicated peptic ulcer w CC	Include all	2	0.9940
382	M	Complicated peptic ulcer w/o CC/MCC	Include all	2	1.0010
383	M	Uncomplicated peptic ulcer w MCC	Include all	3	1.0016
384	M	Uncomplicated peptic ulcer w/o MCC	Include all	3	0.9992
385	M	Inflammatory bowel disease w MCC	Include all	1	0.9912
386	M	Inflammatory bowel disease w CC	Include all	2	0.9895
387	M	Inflammatory bowel disease w/o CC/MCC	Include all	2	0.9867
388	M	G.I. obstruction w MCC	Include all	3	0.9949
389	M	G.I. obstruction w CC	Include all	3	0.9887
390	M	G.I. obstruction w/o CC/MCC	Include all	3	0.9794
391	M	Esophagitis, gastroent & misc digest disorders w MCC	Include all	3	0.9965
392	M	Esophagitis, gastroent & misc digest disorders w/o MCC	Include all	3	0.9878
393	M	Other digestive system diagnoses w MCC	Include all	1	1.0009
394	M	Other digestive system diagnoses w CC	Include all	2	0.9949
395	M	Other digestive system diagnoses w/o CC/MCC	Include all	2	1.0044
405	S	Pancreas, liver & shunt procedures w MCC	Include all	1	1.0350
406	S	Pancreas, liver & shunt procedures w CC	Include all	1	0.9855
407	S	Pancreas, liver & shunt procedures w/o CC/MCC	Include all	2	0.9936
408	S	Biliary tract proc except only cholecyst w or w/o c.d.e. w MCC	Include all	2	1.0241
409	S	Biliary tract proc except only cholecyst w or w/o c.d.e. w CC	Include all	2	0.9920
410	S	Biliary tract proc except only cholecyst w or w/o c.d.e. w/o CC/MCC	Include all	3	1.1458
411	S	Cholecystectomy w c.d.e. w MCC	Include all	1	1.0047
412	S	Cholecystectomy w c.d.e. w CC	Include all	2	0.9831
413	S	Cholecystectomy w c.d.e. w/o CC/MCC	Include all	2	1.0165
414	S	Cholecystectomy except by laparoscope w/o c.d.e. w MCC	Include all	1	1.0027
415	S	Cholecystectomy except by laparoscope w/o c.d.e. w CC	Include all	2	1.0007
416	S	Cholecystectomy except by laparoscope w/o c.d.e. w/o CC/MCC	Include all	2	0.9883
417	S	Laparoscopic cholecystectomy w/o c.d.e. w MCC	Include all	3	1.0129
418	S	Laparoscopic cholecystectomy w/o c.d.e. w CC	Include all	3	1.0195
419	S	Laparoscopic cholecystectomy w/o c.d.e. w/o CC/MCC	Include all	3	1.0154
420	S	Hepatobiliary diagnostic procedures w MCC	Include all	1	0.9705
421	S	Hepatobiliary diagnostic procedures w CC	Include all	2	1.0120
422	S	Hepatobiliary diagnostic procedures w/o CC/MCC	Include all	2	1.0108
423	S	Other hepatobiliary or pancreas O.R. procedures w MCC	Include all	3	1.0052
424	S	Other hepatobiliary or pancreas O.R. procedures w CC	Include all	3	0.9709
425	S	Other hepatobiliary or pancreas O.R. procedures w/o CC/MCC	Include all	3	0.9316
432	M	Cirrhosis & alcoholic hepatitis w MCC	Include all	1	1.0448
433	M	Cirrhosis & alcoholic hepatitis w CC	Include all	2	1.0503
434	M	Cirrhosis & alcoholic hepatitis w/o CC/MCC	Include all	2	1.0686
435	M	Malignancy of hepatobiliary system or pancreas w MCC	Include all	1	1.0287
436	M	Malignancy of hepatobiliary system or pancreas w CC	Include all	2	1.0475
437	M	Malignancy of hepatobiliary system or pancreas w/o CC/MCC	Include all	2	1.0808
438	M	Disorders of pancreas except malignancy w MCC	Include all	1	0.9967
439	M	Disorders of pancreas except malignancy w CC	Include all	2	1.0020
440	M	Disorders of pancreas except malignancy w/o CC/MCC	Include all	2	1.0015
441	M	Disorders of liver except malig,cirr,alc hepa w MCC	Include all	1	1.0247
442	M	Disorders of liver except malig,cirr,alc hepa w CC	Include all	2	1.0372
443	M	Disorders of liver except malig,cirr,alc hepa w/o CC/MCC	Include all	2	1.0259
444	M	Disorders of the biliary tract w MCC	Include all	3	1.0002

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
445	M	Disorders of the biliary tract w CC	Include all	3	1.0021
446	M	Disorders of the biliary tract w/o CC/MCC	Include all	3	1.0032
453	S	Combined anterior/posterior spinal fusion w MCC	Include all	1	0.9981
454	S	Combined anterior/posterior spinal fusion w CC	Include all	2	1.0067
455	S	Combined anterior/posterior spinal fusion w/o CC/MCC	Include all	2	0.9984
456	S	Spinal fus exc cerv w spinal curv/malig/infec or 9+ fus w MCC	Include all	1	0.9747
457	S	Spinal fus exc cerv w spinal curv/malig/infec or 9+ fus w CC	Include all	2	0.9984
458	S	Spinal fus exc cerv w spinal curv/malig/infec or 9+ fus w/o CC/MCC	Include all	2	1.0101
459	S	Spinal fusion except cervical w MCC	Include all	1	0.9961
460	S	Spinal fusion except cervical w/o MCC	Include all	2	0.9921
461	S	Bilateral or multiple major joint procs of lower extremity w MCC	Include all	1	0.9883
462	S	Bilateral or multiple major joint procs of lower extremity w/o MCC	Include all	2	1.0127
463	S	Wnd debrid & skn grft exc hand, for musculo-conn tiss dis w MCC	Include all	1	1.0215
464	S	Wnd debrid & skn grft exc hand, for musculo-conn tiss dis w CC	Include all	2	0.9860
465	S	Wnd debrid & skn grft exc hand, for musculo-conn tiss dis w/o CC/MCC	Include all	2	0.9898
466	S	Revision of hip or knee replacement w MCC	Include all	3	0.9976
467	S	Revision of hip or knee replacement w CC	Include all	3	0.9806
468	S	Revision of hip or knee replacement w/o CC/MCC	Include all	3	0.9907
469	S	Major joint replacement or reattachment of lower extremity w MCC	Include all	1	0.9880
470	S	Major joint replacement or reattachment of lower extremity w/o MCC	Include all	2	0.9928
471	S	Cervical spinal fusion w MCC	Include all	1	0.9901
472	S	Cervical spinal fusion w CC	Include all	2	1.0061
473	S	Cervical spinal fusion w/o CC/MCC	Include all	2	1.0165
474	S	Amputation for musculoskeletal sys & conn tissue dis w MCC	Include all	1	0.9985
475	S	Amputation for musculoskeletal sys & conn tissue dis w CC	Include all	2	1.0125
476	S	Amputation for musculoskeletal sys & conn tissue dis w/o CC/MCC	Include all	2	0.9802
477	S	Biopsies of musculoskeletal system & connective tissue w MCC	Include all	3	0.9789
478	S	Biopsies of musculoskeletal system & connective tissue w CC	Include all	3	0.9902
479	S	Biopsies of musculoskeletal system & connective tissue w/o CC/MCC	Include all	3	0.9697
480	S	Hip & femur procedures except major joint w MCC	Include all	2	0.9919
481	S	Hip & femur procedures except major joint w CC	Include all	2	0.9972
482	S	Hip & femur procedures except major joint w/o CC/MCC	Include all	3	1.0015
483	S	Major joint & limb reattachment proc of upper extremity w CC/MCC	Include all	1	0.9986
484	S	Major joint & limb reattachment proc of upper extremity w/o CC/MCC	Include all	1	1.0037
485	S	Knee procedures w pdx of infection w MCC	Include all	1	1.0112
486	S	Knee procedures w pdx of infection w CC	Include all	2	0.9953
487	S	Knee procedures w pdx of infection w/o CC/MCC	Include all	2	1.0001
488	S	Knee procedures w/o pdx of infection w CC/MCC	Include all	3	1.0256
489	S	Knee procedures w/o pdx of infection w/o CC/MCC	Include all	3	0.9316
490	S	Back & neck proc exc spinal fusion w CC/MCC or disc device/neurostim	Include all	2	0.9967
491	S	Back & neck proc exc spinal fusion w/o CC/MCC	Include all	3	1.0009
492	S	Lower extrem & humer proc except hip,foot,femur w MCC	Include all	2	1.0236
493	S	Lower extrem & humer proc except hip,foot,femur w CC	Include all	2	1.0229
494	S	Lower extrem & humer proc except hip,foot,femur w/o CC/MCC	Include all	3	0.9766
495	S	Local excision & removal int fix devices exc hip & femur w MCC	Include all	2	0.9818
496	S	Local excision & removal int fix devices exc hip & femur w CC	Include all	2	0.9966
497	S	Local excision & removal int fix devices exc hip & femur w/o CC/MCC	Include all	3	0.9827
498	S	Local excision & removal int fix devices of hip & femur w CC/MCC	Include all	3	0.9838

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
499	S	Local excision & removal int fix devices of hip & femur w/o CC/MCC	Include all	3	0.9316
500	S	Soft tissue procedures w MCC	Include all	3	0.9731
501	S	Soft tissue procedures w CC	Include all	3	1.0257
502	S	Soft tissue procedures w/o CC/MCC	Include all	3	1.1253
503	S	Foot procedures w MCC	Include all	3	1.0454
504	S	Foot procedures w CC	Include all	3	1.0093
505	S	Foot procedures w/o CC/MCC	Include all	3	0.9675
506	S	Major thumb or joint procedures	Include all	3	0.9786
507	S	Major shoulder or elbow joint procedures w CC/MCC	Include all	2	0.9711
508	S	Major shoulder or elbow joint procedures w/o CC/MCC	Include all	2	0.9981
509	S	Arthroscopy	Include all	3	1.0555
510	S	Shoulder,elbow or forearm proc,exc major joint proc w MCC	Include all	1	1.0279
511	S	Shoulder,elbow or forearm proc,exc major joint proc w CC	Include all	2	1.0161
512	S	Shoulder,elbow or forearm proc,exc major joint proc w/o CC/MCC	Include all	2	1.0377
513	S	Hand or wrist proc, except major thumb or joint proc w CC/MCC	Include all	3	0.9858
514	S	Hand or wrist proc, except major thumb or joint proc w/o CC/MCC	Include all	3	1.1458
515	S	Other musculoskelet sys & conn tiss O.R. proc w MCC	Include all	3	1.0050
516	S	Other musculoskelet sys & conn tiss O.R. proc w CC	Include all	3	0.9906
517	S	Other musculoskelet sys & conn tiss O.R. proc w/o CC/MCC	Include all	3	0.9804
533	M	Fractures of femur w MCC	Include all	1	0.9655
534	M	Fractures of femur w/o MCC	Include all	2	1.0062
535	M	Fractures of hip & pelvis w MCC	Include all	1	1.0003
536	M	Fractures of hip & pelvis w/o MCC	Include all	2	1.0003
537	M	Sprains, strains, & dislocations of hip, pelvis & thigh w CC/MCC	Include all	3	1.0140
538	M	Sprains, strains, & dislocations of hip, pelvis & thigh w/o CC/MCC	Include all	3	0.9316
539	M	Osteomyelitis w MCC	Include all	3	1.0112
540	M	Osteomyelitis w CC	Include all	3	1.0139
541	M	Osteomyelitis w/o CC/MCC	Include all	3	0.9808
542	M	Pathological fractures & musculoskelet & conn tiss malig w MCC	Include all	1	0.9949
543	M	Pathological fractures & musculoskelet & conn tiss malig w CC	Include all	2	0.9943
544	M	Pathological fractures & musculoskelet & conn tiss malig w/o CC/MCC	Include all	2	0.9901
545	M	Connective tissue disorders w MCC	Include all	3	1.0138
546	M	Connective tissue disorders w CC	Include all	3	1.0066
547	M	Connective tissue disorders w/o CC/MCC	Include all	3	0.9663
548	M	Septic arthritis w MCC	Include all	1	0.9916
549	M	Septic arthritis w CC	Include all	2	0.9969
550	M	Septic arthritis w/o CC/MCC	Include all	2	0.9869
551	M	Medical back problems w MCC	Include all	3	1.0119
552	M	Medical back problems w/o MCC	Include all	3	1.0033
553	M	Bone diseases & arthropathies w MCC	Include all	2	0.9945
554	M	Bone diseases & arthropathies w/o MCC	Include all	3	0.9964
555	M	Signs & symptoms of musculoskeletal system & conn tissue w MCC	Include all	3	0.9956
556	M	Signs & symptoms of musculoskeletal system & conn tissue w/o MCC	Include all	3	0.9840
557	M	Tendonitis, myositis & bursitis w MCC	Include all	3	0.9852
558	M	Tendonitis, myositis & bursitis w/o MCC	Include all	3	1.0013
559	M	Aftercare, musculoskeletal system & connective tissue w MCC	Include all	3	0.9966
560	M	Aftercare, musculoskeletal system & connective tissue w CC	Include all	3	0.9906
561	M	Aftercare, musculoskeletal system & connective tissue w/o CC/MCC	Include all	3	0.9539
562	M	Fx, sprn, strn & disl except femur, hip, pelvis & thigh w MCC	Include all	3	0.9943
563	M	Fx, sprn, strn & disl except femur, hip, pelvis & thigh w/o MCC	Include all	3	0.9962

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
564	M	Other musculoskeletal sys & connective tissue diagnoses w MCC	Include all	3	1.0080
565	M	Other musculoskeletal sys & connective tissue diagnoses w CC	Include all	3	1.0053
566	M	Other musculoskeletal sys & connective tissue diagnoses w/o CC/MCC	Include all	3	0.9891
570	S	Skin debridement with MCC	Include all	1	0.9771
571	S	Skin debridement with CC	Include all	2	0.9877
572	S	Skin debridement without CC/MCC	Include all	2	1.0365
573	S	Skin graft for skin ulcer or cellulitis w MCC	Include all	1	0.9788
574	S	Skin graft for skin ulcer or cellulitis w CC	Include all	2	0.9927
575	S	Skin graft for skin ulcer or cellulitis w/o CC/MCC	Include all	2	1.0191
576	S	Skin graft except for skin ulcer or cellulitis w MCC	Include all	1	0.9811
577	S	Skin graft except for skin ulcer or cellulitis w CC	Include all	2	0.9979
578	S	Skin graft except for skin ulcer or cellulitis w/o CC/MCC	Include all	2	0.9873
579	S	Other skin, subcut tiss & breast proc w MCC	Include all	2	0.9901
580	S	Other skin, subcut tiss & breast proc w CC	Include all	2	0.9886
581	S	Other skin, subcut tiss & breast proc w/o CC/MCC	Include all	3	1.0328
582	S	Mastectomy for malignancy w CC/MCC	Include all	2	0.9751
583	S	Mastectomy for malignancy w/o CC/MCC	Include all	2	0.9902
584	S	Breast biopsy, local excision & other breast procedures w CC/MCC	Include all	2	1.0086
585	S	Breast biopsy, local excision & other breast procedures w/o CC/MCC	Include all	3	0.9316
592	M	Skin ulcers w MCC	Include all	1	1.0035
593	M	Skin ulcers w CC	Include all	2	1.0052
594	M	Skin ulcers w/o CC/MCC	Include all	2	0.9846
595	M	Major skin disorders w MCC	Include all	1	1.0046
596	M	Major skin disorders w/o MCC	Include all	2	1.0078
597	M	Malignant breast disorders w MCC	Include all	1	1.1129
598	M	Malignant breast disorders w CC	Include all	2	1.1305
599	M	Malignant breast disorders w/o CC/MCC	Include all	2	1.0401
600	M	Non-malignant breast disorders w CC/MCC	Include all	3	0.9700
601	M	Non-malignant breast disorders w/o CC/MCC	Include all	3	0.9316
602	M	Cellulitis w MCC	Include all	1	0.9894
603	M	Cellulitis w/o MCC	Include all	2	0.9909
604	M	Trauma to the skin, subcut tiss & breast w MCC	Include all	1	0.9984
605	M	Trauma to the skin, subcut tiss & breast w/o MCC	Include all	2	1.0141
606	M	Minor skin disorders w MCC	Include all	3	0.9838
607	M	Minor skin disorders w/o MCC	Include all	3	1.0054
614	S	Adrenal & pituitary procedures w CC/MCC	Include all	2	1.0175
615	S	Adrenal & pituitary procedures w/o CC/MCC	Include all	2	1.1032
616	S	Amputat of lower limb for endocrine,nutrit,& metabol dis w MCC	Include all	1	1.0044
617	S	Amputat of lower limb for endocrine,nutrit,& metabol dis w CC	Include all	2	1.0126
618	S	Amputat of lower limb for endocrine,nutrit,& metabol dis w/o CC/MCC	Include all	2	0.9316
619	S	O.R. procedures for obesity w MCC	Include all	1	0.9316
620	S	O.R. procedures for obesity w CC	Include all	2	1.0416
621	S	O.R. procedures for obesity w/o CC/MCC	Include all	2	1.0008
622	S	Skin grafts & wound debrid for endoc, nutrit & metab dis w MCC	Include all	1	0.9843
623	S	Skin grafts & wound debrid for endoc, nutrit & metab dis w CC	Include all	2	1.0174
624	S	Skin grafts & wound debrid for endoc, nutrit & metab dis w/o CC/MCC	Include all	2	1.0738
625	S	Thyroid, parathyroid & thyroglossal procedures w MCC	Include all	1	0.9664
626	S	Thyroid, parathyroid & thyroglossal procedures w CC	Include all	2	0.9777
627	S	Thyroid, parathyroid & thyroglossal procedures w/o CC/MCC	Include all	2	1.0031

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
628	S	Other endocrine, nutrit & metab O.R. proc w MCC	Include all	1	1.0016
629	S	Other endocrine, nutrit & metab O.R. proc w CC	Include all	2	1.0133
630	S	Other endocrine, nutrit & metab O.R. proc w/o CC/MCC	Include all	2	1.0031
637	M	Diabetes w MCC	Include all	3	1.0070
638	M	Diabetes w CC	Include all	3	1.0168
639	M	Diabetes w/o CC/MCC	Include all	3	1.0240
640	M	Misc disorders of nutrition, metabolism, fluids/electrolyes w MCC	Include all	3	0.9974
641	M	Misc disorders of nutrition, metabolism, fluids/electrolyes w/o MCC	Include all	3	0.9979
642	M	Inborn and other disorders of metabolism	Include all	3	1.0260
643	M	Endocrine disorders w MCC	Include all	3	0.9975
644	M	Endocrine disorders w CC	Include all	3	0.9941
645	M	Endocrine disorders w/o CC/MCC	Include all	3	1.0490
652	S	Kidney transplant	Include all	1	1.0393
653	S	Major bladder procedures w MCC	Include all	1	0.9901
654	S	Major bladder procedures w CC	Include all	2	1.0114
655	S	Major bladder procedures w/o CC/MCC	Include all	2	1.0646
656	S	Kidney & ureter procedures for neoplasm w MCC	Include all	1	0.9818
657	S	Kidney & ureter procedures for neoplasm w CC	Include all	2	0.9991
658	S	Kidney & ureter procedures for neoplasm w/o CC/MCC	Include all	2	1.0065
659	S	Kidney & ureter procedures for non-neoplasm w MCC	Include all	2	0.9855
660	S	Kidney & ureter procedures for non-neoplasm w CC	Include all	2	1.0053
661	S	Kidney & ureter procedures for non-neoplasm w/o CC/MCC	Include all	3	1.0088
662	S	Minor bladder procedures w MCC	Include all	3	1.0338
663	S	Minor bladder procedures w CC	Include all	3	1.0232
664	S	Minor bladder procedures w/o CC/MCC	Include all	3	1.1458
665	S	Prostatectomy w MCC	Include all	3	1.0109
666	S	Prostatectomy w CC	Include all	3	0.9720
667	S	Prostatectomy w/o CC/MCC	Include all	3	1.0824
668	S	Transurethral procedures w MCC	Include all	3	1.0027
669	S	Transurethral procedures w CC	Include all	3	0.9860
670	S	Transurethral procedures w/o CC/MCC	Include all	3	1.0992
671	S	Urethral procedures w CC/MCC	Include all	3	0.9580
672	S	Urethral procedures w/o CC/MCC	Include all	3	1.1458
673	S	Other kidney & urinary tract procedures w MCC	Include all	3	1.0104
674	S	Other kidney & urinary tract procedures w CC	Include all	3	1.0058
675	S	Other kidney & urinary tract procedures w/o CC/MCC	Include all	3	1.0694
682	M	Renal failure w MCC	Include all	1	0.9998
683	M	Renal failure w CC	Include all	2	0.9942
684	M	Renal failure w/o CC/MCC	Include all	2	1.0037
685	M	Admit for renal dialysis	Include all	3	1.1039
686	M	Kidney & urinary tract neoplasms w MCC	Include all	2	1.0549
687	M	Kidney & urinary tract neoplasms w CC	Include all	2	1.0409
688	M	Kidney & urinary tract neoplasms w/o CC/MCC	Include all	3	1.1458
689	M	Kidney & urinary tract infections w MCC	Include all	3	0.9866
690	M	Kidney & urinary tract infections w/o MCC	Include all	3	0.9886
691	M	Urinary stones w esw lithotripsy w CC/MCC	Include all	3	0.9880
692	M	Urinary stones w esw lithotripsy w/o CC/MCC	Include all	3	1.0000
693	M	Urinary stones w/o esw lithotripsy w MCC	Include all	3	1.0182
694	M	Urinary stones w/o esw lithotripsy w/o MCC	Include all	3	0.9950
695	M	Kidney & urinary tract signs & symptoms w MCC	Include all	3	0.9986
696	M	Kidney & urinary tract signs & symptoms w/o MCC	Include all	3	0.9906
697	M	Urethral stricture	Include all	3	1.0099

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
698	M	Other kidney & urinary tract diagnoses w MCC	Include all	3	0.9972
699	M	Other kidney & urinary tract diagnoses w CC	Include all	3	0.9927
700	M	Other kidney & urinary tract diagnoses w/o CC/MCC	Include all	3	1.0164
707	S	Major male pelvic procedures w CC/MCC	Include all	2	1.0540
708	S	Major male pelvic procedures w/o CC/MCC	Include all	2	1.0502
709	S	Penis procedures w CC/MCC	Include all	3	0.9514
710	S	Penis procedures w/o CC/MCC	Include all	3	0.9316
711	S	Testes procedures w CC/MCC	Include all	2	0.9858
712	S	Testes procedures w/o CC/MCC	Include all	3	1.0000
713	S	Transurethral prostatectomy w CC/MCC	Include all	2	1.0092
714	S	Transurethral prostatectomy w/o CC/MCC	Include all	3	1.0605
715	S	Other male reproductive system O.R. proc for malignancy w CC/MCC	Include all	2	1.1073
716	S	Other male reproductive system O.R. proc for malignancy w/o CC/MCC	Include all	2	1.0618
717	S	Other male reproductive system O.R. proc exc malignancy w CC/MCC	Include all	3	1.0036
718	S	Other male reproductive system O.R. proc exc malignancy w/o CC/MCC	Include all	3	0.9316
722	M	Malignancy, male reproductive system w MCC	Include all	1	1.1246
723	M	Malignancy, male reproductive system w CC	Include all	2	1.0957
724	M	Malignancy, male reproductive system w/o CC/MCC	Include all	2	1.1447
725	M	Benign prostatic hypertrophy w MCC	Include all	3	1.0468
726	M	Benign prostatic hypertrophy w/o MCC	Include all	3	1.0364
727	M	Inflammation of the male reproductive system w MCC	Include all	3	0.9795
728	M	Inflammation of the male reproductive system w/o MCC	Include all	3	1.0047
729	M	Other male reproductive system diagnoses w CC/MCC	Include all	3	1.0408
730	M	Other male reproductive system diagnoses w/o CC/MCC	Include all	3	0.9316
734	S	Pelvic evisceration, rad hysterectomy & rad vulvectomy w CC/MCC	Include all	1	0.9885
735	S	Pelvic evisceration, rad hysterectomy & rad vulvectomy w/o CC/MCC	Include all	1	0.9843
736	S	Uterine & adnexa proc for ovarian or adnexal malignancy w MCC	Include all	1	1.0069
737	S	Uterine & adnexa proc for ovarian or adnexal malignancy w CC	Include all	2	0.9932
738	S	Uterine & adnexa proc for ovarian or adnexal malignancy w/o CC/MCC	Include all	2	0.9651
739	S	Uterine,adnexa proc for non-ovarian/adnexal malig w MCC	Include all	1	0.9999
740	S	Uterine,adnexa proc for non-ovarian/adnexal malig w CC	Include all	2	0.9752
741	S	Uterine,adnexa proc for non-ovarian/adnexal malig w/o CC/MCC	Include all	2	0.9909
742	S	Uterine & adnexa proc for non-malignancy w CC/MCC	Include all	2	0.9892
743	S	Uterine & adnexa proc for non-malignancy w/o CC/MCC	Include all	3	1.0111
744	S	D&C, conization, laparoscopy & tubal interruption w CC/MCC	Include all	2	1.0415
745	S	D&C, conization, laparoscopy & tubal interruption w/o CC/MCC	Include all	3	1.1458
746	S	Vagina, cervix & vulva procedures w CC/MCC	Include all	3	1.0280
747	S	Vagina, cervix & vulva procedures w/o CC/MCC	Include all	3	1.0239
748	S	Female reproductive system reconstructive procedures	Include all	3	0.9660
749	S	Other female reproductive system O.R. procedures w CC/MCC	Include all	2	1.0096
750	S	Other female reproductive system O.R. procedures w/o CC/MCC	Include all	2	0.9750
754	M	Malignancy, female reproductive system w MCC	Include all	1	1.0666
755	M	Malignancy, female reproductive system w CC	Include all	2	1.0543
756	M	Malignancy, female reproductive system w/o CC/MCC	Include all	2	1.1458
757	M	Infections, female reproductive system w MCC	Include all	3	0.9935
758	M	Infections, female reproductive system w CC	Include all	3	0.9914
759	M	Infections, female reproductive system w/o CC/MCC	Include all	3	1.0175

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
760	M	Menstrual & other female reproductive system disorders w CC/MCC	Include all	3	1.0038
761	M	Menstrual & other female reproductive system disorders w/o CC/MCC	Include all	3	0.9316
799	S	Splenectomy w MCC	Include all	1	1.0761
800	S	Splenectomy w CC	Include all	2	1.0581
801	S	Splenectomy w/o CC/MCC	Include all	2	1.0769
802	S	Other O.R. proc of the blood & blood forming organs w MCC	Include all	3	0.9952
803	S	Other O.R. proc of the blood & blood forming organs w CC	Include all	3	1.0507
804	S	Other O.R. proc of the blood & blood forming organs w/o CC/MCC	Include all	3	1.1458
808	M	Major hematomol/immun diag exc sickle cell crisis & coagul w MCC	Include all	1	1.0010
809	M	Major hematomol/immun diag exc sickle cell crisis & coagul w CC	Include all	2	1.0008
810	M	Major hematomol/immun diag exc sickle cell crisis & coagul w/o CC/MCC	Include all	2	0.9957
811	M	Red blood cell disorders w MCC	Include all	3	0.9924
812	M	Red blood cell disorders w/o MCC	Include all	3	0.9959
813	M	Coagulation disorders	Include all	2	0.9853
814	M	Reticuloendothelial & immunity disorders w MCC	Include all	1	0.9984
815	M	Reticuloendothelial & immunity disorders w CC	Include all	2	1.0010
816	M	Reticuloendothelial & immunity disorders w/o CC/MCC	Include all	2	1.0290
820	S	Lymphoma & leukemia w major O.R. procedure w MCC	Include all	1	1.0365
821	S	Lymphoma & leukemia w major O.R. procedure w CC	Include all	2	0.9900
822	S	Lymphoma & leukemia w major O.R. procedure w/o CC/MCC	Include all	2	0.9922
823	S	Lymphoma & non-acute leukemia w other O.R. proc w MCC	Include all	1	1.0040
824	S	Lymphoma & non-acute leukemia w other O.R. proc w CC	Include all	2	1.0008
825	S	Lymphoma & non-acute leukemia w other O.R. proc w/o CC/MCC	Include all	2	1.0033
826	S	Myeloprolif disord or poorly diff neopl w maj O.R. proc w MCC	Include all	1	0.9773
827	S	Myeloprolif disord or poorly diff neopl w maj O.R. proc w CC	Include all	2	1.0162
828	S	Myeloprolif disord or poorly diff neopl w maj O.R. proc w/o CC/MCC	Include all	2	1.0335
829	S	Myeloprolif disord or poorly diff neopl w other O.R. proc w CC/MCC	Include all	2	1.0001
830	S	Myeloprolif disord or poorly diff neopl w other O.R. proc w/o CC/MCC	Include all	2	1.0769
834	M	Acute leukemia w/o major O.R. procedure w MCC	Include all	1	1.0109
835	M	Acute leukemia w/o major O.R. procedure w CC	Include all	2	1.0096
836	M	Acute leukemia w/o major O.R. procedure w/o CC/MCC	Include all	2	1.0474
837	M	Chemo w acute leukemia as sdx or w high dose chemo agent w MCC	Include all	1	1.0211
838	M	Chemo w acute leukemia as sdx w CC or high dose chemo agent	Include all	2	0.9697
839	M	Chemo w acute leukemia as sdx w/o CC/MCC	Include all	2	1.0465
840	M	Lymphoma & non-acute leukemia w MCC	Include all	1	1.0386
841	M	Lymphoma & non-acute leukemia w CC	Include all	2	1.0234
842	M	Lymphoma & non-acute leukemia w/o CC/MCC	Include all	2	1.0603
843	M	Other myeloprolif dis or poorly diff neopl diag w MCC	Include all	3	1.0077
844	M	Other myeloprolif dis or poorly diff neopl diag w CC	Include all	3	1.0372
845	M	Other myeloprolif dis or poorly diff neopl diag w/o CC/MCC	Include all	3	0.9316
846	M	Chemotherapy w/o acute leukemia as secondary diagnosis w MCC	Include all	3	1.0322
847	M	Chemotherapy w/o acute leukemia as secondary diagnosis w CC	Include all	3	1.0352
848	M	Chemotherapy w/o acute leukemia as secondary diagnosis w/o CC/MCC	Include all	3	0.9316
849	M	Radiotherapy	Include all	3	1.1280
853	S	Infectious & parasitic diseases w O.R. procedure w MCC	Include all	1	0.9991
854	S	Infectious & parasitic diseases w O.R. procedure w CC	Include all	2	0.9999
855	S	Infectious & parasitic diseases w O.R. procedure w/o CC/MCC	Include all	2	0.9963
856	S	Postoperative or post-traumatic infections w O.R. proc w MCC	Include all	1	0.9892

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
857	S	Postoperative or post-traumatic infections w O.R. proc w CC	Include all	2	0.9965
858	S	Postoperative or post-traumatic infections w O.R. proc w/o CC/MCC	Include all	2	0.9774
862	M	Postoperative & post-traumatic infections w MCC	Include all	1	1.0010
863	M	Postoperative & post-traumatic infections w/o MCC	Include all	2	0.9965
864	M	Fever of unknown origin	Include all	2	0.9961
865	M	Fever	Include all	1	0.9848
866	M	Viral illness w/o MCC	Include all	2	0.9942
867	M	Other infectious & parasitic diseases diagnoses w MCC	Include all	1	0.9965
868	M	Other infectious & parasitic diseases diagnoses w CC	Include all	2	0.9968
869	M	Other infectious & parasitic diseases diagnoses w/o CC/MCC	Include all	2	0.9666
870	M	Septicemia or severe sepsis w MV 96+ hours	Include all	1	1.0107
871	M	Septicemia or severe sepsis w/o MV 96+ hours w MCC	Include all	1	1.0014
872	M	Septicemia or severe sepsis w/o MV 96+ hours w/o MCC	Include all	1	1.0014
876	S	O.R. procedure w principal diagnoses of mental illness	Include all	3	1.0028
880	M	Acute adjustment reaction & psychosocial dysfunction	Include all	3	0.9877
881	M	Depressive neuroses	Include all	3	1.0715
882	M	Neuroses except depressive	Include all	3	1.1102
883	M	Disorders of personality & impulse control	Include all	3	1.0196
884	M	Organic disturbances & mental retardation	Include all	3	1.0262
885	M	Psychoses	Include all	3	1.0051
886	M	Behavioral & developmental disorders	Include all	3	1.0633
887	M	Other mental disorder diagnoses	Include all	3	0.9791
894	M	Alcohol/drug abuse or dependence, left ama	Include all	3	0.9316
895	M	Alcohol/drug abuse or dependence w rehabilitation therapy	Include all	3	0.9316
896	M	Alcohol/drug abuse or dependence w/o rehabilitation therapy w MCC	Include all	3	1.0022
897	M	Alcohol/drug abuse or dependence w/o rehabilitation therapy w/o MCC	Include all	3	1.0038
901	S	Wound debridements for injuries w MCC	Include all	1	1.0079
902	S	Wound debridements for injuries w CC	Include all	2	1.0015
903	S	Wound debridements for injuries w/o CC/MCC	Include all	2	1.0279
904	S	Skin grafts for injuries w CC/MCC	Include all	2	1.0197
905	S	Skin grafts for injuries w/o CC/MCC	Include all	2	1.0055
906	S	Hand procedures for injuries	Include all	3	1.0274
907	S	Other O.R. procedures for injuries w MCC	Include all	1	0.9799
908	S	Other O.R. procedures for injuries w CC	Include all	2	1.0003
909	S	Other O.R. procedures for injuries w/o CC/MCC	Include all	2	1.0272
913	M	Traumatic injury w MCC	Include all	1	0.9663
914	M	Traumatic injury w/o MCC	Include all	2	1.0088
915	M	Allergic reactions w MCC	Include all	3	1.0190
916	M	Allergic reactions w/o MCC	Include all	3	0.9647
917	M	Poisoning & toxic effects of drugs w MCC	Include all	2	0.9959
918	M	Poisoning & toxic effects of drugs w/o MCC	Include all	3	1.0043
919	M	Complications of treatment w MCC	Include all	3	1.0024
920	M	Complications of treatment w CC	Include all	3	0.9831
921	M	Complications of treatment w/o CC/MCC	Include all	3	0.9998
922	M	Other injury, poisoning & toxic effect diag w MCC	Include all	3	1.0348
923	M	Other injury, poisoning & toxic effect diag w/o MCC	Include all	3	1.0159
927	S	Extensive burns or full thickness burns w MV 96+ hrs w skin graft	Include all	1	1.0373
928	S	Full thickness burn w skin graft or inhal inj w CC/MCC	Include all	1	1.0511
929	S	Full thickness burn w skin graft or inhal inj w/o CC/MCC	Include all	2	1.0049
933	M	Extensive burns or full thickness burns w MV 96+ hrs w/o skin graft	Include all	1	0.9679

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
934	M	Full thickness burn w/o skin grft or inhal inj	Include all	2	1.0128
935	M	Non-extensive burns	Include all	2	1.0754
939	S	O.R. proc w diagnoses of other contact w health services w MCC	Include all	3	0.9925
940	S	O.R. proc w diagnoses of other contact w health services w CC	Include all	3	1.0021
941	S	O.R. proc w diagnoses of other contact w health services w/o CC/MCC	Include all	3	1.0426
945	M	Rehabilitation w CC/MCC	Include all	3	0.9801
946	M	Rehabilitation w/o CC/MCC	Include all	3	0.9944
947	M	Signs & symptoms w MCC	Include all	3	1.0068
948	M	Signs & symptoms w/o MCC	Include all	3	1.0119
949	M	Aftercare w CC/MCC	Include all	3	0.9727
950	M	Aftercare w/o CC/MCC	Include all	3	0.9316
951	M	Other factors influencing health status	Include all	3	1.1458
955	S	Craniotomy for multiple significant trauma	Include all	1	1.1458
956	S	Limb reattachment, hip & femur proc for multiple significant trauma	Include all	1	1.0302
957	S	Other O.R. procedures for multiple significant trauma w MCC	Include all	1	1.1458
958	S	Other O.R. procedures for multiple significant trauma w CC	Include all	2	1.1458
959	S	Other O.R. procedures for multiple significant trauma w/o CC/MCC	Include all	2	1.1458
963	M	Other multiple significant trauma w MCC	Include all	1	1.1458
964	M	Other multiple significant trauma w CC	Include all	2	1.1272
965	M	Other multiple significant trauma w/o CC/MCC	Include all	2	1.1040
969	S	HIV w extensive O.R. procedure w MCC	Include all	1	1.1458
970	S	HIV w extensive O.R. procedure w/o MCC	Include all	1	1.0000
974	M	HIV w major related condition w MCC	Include all	1	1.0899
975	M	HIV w major related condition w CC	Include all	1	1.0329
976	M	HIV w major related condition w/o CC/MCC	Include all	1	1.1458
977	M	HIV w or w/o other related condition	Include all	2	1.0295
981	S	Extensive O.R. procedure unrelated to principal diagnosis w MCC	Include all	1	0.9913
982	S	Extensive O.R. procedure unrelated to principal diagnosis w CC	Include all	2	0.9904
983	S	Extensive O.R. procedure unrelated to principal diagnosis w/o CC/MCC	Include all	2	0.9903
984	S	Prostatic O.R. procedure unrelated to principal diagnosis w MCC	Include all	3	1.0443
985	S	Prostatic O.R. procedure unrelated to principal diagnosis w CC	Include all	3	0.9994
986	S	Prostatic O.R. procedure unrelated to principal diagnosis w/o CC/MCC	Include all	3	1.0000
987	S	Non-extensive O.R. proc unrelated to principal diagnosis w MCC	Include all	3	0.9938
988	S	Non-extensive O.R. proc unrelated to principal diagnosis w CC	Include all	3	1.0028
989	S	Non-extensive O.R. proc unrelated to principal diagnosis w/o CC/MCC	Include all	3	1.0048

Gynecology

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
734	S	Pelvic evisceration, rad hysterectomy & rad vulvectomy w CC/MCC	Include all	1	0.8979
735	S	Pelvic evisceration, rad hysterectomy & rad vulvectomy w/o CC/MCC	Include all	1	1.1932
736	S	Uterine & adnexa proc for ovarian or adnexal malignancy w MCC	Include all	1	0.5872
737	S	Uterine & adnexa proc for ovarian or adnexal malignancy w CC	Include all	2	0.8032
738	S	Uterine & adnexa proc for ovarian or adnexal malignancy w/o CC/MCC	Include all	2	1.0180
739	S	Uterine,adnexa proc for non-ovarian/adnexal malig w MCC	Include all	1	0.5344
740	S	Uterine,adnexa proc for non-ovarian/adnexal malig w CC	Include all	2	0.6847

741	S	Uterine,adnexa proc for non-ovarian/adnexal malig w/o CC/MCC	Include all	2	0.7273
742	S	Uterine & adnexa proc for non-malignancy w CC/MCC	Include all	2	1.3715
743	S	Uterine & adnexa proc for non-malignancy w/o CC/MCC	Include all	3	0.7695
746	S	Vagina, cervix & vulva procedures w CC/MCC	Include all	3	0.5729
747	S	Vagina, cervix & vulva procedures w/o CC/MCC	Include all	3	0.5953
749	S	Other female reproductive system O.R. procedures w CC/MCC	Include all	2	0.9218
750	S	Other female reproductive system O.R. procedures w/o CC/MCC	Include all	2	1.3715
754	M	Malignancy, female reproductive system w MCC	Include all	1	0.5849
755	M	Malignancy, female reproductive system w CC	Include all	2	0.6347
756	M	Malignancy, female reproductive system w/o CC/MCC	Include all	2	0.8073
757	M	Infections, female reproductive system w MCC	Include all	3	0.4585
758	M	Infections, female reproductive system w CC	Include all	3	0.5285
759	M	Infections, female reproductive system w/o CC/MCC	Include all	3	0.4978
760	M	Menstrual & other female reproductive system disorders w CC/MCC	Include all	3	0.5871
761	M	Menstrual & other female reproductive system disorders w/o CC/MCC	Include all	3	0.6763

Nephrology

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
008	S	Simultaneous pancreas/kidney transplant	Include all	1	1.1880
652	S	Kidney transplant	Include all	1	1.0901
653	S	Major bladder procedures w MCC	Include all	1	0.9988
654	S	Major bladder procedures w CC	Include all	2	1.1879
655	S	Major bladder procedures w/o CC/MCC	Include all	2	1.3447
656	S	Kidney & ureter procedures for neoplasm w MCC	Include procedures 3924, 550, 5501-4, 551, 5511-2, 5524, 5529, 553, 5531-5, 5539, 554, 555, 5551-4, 5561, 557, 558, 5581-7, 5589, 5591, 5597, 5598, 5599	1	1.0338
657	S	Kidney & ureter procedures for neoplasm w CC	See MS-DRG 656	2	1.3119
658	S	Kidney & ureter procedures for neoplasm w/o CC/MCC	See MS-DRG 656	2	1.5089
659	S	Kidney & ureter procedures for non-neoplasm w MCC	See MS-DRG 656	2	1.1233
660	S	Kidney & ureter procedures for non-neoplasm w CC	See MS-DRG 656	2	1.5325
661	S	Kidney & ureter procedures for non-neoplasm w/o CC/MCC	See MS-DRG 656	3	1.2220
673	S	Other kidney & urinary tract procedures w MCC	Include procedures 3806-7, 3816, 3836-7, 3846-7, 3866-7, 387, 3886-7, 3927, 3942-3, 3949-50, 3952, 3956-9, 3971	3	1.0207
674	S	Other kidney & urinary tract procedures w CC	Include procedures 3807, 3816, 3836-7, 3846-7, 3866-7, 387, 3886-7, 3927, 3942-3, 3949-50, 3952, 3956-9, 3971	3	1.0978
675	S	Other kidney & urinary tract procedures w/o CC/MCC	See MS-DRG 674	3	1.0146
682	M	Renal failure w MCC	Include all	1	0.9265

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
683	M	Renal failure w CC	Include all	2	0.9586
684	M	Renal failure w/o CC/MCC	Include all	2	1.0476
686	M	Kidney & urinary tract neoplasms w MCC	Include diagnoses: 1890-1, 1980, 2230	2	1.2054
687	M	Kidney & urinary tract neoplasms w CC	See MS-DRG 686	2	1.2303
688	M	Kidney & urinary tract neoplasms w/o CC/MCC	See MS-DRG 686	3	0.8623
689	M	Kidney & urinary tract infections w MCC	Include diagnoses: 0160, 590, 0786, 0954, 5900-3, 5908-9, 59010-11, 59080-1	3	1.2574
695	M	Kidney & urinary tract signs & symptoms w MCC	Include all	3	0.9133
698	M	Other kidney & urinary tract diagnoses w MCC	Include diagnoses: 2504, 580-3, 587, 589, 866, 4401, 4421, 4473, 4533, 5800, 5804, 5808- 13, 5818-22, 5824, 5828-32, 5834, 5836-9, 5890-1, 5899, 5930-2, 5936, 8660, 886600-3, 8661, 86610-3, 27410, 27419, 44323, 44581, 58081, 58089, 58181, 58189, 58281, 58289, 58381, 58389, V420, V594	3	1.1456
699	M	Other kidney & urinary tract diagnoses w CC	See MS-DRG 698	3	1.3266
700	M	Other kidney & urinary tract diagnoses w/o CC/MCC	See MS-DRG 698	3	1.5325

Neurology & Neurosurgery

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
020	S	Intracranial vascular procedures w PDX hemorrhage w MCC	Include all	1	2.1820
021	S	Intracranial vascular procedures w PDX hemorrhage w CC	Include all	1	2.8299
022	S	Intracranial vascular procedures w PDX hemorrhage w/o CC/MCC	Include all	1	3.1397
023	S	Cranio w major dev impl/acute complex CNS PDX w MCC or chemo implant	Include all	1	1.3678
024	S	Cranio w major dev impl/acute complex CNS PDX w/o MCC	Include all	1	1.3702
025	S	Craniotomy & endovascular intracranial procedures w MCC	Include all	1	1.4566
026	S	Craniotomy & endovascular intracranial procedures w CC	Include all	1	1.6871
027	S	Craniotomy & endovascular intracranial procedures w/o CC/MCC	Include all	1	2.0380
031	S	Ventricular shunt procedures w MCC	Include all	1	2.1012
032	S	Ventricular shunt procedures w CC	Include all	2	1.8721
033	S	Ventricular shunt procedures w/o CC/MCC	Include all	2	1.1996
034	S	Carotid artery stent procedure w MCC	Include all	1	0.7928
035	S	Carotid artery stent procedure w CC	Include all	2	0.7784
036	S	Carotid artery stent procedure w/o CC/MCC	Include all	2	0.7757
037	S	Extracranial procedures w MCC	Include all	1	0.7903

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
038	S	Extracranial procedures w CC	Include all	2	0.8239
039	S	Extracranial procedures w/o CC/MCC	Include all	2	0.7979
040	S	Periph & cranial nerve & other nerv syst proc w MCC	Include all	1	1.0644
041	S	Periph/cranial nerve & other nerv syst proc w CC or periph neurostim	Include all	2	1.2300
042	S	Periph & cranial nerve & other nerv syst proc w/o CC/MCC	Include all	2	1.2963
052	M	Spinal disorders & injuries w CC/MCC	Include all	2	1.2455
053	M	Spinal disorders & injuries w/o CC/MCC	Include all	2	1.7778
054	M	Nervous system neoplasms w MCC	Include all	1	1.1631
055	M	Nervous system neoplasms w/o MCC	Include all	2	1.2576
056	M	Degenerative nervous system disorders w MCC	Include all	1	0.7731
057	M	Degenerative nervous system disorders w/o MCC	Include all	2	0.7418
058	M	Multiple sclerosis & cerebellar ataxia w MCC	Include all	1	1.3238
059	M	Multiple sclerosis & cerebellar ataxia w CC	Include all	2	1.3350
060	M	Multiple sclerosis & cerebellar ataxia w/o CC/MCC	Include all	2	1.7207
061	M	Acute ischemic stroke w use of thrombolytic agent w MCC	Include all	1	0.8408
062	M	Acute ischemic stroke w use of thrombolytic agent w CC	Include all	2	0.9748
063	M	Acute ischemic stroke w use of thrombolytic agent w/o CC/MCC	Include all	2	0.9795
064	M	Intracranial hemorrhage or cerebral infarction w MCC	Include all	1	0.8411
065	M	Intracranial hemorrhage or cerebral infarction w CC	Include all	2	0.8860
066	M	Intracranial hemorrhage or cerebral infarction w/o CC/MCC	Include all	2	0.9211
067	M	Nonspecific cva & precerebral occlusion w/o infarct w MCC	Include all	1	0.7677
068	M	Nonspecific cva & precerebral occlusion w/o infarct w/o MCC	Include all	2	0.7887
069	M	Transient ischemia	Include all	3	0.7453
070	M	Nonspecific cerebrovascular disorders w MCC	Include all	2	0.7953
071	M	Nonspecific cerebrovascular disorders w CC	Include all	2	0.8076
073	M	Cranial & peripheral nerve disorders w MCC	Include all	1	0.9421
074	M	Cranial & peripheral nerve disorders w/o MCC	Include all	2	1.2573
075	M	Viral meningitis w CC/MCC	Include all	2	2.7812
076	M	Viral meningitis w/o CC/MCC	Include all	2	3.1397
077	M	Hypertensive encephalopathy w MCC	Include all	1	0.9342
078	M	Hypertensive encephalopathy w CC	Include all	2	0.9280
079	M	Hypertensive encephalopathy w/o CC/MCC	Include all	2	1.0963
080	M	Nontraumatic stupor & coma w MCC	Include all	1	0.9223
081	M	Nontraumatic stupor & coma w/o MCC	Include all	2	0.9565
082	M	Traumatic stupor & coma, coma >1 hr w MCC	Include all	1	1.4580
083	M	Traumatic stupor & coma, coma >1 hr w CC	Include all	1	1.4778
084	M	Traumatic stupor & coma, coma >1 hr w/o CC/MCC	Include all	1	2.3478
085	M	Traumatic stupor & coma, coma <1 hr w MCC	Include all	1	0.9235
086	M	Traumatic stupor & coma, coma <1 hr w CC	Include all	2	0.9278
087	M	Traumatic stupor & coma, coma <1 hr w/o CC/MCC	Include all	2	1.0726
091	M	Other disorders of nervous system w MCC	Include all	3	0.9674
092	M	Other disorders of nervous system w CC	Include all	3	0.8889
093	M	Other disorders of nervous system w/o CC/MCC	Include all	3	0.9335
094	M	Bacterial & tuberculous infections of nervous system w MCC	Include all	1	1.5582
095	M	Bacterial & tuberculous infections of nervous system w CC	Include all	2	1.9463
096	M	Bacterial & tuberculous infections of nervous system w/o CC/MCC	Include all	2	3.1397
097	M	Non-bacterial infect of nervous sys exc viral meningitis w MCC	Include all	1	1.4130
098	M	Non-bacterial infect of nervous sys exc viral meningitis w CC	Include all	2	1.8410
099	M	Non-bacterial infect of nervous sys exc viral meningitis w/o CC/MCC	Include all	2	3.1397
100	M	Seizures w MCC	Include all	2	1.2501
955	S	Craniotomy for multiple significant trauma	Include all	1	3.1397

Orthopedics

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
028	S	Spinal procedures w MCC	Exclude procedures: 0301-2, 0309, 031, 0321, 0329, 0332, 0339, 034, 0351-3, 0359, 036, 0371-2, 0379, 0393, 0394, 0397-9	1	1.9487
029	S	Spinal procedures w CC or spinal neurostimulators	See MS-DRG 028	2	2.0411
030	S	Spinal procedures w/o CC/MCC	See MS-DRG 028	2	2.1601
453	S	Combined anterior/posterior spinal fusion w MCC	Include all	1	1.2163
454	S	Combined anterior/posterior spinal fusion w CC	Include all	2	1.4660
455	S	Combined anterior/posterior spinal fusion w/o CC/MCC	Include all	2	1.6730
456	S	Spinal fus exc cerv w spinal curv/malig/infec or 9+ fus w MCC	Include all	1	1.3943
457	S	Spinal fus exc cerv w spinal curv/malig/infec or 9+ fus w CC	Include all	2	1.4155
458	S	Spinal fus exc cerv w spinal curv/malig/infec or 9+ fus w/o CC/MCC	Include all	2	1.6353
459	S	Spinal fusion except cervical w MCC	Include all	1	1.0418
460	S	Spinal fusion except cervical w/o MCC	Include all	2	1.2361
461	S	Bilateral or multiple major joint procs of lower extremity w MCC	Include all	1	0.9699
462	S	Bilateral or multiple major joint procs of lower extremity w/o MCC	Include all	2	1.2852
463	S	Wound Debridement and Skin Graft Except Hand, for Musculo-Connective Tissue Disease w MCC	Include procedures: 8005, 8006	1	0.8450
464	S	Wound Debridement and Skin Graft Except Hand, for Musculo-Connective Tissue Disease w CC	Include procedures: 8005, 8006	2	0.9531
465	S	Wound Debridement and Skin Graft Except Hand, for Musculo-Connective Tissue Disease w/o CC/MCC	Include procedures: 8005, 8006	2	1.0850
466	S	Revision of hip or knee replacement w MCC	Include all	3	0.7987
467	S	Revision of hip or knee replacement w CC	Include all	3	0.8822
468	S	Revision of hip or knee replacement w/o CC/MCC	Include all	3	1.1134
469	S	Major joint replacement or reattachment of lower extremity w MCC	Include all	1	0.7544
470	S	Major joint replacement or reattachment of lower extremity w/o MCC	Include all	2	1.0267
471	S	Cervical spinal fusion w MCC	Include all	1	1.1197
472	S	Cervical spinal fusion w CC	Include all	2	1.4830
473	S	Cervical spinal fusion w/o CC/MCC	Include all	2	1.4731
480	S	Hip & femur procedures except major joint w MCC	Include all	2	0.7550
481	S	Hip & femur procedures except major joint w CC	Include all	2	0.7712
482	S	Hip & femur procedures except major joint w/o CC/MCC	Include all	3	0.9461
483	S	Major joint & limb reattachment proc of upper extremity w CC/MCC	Include all	1	0.8321
484	S	Major joint & limb reattachment proc of upper extremity w/o CC/MCC	Include all	1	0.9369
485	S	Knee procedures w pdx of infection w MCC	Include all	1	0.9597
486	S	Knee procedures w pdx of infection w CC	Include all	2	1.1593
487	S	Knee procedures w pdx of infection w/o CC/MCC	Include all	2	1.4931
490	S	Back & neck proc exc spinal fusion w CC/MCC or disc device/neurostim	Include all	2	1.1580
491	S	Back & neck proc exc spinal fusion w/o CC/MCC	Include all	3	0.8508
492	S	Lower extrem & humer proc except hip,foot,femur w MCC	Include all	2	1.1115
493	S	Lower extrem & humer proc except hip,foot,femur w CC	Include all	2	1.3675
494	S	Lower extrem & humer proc except hip,foot,femur w/o CC/MCC	Include all	3	2.1601
495	S	Local excision & removal int fix devices exc hip & femur w MCC	Include all	2	1.1361
496	S	Local excision & removal int fix devices exc hip & femur w CC	Include all	2	1.5410
497	S	Local excision & removal int fix devices exc hip & femur w/o CC/MCC	Include all	3	1.5356

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
498	S	Local excision & removal int fix devices of hip & femur w CC/MCC	Include all	3	1.0432
499	S	Local excision & removal int fix devices of hip & femur w/o CC/MCC	Include all	3	1.1037
500	S	Soft tissue procedures w MCC	Include all	3	1.1367
501	S	Soft tissue procedures w CC	Include all	3	1.4113
503	S	Foot procedures w MCC	Include all	3	1.0085
504	S	Foot procedures w CC	Include all	3	1.2562
505	S	Foot procedures w/o CC/MCC	Include all	3	2.1085
506	S	Major thumb or joint procedures	Include all	3	1.3616
507	S	Major shoulder or elbow joint procedures w CC/MCC	Include all	2	1.2661
508	S	Major shoulder or elbow joint procedures w/o CC/MCC	Include all	2	1.7305
515	S	Other musculoskelet sys & conn tiss O.R. proc w MCC	Include procedures: 7601, 7631, 7639, 764, 7641-6, 765-6, 7661-70, 7672, 7674, 7676-7, 7679, 7691-2, 7694, 7699, 7700-1, 7709, 7720-1, 7729-31, 7739, 7780-1, 7789-91, 7799-7801, 7809-7811, 7819-20, 7829-30, 7839-41, 7849-51, 7859, 7870-1, 7879, 7890-1, 7899, 7910, 7919-20, 7929-30, 7939-40, 7949-50, 7959-60, 7969, 7980, 7989-90, 7999, 8010, 8019, 8040, 8049, 8090, 8118, 8120, 8129, 8159, 8165-6, 8196-7, 8199, 8429, 8440, 8493, 8499	3	0.8931
516	S	Other musculoskelet sys & conn tiss O.R. proc w CC	See MS-DRG 515	3	0.8262
517	S	Other musculoskelet sys & conn tiss O.R. proc w/o CC/MCC	See MS-DRG 515	3	0.7312
533	M	Fractures of femur w MCC	Include all	1	0.7515
534	M	Fractures of femur w/o MCC	Include all	2	1.1128
535	M	Fractures of hip & pelvis w MCC	Include all	1	0.7106
536	M	Fractures of hip & pelvis w/o MCC	Include all	2	0.7330
539	M	Osteomyelitis w MCC	Include all	3	0.9879
540	M	Osteomyelitis w CC	Include all	3	1.0168
541	M	Osteomyelitis w/o CC/MCC	Include all	3	0.9648
542	M	Pathological fractures & musculoskelet & conn tiss malig w MCC	Include diagnoses: 7331, 73310-6, 73319, 73393-5	1	0.7328
543	M	Pathological fractures & musculoskelet & conn tiss malig w CC	See MS-DRG 542	2	0.7576
544	M	Pathological fractures & musculoskelet & conn tiss malig w/o CC/MCC	See MS-DRG 542	2	0.6813
956	S	Limb reattachment, hip & femur proc for multiple significant trauma	Include all	1	1.5762

Pulmonology

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
003	S	ECMO or trach w MV 96+ hrs or PDX exc face, mouth & neck w maj O.R.	Include all	1	1.5264
004	S	Trach w MV 96+ hrs or PDX exc face, mouth & neck w/o maj O.R.	Include all	1	1.1879
007	S	Lung transplant	Include all	1	1.4929
163	S	Major chest procedures w MCC	Include procedures: 3173, 3175, 3179, 3209, 321, 3221-2, 3229, 323-6, 329-31, 3325, 3328, 3334, 3339, 334, 3341-3, 3348-9, 3392, 3398-9, 3402, 3427, 345, 3451, 3459, 346, 3473-4, 348, 3481-5, 3489, 3493	2	1.2939
164	S	Major chest procedures w CC	See MS-DRG 163	2	1.2194
165	S	Major chest procedures w/o CC/MCC	See MS-DRG 163	2	1.3745
166	S	Other resp system O.R. procedures w MCC	Include all	2	1.0484
167	S	Other resp system O.R. procedures w CC	Include all	2	1.1782
168	S	Other resp system O.R. procedures w/o CC/MCC	Include all	3	0.9850
175	M	Pulmonary embolism w MCC	Include all	1	1.1377
176	M	Pulmonary embolism w/o MCC	Include all	1	1.4340
177	M	Respiratory infections & inflammations w MCC	Exclude diagnoses: 7955, V712, 79551, 75952	1	0.8727
178	M	Respiratory infections & inflammations w CC	See MS-DRG 177	2	0.8961
179	M	Respiratory infections & inflammations w/o CC/MCC	See MS-DRG 177	2	1.0267
180	M	Respiratory neoplasms w MCC	Exclude diagnoses: 2122-5, 2128-9, 2133	1	1.0453
181	M	Respiratory neoplasms w CC	See MS-DRG 181	2	1.1279
182	M	Respiratory neoplasms w/o CC/MCC	See MS-DRG 181	2	1.1414
183	M	Major chest trauma w MCC	Include all	1	1.2277
184	M	Major chest trauma w CC	Include all	1	1.4775
185	M	Major chest trauma w/o CC/MCC	Include all	1	1.5151
186	M	Pleural effusion w MCC	Include all	3	0.9398
187	M	Pleural effusion w CC	Include all	3	0.9734
189	M	Pulmonary edema & respiratory failure	Include all	2	0.9678
190	M	Chronic obstructive pulmonary disease w MCC	Include all	3	0.8832
191	M	Chronic obstructive pulmonary disease w CC	Include all	3	0.8671
192	M	Chronic obstructive pulmonary disease w/o CC/MCC	Include all	3	0.8470
193	M	Simple pneumonia & pleurisy w MCC	Include all	3	0.8932
194	M	Simple pneumonia & pleurisy w CC	Include all	3	0.9122
196	M	Interstitial lung disease w MCC	Include all	3	0.9626
197	M	Interstitial lung disease w CC	Include all	3	1.0031
198	M	Interstitial lung disease w/o CC/MCC	Include all	3	1.0166
199	M	Pneumothorax w MCC	Exclude diagnoses: 5121	1	1.2689

MS-DRG	Medical/Surgical	DRG Title	ICD-9-CM	Severity	Weight
200	M	Pneumothorax w CC	See MS-DRG 199	2	1.5603
202	M	Bronchitis & asthma w CC/MCC	Include all	3	1.3697
207	M	Respiratory system diagnosis w ventilator support 96+ hours	Include all	2	1.1224
208	M	Respiratory system diagnosis w ventilator support <96 hours	Include all	2	1.0861
870	M	Septicemia or severe sepsis w MV 96+ hours	Include all	1	1.0185
871	M	Septicemia or severe sepsis w/o MV 96+ hours w MCC	Include all	1	0.9259
872	M	Septicemia or severe sepsis w/o MV 96+ hours w/o MCC	Include all	1	1.1097

Urology

MS-DRG	Medical/Surgical	DRG Title	IC9-CM	Severity	Weight
653	S	Major bladder procedures w MCC	Include all	1	0.9647
654	S	Major bladder procedures w CC	Include all	2	1.1475
655	S	Major bladder procedures w/o CC/MCC	Include all	2	1.2989
656	S	Kidney & ureter procedures for neoplasm w MCC	Include procedures: 561-2, 5640-2, 5651-2, 5661-2, 5671-5, 5679, 5681-6, 5689, 5692-5, 5699, 5900, 5902-3, 5909	1	1.0016
657	S	Kidney & ureter procedures for neoplasm w CC	See MS-DRG 656	2	0.9091
658	S	Kidney & ureter procedures for neoplasm w/o CC/MCC	See MS-DRG 656	2	0.9004
659	S	Kidney & ureter procedures for non-neoplasm w MCC	See MS-DRG 656	2	1.1535
660	S	Kidney & ureter procedures for non-neoplasm w CC	See MS-DRG 656	2	1.6182
661	S	Kidney & ureter procedures for non-neoplasm w/o CC/MCC	See MS-DRG 656	3	1.3290
662	S	Minor bladder procedures w MCC	Include all	3	0.9199
663	S	Minor bladder procedures w CC	Include all	3	0.9891
664	S	Minor bladder procedures w/o CC/MCC	Include all	3	1.1594
665	S	Prostatectomy w MCC	Include all	3	0.7591
666	S	Prostatectomy w CC	Include all	3	0.7670
668	S	Transurethral procedures w MCC	Include all	3	0.9203
669	S	Transurethral procedures w CC	Include all	3	1.0045
671	S	Urethral procedures w CC/MCC	Include all	3	1.0698
673	S	Other kidney & urinary tract procedures w MCC	Include procedures: 1756, 3806-7, 3816, 3836-7, 3846-7, 3866-7, 387, 3886-7, 3927, 3942-3, 3949-50, 3952, 3956-9, 3971	3	0.7450
674	S	Other kidney & urinary tract procedures w CC	See MS-DRG 673	3	0.8997
675	S	Other kidney & urinary tract procedures w/o CC/MCC	See MS-DRG 673	3	1.0348
686	M	Kidney & urinary tract neoplasms w MCC	Exclude diagnoses: 1890-1, 1980-1, 2230-1	2	0.9347
687	M	Kidney & urinary tract neoplasms w CC	See MS-DRG 686	2	0.9394
688	M	Kidney & urinary tract neoplasms w/o CC/MCC	See MS-DRG 686	3	1.2693

MS-DRG	Medical/Surgical	DRG Title	IC9-CM	Severity	Weight
691	M	Urinary stones w esw lithotripsy w CC/MCC	Include all	3	1.2096
692	M	Urinary stones w esw lithotripsy w/o CC/MCC	Include all	3	1.6182
697	M	Urethral stricture	Include all	3	0.9376
			Exclude diagnoses: 580-3, 587, 589, 866, 4401, 4421, 4473, 4533, 5800, 5804, 5808-13, 5818-22, 5824, 5828-32, 5834, 5836-9, 5890-1, 5899, 5930-2, 5936, 8660, 886600-3, 8661, 86610-3, 27410, 27419, 44323, 44581, 58081, 58089, 58181, 58189, 58281, 58289, 58381, 58389, V420, V594		
698	M	Other kidney & urinary tract diagnoses w MCC		3	0.8518
699	M	Other kidney & urinary tract diagnoses w CC	See MS-DRG 698	3	0.9126
700	M	Other kidney & urinary tract diagnoses w/o CC/MCC	See MS-DRG 698	3	0.8650
707	S	Major male pelvic procedures w CC/MCC	Include all	2	1.5212
708	S	Major male pelvic procedures w/o CC/MCC	Include all	2	1.6182
709	S	Penis procedures w CC/MCC	Include all	3	1.1702
710	S	Penis procedures w/o CC/MCC	Include all	3	0.9351
711	S	Testes procedures w CC/MCC	Include all	2	1.6182
712	S	Testes procedures w/o CC/MCC	Include all	3	1.6182
713	S	Transurethral prostatectomy w CC/MCC	Include all	2	0.7991
		Other male reproductive system O.R. proc for malignancy w CC/MCC	Include all	2	1.2523
715	S	Other male reproductive system O.R. proc for malignancy w/o CC/MCC	Include all	2	1.3968
716	S	Other male reproductive system O.R. proc exc malignancy w CC/MCC	Include all	3	1.0018
717	S	Other male reproductive system O.R. proc exc malignancy w/o CC/MCC	Include all	3	0.6674
718	S	Other male reproductive system O.R. proc exc malignancy w/o CC/MCC	Include all	3	0.6674
722	M	Malignancy, male reproductive system w MCC	Include all	1	0.9507
723	M	Malignancy, male reproductive system w CC	Include all	2	1.0090
724	M	Malignancy, male reproductive system w/o CC/MCC	Include all	2	1.1142
727	M	Inflammation of the male reproductive system w MCC	Include all	3	0.9867
728	M	Inflammation of the male reproductive system w/o MCC	Include all	3	1.0653
		Other male reproductive system diagnoses w CC/MCC	Exclude diagnoses: V252	3	1.2089
729	M	Other male reproductive system diagnoses w CC/MCC	See MS-DRG 729	3	0.9622
730	M	Other male reproductive system diagnoses w/o CC/MCC	See MS-DRG 729	3	0.9622
984	S	Prostatic O.R. procedure unrelated to principal diagnosis w MCC	Include all	3	0.7884
985	S	Prostatic O.R. procedure unrelated to principal diagnosis w CC	Include all	3	0.7794
		Prostatic O.R. procedure unrelated to principal diagnosis w/o CC/MCC	Include all	3	0.8646
986	S	Prostatic O.R. procedure unrelated to principal diagnosis w/o CC/MCC	Include all	3	0.8646

Appendix D

2015-16 Best Hospitals Rankings, IHQ Specialties

Best Hospitals 2015-16: Cancer

Rank	Hospital	Overall Specialty Score	Reputation with specialists	Survival	Patient safety	Success in preventing pressure ulcers	Success in preventing deaths from treatable complications after surgery	Success in preventing collapsed lung during biopsy, catheter insertion and other procedures	Success in preventing major bleeding and bruising after surgery	Success in preventing respiratory failure after surgery	Success in preventing surgical incisions from reopening afterwards	Success in preventing harm to patients during surgery	Patient volume	Nursing intensity	Nurse Magnet recognition	NCI-designated cancer center	FACT-accredited for BMT and tissue transplant	Advanced technologies	Patient services	Intensivist on staff
1	University of Texas MD Anderson Cancer Center, Houston	100.0	64.7	10	2	2	4	2	1	2	3	2	6,838	2.1	Yes	Yes	2	8	8	Yes
2	Memorial Sloan Kettering Cancer Center, New York	94.7	62.5	10	4	3	5	2	1	5	3	4	4,555	1.9	No	Yes	2	8	8	Yes
3	Mayo Clinic, Rochester, Minn.	91.0	25.5	10	5	4	5	5	3	5	3	5	3,626	2.6	Yes	Yes	2	8	8	Yes
4	Dana-Farber/Brigham and Women's Cancer Center, Boston	90.3	37.4	8	5	5	4	5	5	5	4	5	3,539	2.4	Yes	Yes	2	8	8	Yes
5	Seattle Cancer Care Alliance/University of Washington Medical Center	76.8	10.5	10	3	1	4	5	1	3	2	5	1,215	2.3	Yes	Yes	2	8	8	Yes
6	Johns Hopkins Hospital, Baltimore	73.6	23.8	9	1	1	4	1	1	2	2	1	1,819	2.1	Yes	Yes	2	8	8	Yes
6	UCLA Medical Center, Los Angeles	73.6	6.3	10	5	5	4	5	4	4	2	5	1,897	3.1	Yes	Yes	2	8	8	Yes
8	Massachusetts General Hospital, Boston	73.4	11.6	8	5	5	5	5	1	5	2	2	2,690	2.4	Yes	Yes	2	8	8	Yes
9	UCSF Medical Center, San Francisco	71.5	8.6	9	5	4	3	5	3	4	3	5	1,609	2.7	Yes	Yes	2	8	8	Yes
10	Stanford Health-Stanford Hospital, Stanford, Calif.	70.5	9.1	9	4	2	4	4	4	4	2	3	1,497	2.4	Yes	Yes	2	8	8	Yes
11	Hospitals of the University of Pennsylvania-Penn Presbyterian, Philadelphia	69.7	6.5	10	4	1	3	5	3	4	4	4	2,799	2.4	Yes	Yes	2	8	8	Yes
12	Cleveland Clinic	69.4	5.5	10	3	1	4	4	2	3	3	2	2,793	2.3	Yes	Yes	2	8	8	Yes
13	City of Hope, Duarte, Calif.	69.1	4.6	10	5	5	5	3	2	4	4	5	1,131	2.4	No	Yes	2	8	8	Yes
14	Barnes-Jewish Hospital/Washington University, St. Louis	67.8	5.2	9	2	3	2	3	1	3	2	2	3,766	2.1	Yes	Yes	2	8	8	Yes
15	University of Colorado Hospital, Aurora	67.3	0.8	10	5	5	4	5	2	5	2	5	1,007	1.9	Yes	Yes	2	8	8	Yes
16	Northwestern Memorial Hospital, Chicago	66.7	2.1	10	4	2	5	3	2	4	3	4	2,221	1.8	Yes	Yes	2	8	8	Yes
17	Wake Forest Baptist Medical Center, Winston-Salem, N.C.	66.6	1.6	10	3	2	3	4	4	2	3	2	2,535	1.5	Yes	Yes	2	8	8	Yes
18	Moffitt Cancer Center, Tampa	66.5	4.1	10	1	2	4	1	2	1	2	2	2,286	1.4	No	Yes	2	8	8	Yes
19	Mayo Clinic, Phoenix	66.1	0.8	10	5	3	5	4	3	5	3	5	1,086	4.2	No	Yes	2	8	8	Yes
20	New York-Presbyterian University Hospital of Columbia and Cornell, N.Y.	65.1	2.2	10	3	3	4	3	2	4	2	3	4,551	2.1	No	Yes	2	8	8	Yes
21	Fox Chase Cancer Center, Philadelphia	64.7	3.1	10	1	1	4	1	1	4	2	4	1,266	1.8	Yes	Yes	2	8	8	Yes
22	Emory University Hospital, Atlanta	63.3	1.9	9	5	5	4	5	5	2	1	5	1,917	1.9	Yes	Yes	2	8	8	Yes
23	UC San Diego Health	63.0	0.8	9	5	4	5	2	4	3	3	4	1,118	1.9	Yes	Yes	2	8	8	Yes
24	Ohio State University James Cancer Hospital, Columbus	62.1	4.1	9	1	3	1	2	1	2	1	2	3,342	2.1	Yes	Yes	2	8	8	Yes
25	UPMC-University of Pittsburgh Medical Center	61.9	3.4	9	1	2	3	1	1	2	3	1	4,210	1.8	Yes	Yes	2	8	8	Yes
26	USC Norris Cancer Hospital-Keck Medical Center of USC, Los Angeles	61.8	1.2	10	1	5	3	1	4	1	1	3	965	3.1	No	Yes	2	8	7	Yes
27	Duke University Hospital, Durham, N.C.	61.6	6.2	7	2	1	2	3	2	4	2	5	2,713	2.2	Yes	Yes	2	8	8	Yes
28	University of Michigan Hospitals and Health Centers, Ann Arbor	61.5	4.4	8	4	2	2	5	3	3	2	5	2,494	2.7	No	Yes	2	8	8	Yes
29	Thomas Jefferson University Hospital, Philadelphia	61.3	1.1	10	2	1	4	3	1	3	4	4	2,019	2.3	Yes	Yes	2	8	8	Yes
30	Seidman Cancer Center at UH Case Medical, Cleveland	60.9	2.4	9	3	2	4	2	1	4	3	4	1,716	2.3	Yes	Yes	2	8	8	Yes
31	University of Kansas Hospital, Kansas City	60.8	0.3	10	2	3	4	3	3	1	2	2	1,591	2.1	Yes	Yes	2	8	8	Yes
32	University of North Carolina Hospitals, Chapel Hill	60.6	2.4	10	1	1	2	1	2	1	1	4	1,746	1.8	Yes	Yes	2	8	8	Yes
33	Vanderbilt University Medical Center, Nashville	60.4	2.2	8	3	2	4	2	3	2	3	5	1,533	2.1	Yes	Yes	2	8	8	Yes
34	University of Chicago Medical Center	60.2	2.7	9	3	4	3	3	1	3	2	5	1,866	2.4	No	Yes	2	8	8	Yes
35	University of California, Davis Medical Center, Sacramento	59.6	0.6	9	3	4	4	2	2	4	3	2	997	2.7	Yes	Yes	2	8	8	Yes
36	Houston Methodist Hospital, Houston	59.3	1.3	10	4	4	4	2	2	4	1	5	1,555	1.8	Yes	No	2	8	8	Yes
37	Oregon Health and Science University Hospital, Portland	59.0	0.3	10	1	4	4	1	2	2	2	1	1,287	2.0	Yes	Yes	2	8	8	Yes
38	University of Wisconsin Hospital and Clinics, Madison	58.9	0.7	9	2	2	5	2	2	4	1	2	1,441	1.9	Yes	Yes	2	8	8	Yes
39	University of Iowa Hospitals and Clinics, Iowa City	58.4	0.4	9	4	2	3	5	2	2	4	4	1,319	1.8	Yes	Yes	2	8	8	Yes
40	Rush University Medical Center, Chicago	58.1	0.8	10	1	1	3	1	1	3	4	2	1,864	2.2	Yes	No	2	8	8	Yes
41	NYU Langone Medical Center, New York	57.7	1.0	8	4	2	5	2	2	4	2	5	1,331	2.7	Yes	Yes	1	8	8	Yes
42	Yale-New Haven Hospital, New Haven, Conn.	57.6	2.2	8	2	3	4	1	1	3	2	2	2,597	1.5	Yes	Yes	2	8	8	Yes
43	Cedars-Sinai Medical Center, Los Angeles	57.5	2.1	8	4	4	4	2	2	4	3	4	2,143	2.5	Yes	No	2	8	8	Yes
43	Roswell Park Cancer Institute, Buffalo	57.5	1.5	9	1	1	3	1	1	1	3	1	1,323	2.4	Yes	Yes	2	8	8	Yes
45	University of Maryland Medical Center, Baltimore	57.2	1.0	10	1	1	2	1	1	1	2	1	1,273	2.3	Yes	Yes	2	8	8	Yes
46	UF Health Shands Hospital, Gainesville, Fla.	56.9	0.6	10	3	3	2	3	2	2	2	4	1,649	1.9	Yes	No	2	8	8	Yes
47	IU Health Academic Health Center, Indianapolis	56.2	1.4	8	2	4	2	1	2	2	2	4	1,892	2.0	Yes	Yes	2	8	8	Yes
48	Mayo Clinic, Jacksonville, Fla.	56.0	0.9	9	5	3	4	4	2	5	4	5	893	2.1	No	Yes	2	8	8	Yes
49	Mount Sinai Hospital, New York	55.6	1.3	9	3	1	2	2	4	4	3	3	2,303	2.0	Yes	No	2	8	8	Yes
50	UT Southwestern Medical Center, Dallas	55.4	0.3	10	2	1	5	4	1	4	3	3	1,031	1.9	No	Yes	2	8	8	Yes

Top 10

Top 20

Best Hospitals 2015-16: Cardiology & Heart Surgery

Rank	Hospital	Overall Specialty Score	Reputation with specialists	Survival	Patient safety	Success in preventing pressure ulcers	Success in preventing deaths from treatable complications after surgery	Success in preventing collapsed lung during biopsy, catheter insertion and other procedures	Success in preventing major bleeding and bruising after surgery	Success in preventing respiratory failure after surgery	Success in preventing surgical incisions from reopening afterwards	Success in preventing harm to patients during surgery	Patient volume	Nursing intensity	Nurse Magnet recognition	Advanced technologies	Patient services	Trauma center	Intensivist on staff
1	Cleveland Clinic	100.0	60.3	10	3	1	4	4	2	3	3	2	15,887	2.3	Yes	6	7	No	Yes
2	Mayo Clinic, Rochester, Minn.	99.3	53.2	10	5	4	5	5	3	5	3	5	11,192	2.6	Yes	6	7	Yes	Yes
3	New York-Presbyterian University Hospital of Columbia and Cornell, N.Y.	83.7	18.9	10	3	3	4	3	2	4	2	3	18,900	2.1	No	6	7	Yes	Yes
4	Brigham and Women's Hospital, Boston	83.3	17.5	9	5	5	4	5	5	5	4	5	7,459	2.4	Yes	6	7	Yes	Yes
5	Massachusetts General Hospital, Boston	79.5	20.5	8	5	5	5	5	1	5	2	2	8,718	2.4	Yes	6	7	Yes	Yes
6	Duke University Hospital, Durham, N.C.	78.5	16.4	10	2	1	2	3	2	4	2	5	8,271	2.2	Yes	6	7	Yes	Yes
7	Mount Sinai Hospital, New York	74.0	6.1	10	3	1	2	2	4	4	3	3	10,976	2.0	Yes	6	7	Yes	Yes
8	Hospitals of the University of Pennsylvania-Penn Presbyterian, Philadelphia	73.1	8.0	9	4	1	3	5	3	4	4	4	11,688	2.4	Yes	6	7	Yes	Yes
9	Northwestern Memorial Hospital, Chicago	72.5	3.1	10	4	2	5	3	2	4	3	4	5,274	1.8	Yes	6	7	Yes	Yes
10	Cedars-Sinai Medical Center, Los Angeles	71.9	6.0	9	4	4	4	2	2	4	3	4	7,863	2.5	Yes	6	7	Yes	Yes
11	NYU Langone Medical Center, New York	71.5	2.7	10	4	2	5	2	2	4	2	5	4,771	2.7	Yes	5	7	Yes	Yes
12	UCLA Medical Center, Los Angeles	70.6	3.5	9	5	5	4	5	4	4	2	5	4,774	3.1	Yes	6	7	Yes	Yes
13	St. Francis Hospital, Roslyn, N.Y.	69.9	1.9	10	3	1	4	4	3	2	1	5	10,690	1.9	Yes	5	7	Yes	Yes
14	Barnes-Jewish Hospital/Washington University, St. Louis	69.8	4.9	10	2	3	2	3	1	3	2	2	9,692	2.1	Yes	6	7	Yes	Yes
15	Emory University Hospital, Atlanta	68.9	5.9	9	5	5	4	5	5	2	1	5	5,625	1.9	Yes	6	7	No	Yes
16	Johns Hopkins Hospital, Baltimore	68.8	17.1	8	1	1	4	1	1	2	2	1	4,644	2.1	Yes	6	7	Yes	Yes
17	Texas Heart Institute at St. Luke's Episcopal Hospital, Houston	68.4	13.6	9	3	4	2	2	4	2	1	5	8,278	1.7	Yes	5	6	No	Yes
18	Stanford Health-Stanford Hospital, Stanford, Calif.	68.1	6.9	8	4	2	4	4	4	4	2	3	3,521	2.4	Yes	6	7	Yes	Yes
19	Scripps La Jolla Hospitals and Clinics, La Jolla, Calif.	68.0	2.4	9	5	4	4	2	5	5	3	3	5,555	3.0	Yes	5	7	Yes	Yes
20	St. Luke's Hospital, Kansas City, Mo.	67.8	1.9	9	5	5	3	5	5	5	4	5	5,251	1.7	Yes	6	7	Yes	Yes
21	Houston Methodist Hospital, Houston	67.3	4.5	10	4	4	4	2	2	4	1	5	8,303	1.8	Yes	6	7	No	Yes
22	Beaumont Hospital, Royal Oak, Mich.	65.6	1.8	9	3	2	4	3	2	4	2	4	10,680	1.8	Yes	5	7	Yes	Yes
23	Advocate Christ Medical Center, Oak Lawn, Ill.	64.2	0.6	9	4	3	2	2	4	4	4	5	8,231	2.2	Yes	5	7	Yes	Yes
24	UC San Diego Health	63.7	1.0	10	5	4	5	2	4	3	3	4	2,625	1.9	Yes	6	6	Yes	Yes
25	Kaiser Permanente Los Angeles Medical Center	63.6	1.3	9	5	4	3	5	4	5	2	3	5,775	5.2	No	5	7	No	Yes
26	University of Kansas Hospital, Kansas City	63.1	0.1	10	2	3	4	3	3	1	2	2	4,642	2.1	Yes	5	7	Yes	Yes
27	University of Washington Medical Center, Seattle	62.7	1.9	10	3	1	4	5	1	3	2	5	2,346	2.3	Yes	6	7	No	Yes
28	Mayo Clinic, Phoenix	62.6	1.3	10	5	3	5	4	3	5	3	5	2,573	4.2	No	6	7	No	Yes
29	University of California, Davis Medical Center, Sacramento	62.5	0.0	10	3	4	4	2	2	4	3	2	3,268	2.7	Yes	5	7	Yes	Yes
30	UPMC-University of Pittsburgh Medical Center	62.4	1.6	8	1	2	3	1	1	2	3	1	13,268	1.8	Yes	6	7	Yes	Yes
31	Ohio State University Wexner Medical Center, Columbus	62.1	1.4	10	1	3	1	2	1	2	1	2	8,108	2.1	Yes	6	7	Yes	Yes
31	Sentara Norfolk General Hospital-Sentara Heart Hospital, Norfolk, Va.	62.1	0.8	9	2	4	2	2	3	2	1	5	6,696	1.6	Yes	6	7	Yes	Yes
31	University of Michigan Hospitals and Health Centers, Ann Arbor	62.1	4.3	8	4	2	2	5	3	3	2	5	6,875	2.7	No	6	7	Yes	Yes
34	Vanderbilt University Medical Center, Nashville	61.8	1.6	9	3	2	4	2	3	2	3	5	6,504	2.1	Yes	6	7	Yes	Yes
35	Tampa General Hospital	61.7	0.1	10	1	3	2	2	1	1	2	1	5,775	2.2	Yes	6	7	Yes	Yes
36	Lehigh Valley Hospital, Allentown, Pa.	61.6	0.4	9	3	4	3	3	3	1	4	4	8,480	2.0	Yes	5	7	Yes	Yes
37	Minneapolis Heart Institute at Abbott Northwestern Hospital	60.6	0.8	9	4	5	4	3	2	4	2	3	7,497	2.2	Yes	6	7	No	Yes
38	University Hospitals Case Medical Center, Cleveland	60.1	0.6	9	3	2	4	2	1	4	3	4	5,103	2.3	Yes	5	7	Yes	Yes
39	MedStar Washington Hospital Center, Washington, D.C.	60.0	1.9	9	1	3	2	2	1	3	1	2	11,487	2.2	No	6	7	Yes	Yes
40	UCSF Medical Center, San Francisco	59.9	2.0	7	5	4	3	5	3	4	3	5	2,275	2.7	Yes	6	6	Yes	Yes
40	University of Colorado Hospital, Aurora	59.9	0.3	8	5	5	4	5	2	5	2	5	2,723	1.9	Yes	6	7	Yes	Yes
42	Hackensack University Medical Center, Hackensack, N.J.	59.7	0.1	8	4	3	5	4	3	4	3	3	6,473	2.5	Yes	5	7	Yes	Yes
42	UF Health Shands Hospital, Gainesville, Fla.	59.7	1.4	9	3	3	2	3	2	2	2	4	5,300	1.9	Yes	6	6	Yes	Yes
44	Florida Hospital Orlando	59.1	0.5	6	4	4	4	2	3	4	3	3	17,290	2.0	Yes	6	7	No	Yes
45	Kaiser Permanente San Francisco Medical Center	58.8	0.0	10	4	2	4	4	4	5	3	1	4,076	4.4	No	4	7	No	Yes
45	Morristown Medical Center, Morristown, N.J.	58.8	0.1	7	3	2	4	4	1	5	1	5	7,520	2.7	Yes	5	7	Yes	Yes
47	Aurora St. Luke's Medical Center, Milwaukee	58.6	0.1	9	2	2	4	2	2	2	3	2	10,988	1.5	Yes	6	7	No	Yes
47	IU Health Academic Health Center, Indianapolis	58.6	0.4	8	2	4	2	1	2	2	2	4	6,800	2.0	Yes	6	7	Yes	Yes
49	Loyola University Medical Center, Maywood, Ill.	58.5	0.7	8	3	2	4	2	3	2	2	5	4,132	1.7	Yes	6	7	Yes	Yes
49	Virginia Commonwealth University Medical Center, Richmond	58.5	0.1	9	1	1	1	4	2	2	2	2	4,342	2.2	Yes	6	6	Yes	Yes

Top 10

Top 20

Best Hospitals 2015-16: Diabetes & Endocrinology

Rank	Hospital	Overall Specialty Score	Reputation with specialists	Survival	Patient safety	Success in preventing pressure ulcers (skin breakdown due to lengthy bed rest, weight, dressings)	Success in preventing deaths from treatable complications after surgery	Success in preventing collapsed lung during biopsy, catheter insertion and other procedures	Success in preventing major bleeding and bruising after surgery	Success in preventing respiratory failure after surgery	Success in preventing surgical incisions from reopening afterwards	Success in preventing harm to patients during surgery	Patient volume	Nursing intensity	Nurse Magnet recognition	Advanced technologies	Patient services	Intensivist on staff
1	Mayo Clinic, Rochester, Minn.	100.0	57.8	10	5	4	5	5	3	5	3	5	829	2.6	Yes	4	8	Yes
2	Massachusetts General Hospital, Boston	86.4	38.3	8	5	5	5	5	1	5	2	2	759	2.4	Yes	4	8	Yes
3	Cleveland Clinic	83.8	28.4	9	3	1	4	4	2	3	3	2	1,277	2.3	Yes	4	8	Yes
4	UCSF Medical Center, San Francisco	73.1	13.2	8	5	4	3	5	3	4	3	5	349	2.7	Yes	4	8	Yes
5	Johns Hopkins Hospital, Baltimore	71.9	26.6	8	1	1	4	1	1	2	2	1	554	2.1	Yes	4	8	Yes
6	New York-Presbyterian University Hospital of Columbia and Cornell, N.Y.	69.3	8.5	9	3	3	4	3	2	4	2	3	1,624	2.1	No	4	8	Yes
7	Northwestern Memorial Hospital, Chicago	69.0	5.3	9	4	2	5	3	2	4	3	4	710	1.8	Yes	4	8	Yes
8	Yale-New Haven Hospital, New Haven, Conn.	67.9	7.8	8	2	3	4	1	1	3	2	2	1,438	1.5	Yes	4	8	Yes
9	Brigham and Women's Hospital, Boston	67.5	12.8	6	5	5	4	5	5	5	4	5	667	2.4	Yes	4	8	Yes
10	Hospitals of the University of Pennsylvania-Penn Presbyterian, Philadelphia	66.1	7.2	7	4	1	3	5	3	4	4	4	973	2.4	Yes	4	8	Yes
11	Cedars-Sinai Medical Center, Los Angeles	64.2	3.5	8	4	4	4	2	2	4	3	4	815	2.5	Yes	4	8	Yes
12	UCLA Medical Center, Los Angeles	63.5	7.4	7	5	5	4	5	4	4	2	5	517	3.1	Yes	4	8	Yes
13	Barnes-Jewish Hospital/Washington University, St. Louis	62.6	8.3	7	2	3	2	3	1	3	2	2	1,148	2.1	Yes	4	8	Yes
13	Scripps La Jolla Hospitals and Clinics, La Jolla, Calif.	62.6	0.1	9	5	4	4	2	5	5	3	3	394	3.0	Yes	4	8	Yes
13	Stanford Health-Stanford Hospital, Stanford, Calif.	62.6	2.5	9	4	2	4	4	4	4	2	3	385	2.4	Yes	4	8	Yes
16	Florida Hospital Orlando	62.2	0.0	7	4	4	4	4	2	3	4	3	1,762	2.0	Yes	4	8	Yes
17	Beaumont Hospital, Royal Oak, Mich.	61.8	0.4	9	3	2	4	3	2	4	2	4	1,177	1.8	Yes	4	8	Yes
18	Emory University Hospital, Atlanta	61.7	3.0	8	5	5	4	5	5	2	1	5	532	1.9	Yes	4	8	Yes
19	St. Luke's Episcopal Hospital, Houston	61.5	2.1	9	3	4	2	2	4	2	1	5	555	1.7	Yes	4	7	Yes
20	Duke University Hospital, Durham, N.C.	61.2	2.4	9	2	1	2	3	2	4	2	5	587	2.2	Yes	4	8	Yes
21	John Muir Medical Center, Concord, Calif.	61.1	0.0	10	4	2	2	3	5	5	4	2	306	2.6	Yes	4	7	Yes
21	Mount Sinai Hospital, New York	61.1	6.9	7	3	1	2	2	4	4	3	3	1,033	2.0	Yes	4	8	Yes
23	Houston Methodist Hospital, Houston	61.0	2.6	8	4	4	4	2	2	4	1	5	831	1.8	Yes	4	8	Yes
24	Ohio State University Wexner Medical Center, Columbus	60.8	1.3	9	1	3	1	2	1	2	1	2	949	2.1	Yes	4	8	Yes
25	NYU Langone Medical Center, New York	59.7	1.9	8	4	2	5	2	2	4	2	5	402	2.7	Yes	4	8	Yes
26	Christiana Care Hospital, Newark, Del.	59.2	0.0	8	3	2	2	2	3	4	3	4	1,212	2.0	Yes	4	8	Yes
26	University of Kansas Hospital, Kansas City	59.2	0.1	9	2	3	4	3	3	1	2	2	494	2.1	Yes	4	8	Yes
28	UF Health Shands Hospital, Gainesville, Fla.	59.0	0.0	9	3	3	2	3	2	2	2	4	560	1.9	Yes	4	8	Yes
29	University of Washington Medical Center, Seattle	58.7	5.3	7	3	1	4	5	1	3	2	5	364	2.3	Yes	4	8	Yes
30	University of Colorado Hospital, Aurora	58.2	3.0	7	5	5	4	5	2	5	2	5	472	1.9	Yes	4	8	Yes
31	UC San Diego Medical Center, Calif.	57.9	0.6	9	5	4	5	2	4	3	3	4	278	1.9	Yes	4	8	Yes
32	IU Health Academic Health Center, Indianapolis	57.5	0.2	8	2	4	2	1	2	2	2	4	959	2.0	Yes	4	8	Yes
32	Vanderbilt University Medical Center, Nashville	57.5	2.1	8	3	2	4	2	3	2	3	5	620	2.1	Yes	4	8	Yes
34	Froedtert Hospital and the Medical College of Wisconsin, Milwaukee	57.3	0.8	8	3	2	2	2	4	4	2	4	638	1.8	Yes	4	8	Yes
34	UR Medicine Strong Memorial Hospital, Rochester, N.Y.	57.3	1.7	8	2	2	1	1	3	4	4	2	615	1.9	Yes	4	8	Yes
36	University of Michigan Hospitals and Health Centers, Ann Arbor	57.2	3.0	8	4	2	2	5	3	3	2	5	654	2.7	No	4	8	Yes
37	Beth Israel Deaconess Medical Center, Boston	57.0	4.9	9	1	1	4	1	1	4	3	1	576	2.2	No	4	8	Yes
38	Baystate Medical Center, Springfield, Mass.	56.9	0.0	8	4	2	3	4	3	4	3	5	654	1.3	Yes	4	8	Yes
39	Banner Good Samaritan Medical Center, Phoenix	56.8	0.9	9	2	2	4	1	4	3	1	3	526	2.1	Yes	4	8	Yes
39	University of Virginia Medical Center, Charlottesville	56.8	8.7	7	3	3	2	1	3	4	2	4	600	2.1	No	4	7	Yes
41	Baylor University Medical Center, Dallas	56.7	0.9	8	1	1	1	1	2	3	3	1	985	1.8	Yes	4	8	Yes
42	Scripps Mercy Hospital, San Diego	56.6	0.0	9	3	3	2	4	3	2	2	5	862	2.3	No	4	8	Yes
43	Aurora St. Luke's Medical Center, Milwaukee	56.5	0.0	8	2	2	4	2	2	2	3	2	977	1.5	Yes	4	8	Yes
44	Lancaster General Hospital, Lancaster, Pa.	56.3	0.0	9	3	1	4	3	2	4	4	3	625	1.7	Yes	4	8	Yes
45	Lankenau Medical Center, Wynnwood, Pa.	56.2	0.0	9	4	3	2	3	3	4	3	3	348	1.6	Yes	4	8	Yes
46	Hillcrest Hospital, Cleveland	56.1	0.0	9	4	3	4	4	2	3	3	3	379	1.8	Yes	4	8	Yes
47	Kaiser Permanente Downey Medical Center, Downey, Calif.	55.9	0.0	9	5	4	4	3	3	4	4	3	418	5.3	No	3	8	Yes
47	Mayo Clinic, Phoenix	55.9	0.7	8	5	3	5	4	3	5	3	5	227	4.2	No	4	8	Yes
49	Christ Hospital, Cincinnati	55.8	0.7	8	2	4	3	3	3	2	1	1	545	1.8	Yes	4	8	Yes
49	Munson Medical Center, Traverse City, Mich.	55.8	0.0	9	2	1	2	3	1	4	2	3	338	1.8	Yes	4	8	Yes

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Best Hospitals 2015-16: Ear, Nose & Throat

Rank	Hospital	Overall Specialty Score	Reputation with specialists	Survival	Patient safety	Success in preventing pressure ulcers	Success in preventing deaths from treatable complications after surgery	Success in preventing collapsed lung during biopsy, catheter insertion and other procedures	Success in preventing major bleeding and bruising after surgery	Success in preventing respiratory failure after surgery	Success in preventing surgical incisions from reopening afterwards	Success in preventing harm to patients during surgery	Patient volume	Nursing intensity	Nurse Magnet recognition	Advanced technologies	Patient services	Trauma center	Intensivist on staff
1	Massachusetts Eye and Ear Infirmary, Massachusetts General Hospital, Boston	100.0	29.8	8	5	5	5	5	1	5	2	2	457	2.4	Yes	1	8	Yes	Yes
2	Mayo Clinic, Rochester, Minn.	97.9	16.6	10	5	4	5	5	3	5	3	5	361	2.6	Yes	1	8	Yes	Yes
3	Johns Hopkins Hospital, Baltimore	92.5	37.2	9	1	1	4	1	1	2	2	1	225	2.1	Yes	1	8	Yes	Yes
4	Hospitals of the University of Pennsylvania-Penn Presbyterian, Philadelphia	89.0	17.5	7	4	1	3	5	3	4	4	4	384	2.4	Yes	1	8	Yes	Yes
5	University of Texas MD Anderson Cancer Center, Houston	86.7	15.4	8	2	2	4	2	1	2	3	2	522	2.1	Yes	1	8	No	Yes
6	UPMC-University of Pittsburgh Medical Center	85.3	13.8	8	1	2	3	1	1	2	3	1	525	1.8	Yes	1	8	Yes	Yes
7	Cleveland Clinic	85.0	17.3	9	3	1	4	4	2	3	3	2	308	2.3	Yes	1	8	No	Yes
8	University of Iowa Hospitals and Clinics, Iowa City	83.9	17.1	8	4	2	3	5	2	2	4	4	197	1.8	Yes	1	8	Yes	Yes
9	Stanford Health-Stanford Hospital, Stanford, Calif.	83.2	10.0	8	4	2	4	4	4	4	2	3	246	2.4	Yes	1	8	Yes	Yes
9	UCLA Medical Center, Los Angeles	83.2	7.2	7	5	5	4	5	4	4	2	5	339	3.1	Yes	1	8	Yes	Yes
11	UCSF Medical Center, San Francisco	82.1	6.9	9	5	4	3	5	3	4	3	5	167	2.7	Yes	1	8	Yes	Yes
12	Barnes-Jewish Hospital/Washington University, St. Louis	81.4	9.9	8	2	3	2	3	1	3	2	2	377	2.1	Yes	1	8	Yes	Yes
13	University of Michigan Hospitals and Health Centers, Ann Arbor	81.0	13.5	7	4	2	2	5	3	3	2	5	430	2.7	No	1	8	Yes	Yes
14	Ohio State University Wexner Medical Center, Columbus	79.0	5.4	9	1	3	1	2	1	2	1	2	515	2.1	Yes	1	8	Yes	Yes
15	University of Washington Medical Center, Seattle	76.8	8.9	8	3	1	4	5	1	3	2	5	181	2.3	Yes	1	8	No	Yes
16	Vanderbilt University Medical Center, Nashville	76.7	10.8	5	3	2	4	2	3	2	3	5	345	2.1	Yes	1	8	Yes	Yes
17	NYU Langone Medical Center, New York	75.7	2.0	10	4	2	5	2	2	4	2	5	68	2.7	Yes	1	8	Yes	Yes
18	University of North Carolina Hospitals, Chapel Hill	75.2	5.3	9	1	1	2	1	2	1	1	4	284	1.8	Yes	1	8	Yes	Yes
19	Oregon Health and Science University Hospital, Portland	75.1	2.6	10	1	4	4	1	2	2	2	1	240	2.0	Yes	1	8	Yes	Yes
20	Mayo Clinic, Phoenix	74.4	0.8	10	5	3	5	4	3	5	3	5	213	4.2	No	1	8	No	Yes
21	University of Kansas Hospital, Kansas City	73.8	0.7	10	2	3	4	3	3	1	2	2	303	2.1	Yes	1	8	Yes	Yes
22	Northwestern Memorial Hospital, Chicago	73.6	2.1	10	4	2	5	3	2	4	3	4	128	1.8	Yes	1	8	Yes	Yes
23	Mount Sinai Hospital, New York	73.1	3.8	6	3	1	2	2	4	4	3	3	369	2.0	Yes	1	8	Yes	Yes
24	Ochsner Medical Center, New Orleans	72.6	0.1	10	3	3	2	4	3	4	2	3	163	2.0	Yes	1	8	Yes	Yes
24	University Hospitals Case Medical Center, Cleveland	72.6	2.9	7	3	2	4	2	1	4	3	4	339	2.3	Yes	1	8	Yes	Yes
26	University of Cincinnati Medical Center	72.2	4.6	10	2	2	4	2	2	2	3	1	292	1.9	No	1	8	Yes	Yes
27	Thomas Jefferson University Hospital, Philadelphia	71.9	1.3	8	2	1	4	3	1	3	4	4	386	2.3	Yes	1	8	Yes	Yes
28	University of California, Davis Medical Center, Sacramento	71.8	1.7	9	3	4	4	2	2	4	3	2	162	2.7	Yes	1	8	Yes	Yes
29	Cedars-Sinai Medical Center, Los Angeles	71.5	0.8	9	4	4	4	2	2	4	3	4	110	2.5	Yes	1	8	Yes	Yes
29	Wake Forest Baptist Medical Center, Winston-Salem, N.C.	71.5	1.8	8	3	2	3	4	4	2	3	2	324	1.5	Yes	1	8	Yes	Yes
31	Hillcrest Hospital, Cleveland	71.0	0.1	10	4	3	4	4	2	3	3	3	69	1.8	Yes	1	8	Yes	Yes
32	Medical University of South Carolina, Charleston	70.9	5.0	9	1	1	2	3	3	2	1	1	293	2.1	No	1	8	Yes	Yes
33	UC San Diego Health	70.6	1.2	8	5	4	5	2	4	3	3	4	116	1.9	Yes	1	8	Yes	Yes
34	Brigham and Women's Hospital, Boston	70.3	0.9	6	5	5	4	5	5	5	4	5	187	2.4	Yes	1	8	Yes	Yes
35	Loyola University Medical Center, Maywood, Ill.	69.5	3.3	7	3	2	4	2	3	2	2	5	200	1.7	Yes	1	8	Yes	Yes
35	St. Vincent Hospital and Health Center, Indianapolis	69.5	0.0	9	3	4	2	3	3	2	3	4	209	1.7	Yes	1	8	Yes	Yes
37	Scripps La Jolla Hospitals and Clinics, La Jolla, Calif.	69.4	0.0	8	5	4	4	2	5	5	3	3	52	3.0	Yes	1	8	Yes	Yes
38	St. Luke's Hospital, Kansas City, Mo.	69.3	0.0	8	5	5	3	5	5	5	4	5	41	1.7	Yes	1	8	Yes	Yes
39	Baptist Health Lexington, Lexington, Ky.	68.9	0.0	10	4	2	2	5	4	4	2	3	38	1.1	Yes	1	7	No	Yes
39	University of California, Irvine Medical Center, Orange	68.9	0.9	9	2	3	3	1	2	3	2	4	100	2.6	Yes	1	8	Yes	Yes
41	Sentara Norfolk General Hospital, Norfolk, Va.	68.6	0.8	9	2	4	2	2	3	2	1	5	213	1.6	Yes	1	8	Yes	Yes
42	New York Eye and Ear Infirmary, N.Y.	68.5	1.8	10	5	4	3	5	5	5	3	5	16	1.4	Yes	1	8	Yes	No
43	Memorial Sloan Kettering Cancer Center, New York	68.3	4.8	8	4	3	5	2	1	5	3	4	244	1.9	No	1	8	No	Yes
43	Yale-New Haven Hospital, New Haven, Conn.	68.3	1.5	7	2	3	4	1	1	3	2	2	361	1.5	Yes	1	8	Yes	Yes
45	Carolinas Medical Center, Charlotte, N.C.	68.1	0.0	9	3	4	2	2	2	3	3	5	176	1.9	Yes	1	8	Yes	Yes
45	Emory University Hospital, Atlanta	68.1	0.0	8	5	5	4	5	5	2	1	5	205	1.9	Yes	1	8	No	Yes
45	New York-Presbyterian University Hospital of Columbia and Cornell, N.Y.	68.1	2.8	8	3	3	4	3	2	4	2	3	284	2.1	No	1	8	Yes	Yes
48	Baystate Medical Center, Springfield, Mass.	68.0	0.0	10	4	2	3	4	3	4	3	5	56	1.3	Yes	1	8	Yes	Yes
49	Froedtert Hospital and the Medical College of Wisconsin, Milwaukee	67.8	1.1	8	3	2	2	2	4	4	2	4	167	1.8	Yes	1	8	Yes	Yes
49	University of Wisconsin Hospital and Clinics, Madison	67.8	1.7	7	2	2	5	2	2	4	1	2	219	1.9	Yes	1	8	Yes	Yes

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Best Hospitals 2015-16: Gastroenterology & GI Surgery

Rank	Hospital	Overall Specialty Score	Reputation with specialists	Survival	Patient safety	Success in preventing pressure ulcers	Success in preventing deaths from treatable complications after surgery	Success in preventing collapsed lung during biopsy, catheter insertion and other procedures	Success in preventing major bleeding and bruising after surgery	Success in preventing respiratory failure after surgery	Success in preventing surgical incisions from reopening afterwards	Success in preventing harm to patients during surgery	Patient volume	Nursing intensity	Nurse Magnet recognition	Advanced technologies	Patient services	Trauma center	Intensivist on staff
1	Mayo Clinic, Rochester, Minn.	100.0	56.3	10	5	4	5	5	3	5	3	5	7,404	2.6	Yes	7	8	Yes	Yes
2	Cleveland Clinic	84.4	34.9	10	3	1	4	4	2	3	3	2	7,391	2.3	Yes	7	8	No	Yes
3	Massachusetts General Hospital, Boston	76.3	17.8	7	5	5	5	5	1	5	2	2	5,266	2.4	Yes	7	8	Yes	Yes
4	UCLA Medical Center, Los Angeles	73.9	8.4	9	5	5	4	5	4	4	2	5	3,983	3.1	Yes	7	8	Yes	Yes
5	Johns Hopkins Hospital, Baltimore	72.7	24.0	8	1	1	4	1	1	2	2	1	3,596	2.1	Yes	7	8	Yes	Yes
6	Cedars-Sinai Medical Center, Los Angeles	70.5	7.3	8	4	4	4	2	2	4	3	4	5,711	2.5	Yes	7	8	Yes	Yes
7	UPMC-University of Pittsburgh Medical Center	70.0	11.1	7	1	2	3	1	1	2	3	1	9,935	1.8	Yes	7	8	Yes	Yes
8	Mount Sinai Hospital, New York	69.7	13.3	7	3	1	2	2	4	4	3	3	6,457	2.0	Yes	7	8	Yes	Yes
9	Mayo Clinic, Phoenix	68.9	4.9	10	5	3	5	4	3	5	3	5	2,383	4.2	No	7	8	No	Yes
10	Houston Methodist Hospital, Houston	68.3	2.7	10	4	4	4	2	2	4	1	5	5,158	1.8	Yes	7	8	No	Yes
11	New York-Presbyterian University Hospital of Columbia and Cornell, N.Y.	66.9	6.6	8	3	3	4	3	2	4	2	3	8,504	2.1	No	7	8	Yes	Yes
12	Brigham and Women's Hospital, Boston	66.8	4.1	7	5	5	4	5	5	4	5	4	4,648	2.4	Yes	6	8	Yes	Yes
13	Hospitals of the University of Pennsylvania-Penn Presbyterian, Philadelphia	66.7	9.8	6	4	1	3	5	3	4	4	4	4,239	2.4	Yes	7	8	Yes	Yes
13	Northwestern Memorial Hospital, Chicago	66.7	7.0	8	4	2	5	3	2	4	3	4	3,624	1.8	Yes	7	8	Yes	Yes
15	UCSF Medical Center, San Francisco	66.2	7.3	7	5	4	3	5	3	4	3	5	2,458	2.7	Yes	7	8	Yes	Yes
16	St. Francis Hospital, Roslyn, N.Y.	64.5	0.0	10	3	1	4	4	3	2	1	5	2,413	1.9	Yes	6	8	Yes	Yes
17	IU Health Academic Health Center, Indianapolis	64.3	2.5	9	2	4	2	1	2	2	2	4	6,483	2.0	Yes	7	8	Yes	Yes
18	Beaumont Hospital, Royal Oak, Mich.	63.9	0.5	9	3	2	4	3	2	4	2	4	6,633	1.8	Yes	7	8	Yes	Yes
19	NYU Langone Medical Center, New York	63.7	2.7	8	4	2	5	2	2	4	2	5	2,518	2.7	Yes	7	8	Yes	Yes
20	Barnes-Jewish Hospital/Washington University, St. Louis	63.2	6.1	7	2	3	2	3	1	3	2	2	6,839	2.1	Yes	7	8	Yes	Yes
21	St. Luke's Episcopal Hospital, Houston	63.0	4.4	9	3	4	2	2	4	2	1	5	4,189	1.7	Yes	7	7	No	Yes
22	Yale-New Haven Hospital, New Haven, Conn.	62.8	3.6	8	2	3	4	1	1	3	2	2	7,138	1.5	Yes	7	8	Yes	Yes
23	Stanford Health-Stanford Hospital, Stanford, Calif.	62.3	2.6	7	4	2	4	4	4	4	2	3	3,063	2.4	Yes	7	8	Yes	Yes
24	UC San Diego Health	62.2	2.1	8	5	4	5	2	4	3	3	4	2,090	1.9	Yes	7	8	Yes	Yes
25	University of Chicago Medical Center	61.9	9.1	8	3	4	3	3	1	3	2	5	2,711	2.4	No	7	8	Yes	Yes
26	Baylor University Medical Center, Dallas	61.8	3.3	8	1	1	1	1	2	3	3	1	4,983	1.8	Yes	7	8	Yes	Yes
27	University Hospitals Case Medical Center, Cleveland	61.7	2.4	8	3	2	4	2	1	4	3	4	3,592	2.3	Yes	7	8	Yes	Yes
27	University of Washington Medical Center, Seattle	61.7	2.8	9	3	1	4	5	1	3	2	5	1,990	2.3	Yes	7	8	No	Yes
29	Sanford USD Medical Center, Sioux Falls, S.D.	61.3	0.0	9	4	3	4	5	3	3	2	1	2,307	3.1	Yes	6	8	Yes	Yes
29	University of Wisconsin Hospital and Clinics, Madison	61.3	0.5	10	2	2	5	2	2	4	1	2	3,273	1.9	Yes	7	8	Yes	Yes
31	Ochsner Medical Center, New Orleans	61.2	0.9	8	3	3	2	4	3	4	2	3	4,801	2.0	Yes	7	8	Yes	Yes
32	University of Kansas Hospital, Kansas City	60.8	0.5	9	2	3	4	3	3	1	2	2	2,888	2.1	Yes	7	8	Yes	Yes
33	Florida Hospital Orlando	60.7	0.9	6	4	4	4	2	3	4	3	3	###	2.0	Yes	7	8	No	Yes
33	Lehigh Valley Hospital, Allentown, Pa.	60.7	0.0	9	3	4	3	3	3	1	4	4	4,602	2.0	Yes	6	8	Yes	Yes
35	Scripps La Jolla Hospitals and Clinics, La Jolla, Calif.	60.6	0.6	7	5	4	4	2	5	5	3	3	2,722	3.0	Yes	7	8	Yes	Yes
36	Thomas Jefferson University Hospital, Philadelphia	60.1	2.6	7	2	1	4	3	1	3	4	4	4,917	2.3	Yes	7	8	Yes	Yes
37	St. Luke's Hospital, Kansas City, Mo.	59.6	0.0	7	5	5	3	5	5	5	4	5	1,974	1.7	Yes	7	8	Yes	Yes
37	Wake Forest Baptist Medical Center, Winston-Salem, N.C.	59.6	2.3	9	3	2	3	4	4	2	3	2	4,366	1.5	Yes	6	8	Yes	Yes
39	Tampa General Hospital	59.5	1.5	9	1	3	2	2	1	1	2	1	3,853	2.2	Yes	7	8	Yes	Yes
40	Emory University Hospital, Atlanta	59.4	2.4	7	5	5	4	5	5	2	1	5	3,239	1.9	Yes	7	8	No	Yes
40	Mayo Clinic, Jacksonville, Fla.	59.4	4.1	10	5	3	4	4	2	5	4	5	2,452	2.1	No	7	8	No	Yes
42	University of Colorado Hospital, Aurora	59.2	1.4	7	5	5	4	5	2	5	2	5	1,942	1.9	Yes	7	8	Yes	Yes
43	Aurora St. Luke's Medical Center, Milwaukee	59.1	0.4	9	2	2	4	2	2	2	3	2	5,134	1.5	Yes	7	8	No	Yes
43	John Muir Medical Center, Walnut Creek, Calif.	59.1	0.1	9	2	3	2	2	5	2	2	1	2,042	2.9	Yes	6	8	Yes	Yes
45	Advocate Lutheran General Hospital, Park Ridge, Ill.	59.0	0.0	8	5	4	4	4	5	5	4	5	2,812	1.7	Yes	6	8	Yes	Yes
45	Lancaster General Hospital, Lancaster, Pa.	59.0	0.0	9	3	1	4	3	2	4	4	3	3,799	1.7	Yes	6	8	Yes	Yes
45	St. Alexius Medical Center, Hoffman Estates, Ill.	59.0	0.3	10	5	5	5	4	4	5	4	5	1,745	1.5	No	6	8	Yes	Yes
45	St. Cloud Hospital, St. Cloud, Minn.	59.0	0.0	9	3	4	4	1	3	4	3	2	2,828	2.0	Yes	6	8	Yes	Yes
49	Christ Hospital, Cincinnati	58.5	1.3	10	2	4	3	3	3	2	1	1	2,548	1.8	Yes	6	8	No	Yes
50	Akron General Medical Center, Ohio	58.4	0.0	10	3	3	5	3	3	1	4	2	2,640	1.3	Yes	6	8	Yes	Yes

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Best Hospitals 2015-16: Geriatrics

Rank	Hospital	Overall Specialty Score	Reputation with specialists	Survival	Patient safety	Success in preventing pressure ulcers	Success in preventing deaths from treatable complications after surgery	Success in preventing collapsed lung during biopsy, catheter insertion and other procedures	Success in preventing major bleeding and bruising after surgery	Success in preventing respiratory failure after surgery	Success in preventing surgical incisions from reopening afterwards	Success in preventing harm to patients during surgery	Patient volume	Nursing intensity	Nurse Magnet recognition	NIA-designated Alzheimer's center	Patient services	Intensivist on staff
1	Mayo Clinic, Rochester, Minn.	100.0	13.2	10	5	4	5	5	3	5	3	5	26,429	2.6	Yes	Yes	9	Yes
2	UCLA Medical Center, Los Angeles	98.3	21.1	8	5	5	4	5	4	4	2	5	15,363	3.1	Yes	Yes	9	Yes
3	Mount Sinai Hospital, New York	97.8	27.6	8	3	1	2	2	4	4	3	3	23,830	2.0	Yes	Yes	9	Yes
4	Massachusetts General Hospital, Boston	91.9	14.0	8	5	5	5	5	1	5	2	2	20,689	2.4	Yes	Yes	9	Yes
5	Johns Hopkins Hospital, Baltimore	88.9	25.0	9	1	1	4	1	1	2	2	1	7,602	2.1	Yes	Yes	9	Yes
6	NYU Langone Medical Center, New York	86.5	4.1	10	4	2	5	2	2	4	2	5	14,025	2.7	Yes	Yes	9	Yes
7	Hospital for Special Surgery, New York	86.3	0.4	10	5	3	5	5	5	5	2	5	4,453	3.2	Yes	No	9	Yes
8	New York-Presbyterian University Hospital of Columbia and Cornell, N.Y.	86.1	7.4	9	3	3	4	3	2	4	2	3	40,527	2.1	No	Yes	9	Yes
9	Brigham and Women's Hospital, Boston	84.1	3.0	9	5	5	4	5	5	5	4	5	14,829	2.4	Yes	Yes	9	Yes
10	Cleveland Clinic	80.9	11.8	10	3	1	4	4	2	3	3	2	20,343	2.3	Yes	No	9	Yes
11	UPMC-University of Pittsburgh Medical Center	79.2	7.5	7	1	2	3	1	1	2	3	1	29,888	1.8	Yes	Yes	9	Yes
12	Northwestern Memorial Hospital, Chicago	78.8	1.4	10	4	2	5	3	2	4	3	4	11,373	1.8	Yes	Yes	9	Yes
13	UCSF Medical Center, San Francisco	77.1	6.6	6	5	4	3	5	3	4	3	5	6,715	2.7	Yes	Yes	9	Yes
14	Hospitals of the University of Pennsylvania-Penn Presbyterian, Philadelphia	76.5	2.1	8	4	1	3	5	3	4	4	4	16,432	2.4	Yes	Yes	9	Yes
15	Rush University Medical Center, Chicago	75.5	3.2	10	1	1	3	1	1	3	4	2	8,548	2.2	Yes	Yes	9	Yes
16	Mayo Clinic, Phoenix	75.0	1.1	9	5	3	5	4	3	5	3	5	8,477	4.2	No	Yes	9	Yes
17	University of Kansas Hospital, Kansas City	74.2	0.6	10	2	3	4	3	3	1	2	2	7,874	2.1	Yes	Yes	9	Yes
18	UC San Diego Health	73.9	2.1	8	5	4	5	2	4	3	3	4	6,302	1.9	Yes	Yes	9	Yes
19	Barnes-Jewish Hospital/Washington University, St. Louis	73.8	1.9	8	2	3	2	3	1	3	2	2	16,358	2.1	Yes	Yes	9	Yes
20	Emory Wesley Woods Geriatric Hospital, Atlanta	73.1	1.8	7	5	5	4	5	5	2	1	5	10,864	1.9	Yes	Yes	8	Yes
21	IU Health Academic Health Center, Indianapolis	72.1	2.1	8	2	4	2	1	2	2	2	4	13,641	2.0	Yes	Yes	9	Yes
21	University of Washington Medical Center, Seattle	72.1	1.6	10	3	1	4	5	1	3	2	5	3,562	2.3	Yes	Yes	8	Yes
23	Beaumont Hospital, Royal Oak, Mich.	71.4	2.5	9	3	2	4	3	2	4	2	4	34,379	1.8	Yes	No	9	Yes
24	University of California, Davis Medical Center, Sacramento	71.0	0.1	8	3	4	4	2	2	4	3	2	6,546	2.7	Yes	Yes	9	Yes
25	Yale-New Haven Hospital, New Haven, Conn.	70.5	8.1	7	2	3	4	1	1	3	2	2	32,078	1.5	Yes	No	9	Yes
26	Cedars-Sinai Medical Center, Los Angeles	69.0	2.3	9	4	4	4	2	2	4	3	4	22,351	2.5	Yes	No	8	Yes
26	Houston Methodist Hospital, Houston	69.0	2.8	10	4	4	4	2	2	4	1	5	16,595	1.8	Yes	No	9	Yes
28	Florida Hospital Orlando	68.3	1.6	6	4	4	4	2	3	4	3	3	45,861	2.0	Yes	No	9	Yes
29	Banner Good Samaritan Medical Center, Phoenix	67.8	0.0	8	2	2	4	1	4	3	1	3	9,555	2.1	Yes	Yes	9	Yes
30	University of Wisconsin Hospital and Clinics, Madison	66.8	0.6	8	2	2	5	2	2	4	1	2	7,895	1.9	Yes	Yes	9	Yes
31	Lehigh Valley Hospital, Allentown, Pa.	65.1	0.6	9	3	4	3	3	3	1	4	4	24,669	2.0	Yes	No	9	Yes
31	Scripps La Jolla Hospitals and Clinics, La Jolla, Calif.	65.1	0.0	8	5	4	4	2	5	5	3	3	15,253	3.0	Yes	No	8	Yes
33	Duke University Hospital, Durham, N.C.	64.8	6.1	8	2	1	2	3	2	4	2	5	11,820	2.2	Yes	No	9	Yes
34	University Hospitals Case Medical Center, Cleveland	64.6	3.5	8	3	2	4	2	1	4	3	4	12,004	2.3	Yes	No	9	Yes
35	Kaiser Permanente Los Angeles Medical Center	63.7	1.0	9	5	4	3	5	4	5	2	3	8,987	5.2	No	No	8	Yes
36	Oregon Health and Science University Hospital, Portland	63.6	0.0	8	1	4	4	1	2	2	2	1	5,698	2.0	Yes	Yes	9	Yes
36	St. Francis Hospital, Roslyn, N.Y.	63.6	0.1	10	3	1	4	4	3	2	1	5	15,725	1.9	Yes	No	8	Yes
38	Banner-University Medical Center Tucson, Ariz.	63.0	0.0	7	3	4	3	2	2	5	3	1	6,548	1.9	Yes	Yes	7	Yes
38	Keck Medical Center of USC, Los Angeles	63.0	1.2	10	1	5	3	1	4	1	1	3	3,292	3.1	No	Yes	8	Yes
40	Abbott Northwestern Hospital, Minneapolis	62.3	0.0	9	4	5	4	3	2	4	2	3	15,992	2.2	Yes	No	9	Yes
41	Mayo Clinic, Jacksonville, Fla.	61.9	1.1	7	5	3	4	4	2	5	4	5	7,946	2.1	No	Yes	8	Yes
42	UT Southwestern Medical Center, Dallas	61.4	1.1	8	2	1	5	4	1	4	3	3	5,841	1.9	No	Yes	9	Yes
43	Stanford Health-Stanford Hospital, Stanford, Calif.	61.3	2.2	7	4	2	4	4	4	4	2	3	10,455	2.4	Yes	No	9	Yes
43	University of California, Irvine Medical Center, Orange	61.3	0.0	6	2	3	3	1	2	3	2	4	4,278	2.6	Yes	Yes	8	Yes
43	University of Colorado Hospital, Aurora	61.3	0.8	9	5	5	4	5	2	5	2	5	4,875	1.9	Yes	No	9	Yes
46	University of Michigan Hospitals and Health Centers, Ann Arbor	61.2	6.3	8	4	2	2	5	3	3	2	5	11,494	2.7	No	No	9	Yes
47	Aurora St. Luke's Medical Center, Milwaukee	60.6	0.0	9	2	2	4	2	2	2	3	2	24,591	1.5	Yes	No	8	Yes
48	Hackensack University Medical Center, Hackensack, N.J.	60.5	0.1	7	4	3	5	4	3	4	3	3	18,314	2.5	Yes	No	9	Yes
49	Bethesda North Hospital, Cincinnati	60.2	0.0	7	5	4	4	5	5	4	3	4	13,997	1.8	Yes	No	9	Yes
50	Christ Hospital, Cincinnati	60.0	0.7	9	2	4	3	3	3	2	1	1	12,381	1.8	Yes	No	9	Yes
50	Morristown Medical Center, Morristown, N.J.	60.0	0.0	7	3	2	4	4	1	5	1	5	18,340	2.7	Yes	No	9	Yes

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Best Hospitals 2015-16: Gynecology

Rank	Hospital	Overall Specialty Score	Reputation with specialists	Survival	Patient safety	Success in preventing pressure ulcers	Success in preventing deaths from treatable complications after surgery	Success in preventing collapsed lung during biopsy, catheter insertion and other procedures	Success in preventing major bleeding and bruising after surgery	Success in preventing respiratory failure after surgery	Success in preventing surgical incisions from reopening afterwards	Success in preventing harm to patients during surgery	Patient volume	Nursing intensity	Nurse Magnet recognition	Advanced technologies	Patient services	Intensivist on staff
1	Mayo Clinic, Rochester, Minn.	100.0	17.0	10	5	4	5	5	3	5	3	5	600	2.6	Yes	5	9	Yes
2	Brigham and Women's Hospital, Boston	93.5	11.6	10	5	5	4	5	5	5	4	5	439	2.4	Yes	5	9	Yes
3	Cleveland Clinic	91.3	15.2	10	3	1	4	4	2	3	3	2	372	2.3	Yes	5	9	Yes
4	Massachusetts General Hospital, Boston	88.3	7.9	10	5	5	5	5	1	5	2	2	388	2.4	Yes	5	9	Yes
5	Memorial Sloan Kettering Cancer Center, New York	84.6	8.0	10	4	3	5	2	1	5	3	4	548	1.9	No	5	8	Yes
6	UCSF Medical Center, San Francisco	83.5	5.7	10	5	4	3	5	3	4	3	5	175	2.7	Yes	5	9	Yes
7	University of Texas MD Anderson Cancer Center, Houston	81.9	12.6	8	2	2	4	2	1	2	3	2	366	2.1	Yes	5	9	Yes
8	UCLA Medical Center, Los Angeles	81.6	3.0	10	5	5	4	5	4	4	2	5	182	3.1	Yes	5	9	Yes
9	Magee-Womens Hospital of UPMC, Pittsburgh	80.2	8.4	10	1	2	4	1	1	3	1	1	723	1.5	No	5	9	Yes
10	Abbott Northwestern Hospital, Minneapolis	79.7	1.7	10	4	5	4	3	2	4	2	3	366	2.2	Yes	5	9	Yes
11	Stanford Health-Stanford Hospital, Stanford, Calif.	79.2	4.0	9	4	2	4	4	4	4	2	3	172	2.4	Yes	5	9	Yes
12	Johns Hopkins Hospital, Baltimore	79.1	11.9	9	1	1	4	1	1	2	2	1	170	2.1	Yes	5	9	Yes
13	Florida Hospital Orlando	78.4	2.3	7	4	4	4	2	3	4	3	3	718	2.0	Yes	5	9	Yes
14	Hospitals of the University of Pennsylvania-Penn Presbyterian, Philadelphia	78.2	4.1	9	4	1	3	5	3	4	4	4	246	2.4	Yes	5	9	Yes
14	Scripps La Jolla Hospitals and Clinics, La Jolla, Calif.	78.2	1.0	10	5	4	4	2	5	5	3	3	142	3.0	Yes	5	8	Yes
16	New York-Presbyterian University Hospital of Columbia and Cornell, N.Y.	77.7	7.6	9	3	3	4	3	2	4	2	3	379	2.1	No	5	9	Yes
17	Barnes-Jewish Hospital/Washington University, St. Louis	76.8	1.9	9	2	3	2	3	1	3	2	2	548	2.1	Yes	5	9	Yes
18	University of Wisconsin Hospital and Clinics, Madison	76.3	1.7	9	2	2	5	2	2	4	1	2	420	1.9	Yes	5	9	Yes
19	John Muir Medical Center, Walnut Creek, Calif.	76.1	0.9	10	2	3	2	2	5	2	2	1	195	2.9	Yes	5	8	Yes
19	St. Luke's Hospital, Kansas City, Mo.	76.1	0.7	9	5	5	3	5	5	5	4	5	260	1.7	Yes	5	8	Yes
21	University of Washington Medical Center, Seattle	75.8	1.4	9	3	1	4	5	1	3	2	5	276	2.3	Yes	5	9	Yes
22	St. Vincent Hospital and Health Center, Indianapolis	75.6	0.7	8	3	4	2	3	3	2	3	4	615	1.7	Yes	5	8	Yes
22	UR Medicine Strong Memorial Hospital, Rochester, N.Y.	75.6	0.7	10	2	2	1	1	3	4	4	2	42	1.9	Yes	5	9	Yes
22	University of Michigan Hospitals and Health Centers, Ann Arbor	75.6	3.6	10	4	2	2	5	3	3	2	5	261	2.7	No	5	9	Yes
25	University of North Carolina Hospitals, Chapel Hill	75.2	4.3	9	1	1	2	1	2	1	1	4	329	1.8	Yes	5	9	Yes
26	Emory University Hospital, Atlanta	75.1	1.6	9	5	5	4	5	5	2	1	5	138	1.9	Yes	5	9	Yes
27	Northwestern Memorial Hospital, Chicago	74.8	4.5	8	4	2	5	3	2	4	3	4	186	1.8	Yes	5	9	Yes
27	Yale-New Haven Hospital, New Haven, Conn.	74.8	1.6	9	2	3	4	1	1	3	2	2	540	1.5	Yes	5	9	Yes
29	University of Iowa Hospitals and Clinics, Iowa City	74.7	2.7	9	4	2	3	5	2	2	4	4	272	1.8	Yes	5	9	Yes
30	Inova Fairfax Hospital, Falls Church, Va.	74.1	2.6	10	1	3	2	1	1	2	2	3	282	1.9	Yes	5	9	Yes
31	Memorial Hermann-Texas Medical Center, Houston	74.0	1.7	10	3	4	2	2	2	2	2	5	85	2.3	Yes	5	8	Yes
31	University of Colorado Hospital, Aurora	74.0	0.0	9	5	5	4	5	2	5	2	5	203	1.9	Yes	5	9	Yes
33	Rush University Medical Center, Chicago	73.7	0.2	10	1	1	3	1	1	3	4	2	431	2.2	Yes	5	9	Yes
34	Christiana Care Hospital, Newark, Del.	73.6	0.8	9	3	2	2	2	3	4	3	4	344	2.0	Yes	5	8	Yes
35	Duke University Hospital, Durham, N.C.	73.5	4.3	8	2	1	2	3	2	4	2	5	218	2.2	Yes	5	9	Yes
35	Lehigh Valley Hospital, Allentown, Pa.	73.5	0.5	9	3	4	3	3	3	1	4	4	339	2.0	Yes	5	9	Yes
37	Advocate Christ Medical Center, Oak Lawn, Ill.	73.4	0.0	9	4	3	2	2	4	4	4	5	258	2.2	Yes	5	9	Yes
38	Mayo Clinic, Phoenix	73.2	1.7	9	5	3	5	4	3	5	3	5	95	4.2	No	5	8	Yes
38	University of California, Davis Medical Center, Sacramento	73.2	1.2	8	3	4	4	2	2	4	3	2	240	2.7	Yes	5	9	Yes
40	Beaumont Hospital, Royal Oak, Mich.	72.8	0.7	9	3	2	4	3	2	4	2	4	260	1.8	Yes	5	9	Yes
41	City of Hope, Duarte, Calif.	72.7	0.0	10	5	5	5	3	2	4	4	5	132	2.4	No	5	8	Yes
41	Northern Westchester Hospital, Mount Kisco, N.Y.	72.7	0.0	10	3	1	5	4	3	2	2	3	40	1.5	Yes	5	7	Yes
41	University of Kansas Hospital, Kansas City	72.7	0.1	9	2	3	4	3	3	1	2	2	353	2.1	Yes	5	9	Yes
44	UC San Diego Health	72.6	1.8	8	5	4	5	2	4	3	3	4	120	1.9	Yes	5	9	Yes
45	Houston Methodist Hospital, Houston	72.5	1.3	8	4	4	4	2	2	4	1	5	228	1.8	Yes	5	9	Yes
46	University of Alabama Hospital at Birmingham	72.3	2.2	8	1	1	1	2	2	3	3	4	507	1.9	Yes	5	8	Yes
47	California Pacific Medical Center, San Francisco	72.2	1.2	10	4	2	4	2	2	5	3	3	93	1.9	No	5	9	Yes
48	Good Samaritan Hospital, Cincinnati	72.1	0.9	9	4	2	4	4	2	4	4	2	137	1.6	Yes	5	9	Yes
49	Cedars-Sinai Medical Center, Los Angeles	72.0	1.6	7	4	4	4	2	2	4	3	4	286	2.5	Yes	5	9	Yes
50	Kaiser Permanente Sacramento Medical Center, Calif.	71.7	0.0	9	3	5	4	3	1	5	3	1	272	5.3	No	4	9	Yes

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Best Hospitals 2015-16: Nephrology

Rank	Hospital	Overall Specialty Score	Reputation with specialists	Survival	Patient safety	Success in preventing pressure ulcers	Success in preventing deaths from treatable complications after surgery	Success in preventing collapsed lung during biopsy, catheter insertion and other procedures	Success in preventing major bleeding and bruising after surgery	Success in preventing respiratory failure after surgery	Success in preventing surgical incisions from reopening afterwards	Success in preventing harm to patients during surgery	Patient volume	Nursing intensity	Nurse Magnet recognition	Advanced technologies	Patient services	Trauma center	Intensivist on staff
1	Mayo Clinic, Rochester, Minn.	100.0	34.7	10	5	4	5	5	3	5	3	5	2,260	2.6	Yes	7	8	Yes	Yes
2	Cleveland Clinic	93.8	30.5	10	3	1	4	4	2	3	3	2	2,855	2.3	Yes	7	8	No	Yes
3	New York-Presbyterian University Hospital of Columbia and Cornell, N.Y.	89.1	22.3	9	3	3	4	3	2	4	2	3	4,331	2.1	No	7	8	Yes	Yes
4	UCSF Medical Center, San Francisco	88.5	8.7	10	5	4	3	5	3	4	3	5	1,501	2.7	Yes	7	8	Yes	Yes
5	Brigham and Women's Hospital, Boston	84.4	19.9	7	5	5	4	5	5	5	4	5	1,270	2.4	Yes	7	8	Yes	Yes
6	Massachusetts General Hospital, Boston	84.3	19.8	8	5	5	5	5	1	5	2	2	1,536	2.4	Yes	7	8	Yes	Yes
7	UCLA Medical Center, Los Angeles	82.6	6.8	9	5	5	4	5	4	4	2	5	1,853	3.1	Yes	7	8	Yes	Yes
8	Vanderbilt University Medical Center, Nashville	81.7	12.3	9	3	2	4	2	3	2	3	5	1,863	2.1	Yes	7	8	Yes	Yes
9	Johns Hopkins Hospital, Baltimore	81.3	18.9	9	1	1	4	1	1	2	2	1	1,551	2.1	Yes	7	8	Yes	Yes
10	Barnes-Jewish Hospital/Washington University, St. Louis	80.8	10.5	9	2	3	2	3	1	3	2	2	2,998	2.1	Yes	7	8	Yes	Yes
11	University of Washington Medical Center, Seattle	80.0	6.4	10	3	1	4	5	1	3	2	5	837	2.3	Yes	7	8	No	Yes
12	University of Colorado Hospital, Aurora	79.5	3.7	10	5	5	4	5	2	5	2	5	974	1.9	Yes	7	8	Yes	Yes
13	UF Health Shands Hospital, Gainesville, Fla.	77.3	4.9	10	3	3	2	3	2	2	2	4	1,685	1.9	Yes	7	8	Yes	Yes
13	University of Wisconsin Hospital and Clinics, Madison	77.3	3.1	10	2	2	5	2	2	4	1	2	1,584	1.9	Yes	7	8	Yes	Yes
15	Northwestern Memorial Hospital, Chicago	76.3	2.4	10	4	2	5	3	2	4	3	4	1,885	1.8	Yes	7	8	Yes	Yes
15	University of California, Davis Medical Center, Sacramento	76.3	1.7	10	3	4	4	2	2	4	3	2	1,378	2.7	Yes	7	8	Yes	Yes
17	Duke University Hospital, Durham, N.C.	76.2	6.7	9	2	1	2	3	2	4	2	5	1,616	2.2	Yes	7	8	Yes	Yes
18	Wake Forest Baptist Medical Center, Winston-Salem, N.C.	75.3	3.7	9	3	2	3	4	4	2	3	2	3,028	1.5	Yes	7	8	Yes	Yes
19	Hospitals of the University of Pennsylvania-Penn Presbyterian, Philadelphia	74.9	6.5	8	4	1	3	5	3	4	4	4	1,835	2.4	Yes	7	8	Yes	Yes
20	UC San Diego Health	74.7	1.2	10	5	4	5	2	4	3	3	4	827	1.9	Yes	7	8	Yes	Yes
21	Cedars-Sinai Medical Center, Los Angeles	74.6	3.6	8	4	4	4	2	2	4	3	4	1,991	2.5	Yes	7	8	Yes	Yes
22	Mayo Clinic, Phoenix	74.5	1.4	10	5	3	5	4	3	5	3	5	1,184	4.2	No	7	8	No	Yes
23	Mount Sinai Hospital, New York	73.9	4.3	8	3	1	2	2	4	4	3	3	2,434	2.0	Yes	7	8	Yes	Yes
24	IU Health Academic Health Center, Indianapolis	73.2	2.2	9	2	4	2	1	2	2	2	4	2,635	2.0	Yes	7	8	Yes	Yes
25	University of Michigan Hospitals and Health Centers, Ann Arbor	73.0	4.5	9	4	2	2	5	3	3	2	5	2,037	2.7	No	7	8	Yes	Yes
26	Tampa General Hospital	72.5	0.5	10	1	3	2	2	1	1	2	1	1,856	2.2	Yes	7	8	Yes	Yes
27	Rush University Medical Center, Chicago	72.3	5.4	9	1	1	3	1	1	3	4	2	1,193	2.2	Yes	7	8	Yes	Yes
28	Houston Methodist Hospital, Houston	71.7	2.2	9	4	4	4	2	2	4	1	5	2,105	1.8	Yes	7	8	No	Yes
29	University of Alabama Hospital at Birmingham	71.1	3.4	9	1	1	1	2	2	3	3	4	2,320	1.9	Yes	7	7	Yes	Yes
30	Banner Good Samaritan Medical Center, Phoenix	70.9	0.6	10	2	2	4	1	4	3	1	3	1,385	2.1	Yes	7	8	Yes	Yes
31	Ohio State University Wexner Medical Center, Columbus	70.8	1.9	9	1	3	1	2	1	2	1	2	2,376	2.1	Yes	7	8	Yes	Yes
32	UPMC-University of Pittsburgh Medical Center	70.7	4.1	8	1	2	3	1	1	2	3	1	3,283	1.8	Yes	7	8	Yes	Yes
33	Stanford Health-Stanford Hospital, Stanford, Calif.	70.4	5.2	7	4	2	4	4	4	4	2	3	1,085	2.4	Yes	7	8	Yes	Yes
34	Memorial Hermann-Texas Medical Center, Houston	69.9	0.1	9	3	4	2	2	2	2	2	5	880	2.3	Yes	7	8	Yes	Yes
35	University of Maryland Medical Center, Baltimore	69.4	0.2	10	1	1	2	1	1	1	2	1	1,404	2.3	Yes	7	8	Yes	Yes
36	University Hospital, San Antonio	68.9	0.1	10	1	2	4	1	1	3	2	1	523	1.7	Yes	7	8	Yes	Yes
37	Beaumont Hospital, Royal Oak, Mich.	68.8	0.4	8	3	2	4	3	2	4	2	4	2,603	1.8	Yes	7	8	Yes	Yes
38	University of Kansas Hospital, Kansas City	68.4	0.1	9	2	3	4	3	3	1	2	2	1,655	2.1	Yes	7	8	Yes	Yes
39	UR Medicine Strong Memorial Hospital, Rochester, N.Y.	68.3	0.5	9	2	2	1	1	3	4	4	2	1,363	1.9	Yes	7	8	Yes	Yes
40	Ochsner Medical Center, New Orleans	68.2	0.1	8	3	3	2	4	3	4	2	3	2,191	2.0	Yes	7	8	Yes	Yes
41	Banner-University Medical Center Tucson, Ariz.	68.0	0.1	9	3	4	3	2	2	5	3	1	818	1.9	Yes	7	7	Yes	Yes
42	Emory University Hospital, Atlanta	67.9	3.8	7	5	5	4	5	5	2	1	5	1,772	1.9	Yes	7	8	No	Yes
43	Loyola University Medical Center, Maywood, Ill.	67.7	0.9	9	3	2	4	2	3	2	2	5	1,053	1.7	Yes	7	8	Yes	Yes
43	Nebraska Medical Center, Omaha	67.7	0.0	9	1	1	2	2	2	4	1	4	1,424	2.3	Yes	7	8	Yes	Yes
45	Florida Hospital Orlando	67.5	0.0	7	4	4	4	2	3	4	3	3	5,747	2.0	Yes	7	8	No	Yes
45	Froedtert Hospital and the Medical College of Wisconsin, Milwaukee	67.5	0.7	8	3	2	2	2	4	4	2	4	1,253	1.8	Yes	7	8	Yes	Yes
47	St. Luke's Hospital, Kansas City, Mo.	67.3	0.0	8	5	5	3	5	5	5	4	5	749	1.7	Yes	7	8	Yes	Yes
48	University Hospitals Case Medical Center, Cleveland	67.2	0.2	8	3	2	4	2	1	4	3	4	1,530	2.3	Yes	7	8	Yes	Yes
48	Virginia Commonwealth University Medical Center, Richmond	67.2	1.0	9	1	1	1	4	2	2	2	2	1,009	2.2	Yes	7	7	Yes	Yes
50	University of Chicago Medical Center	67.0	1.6	9	3	4	3	3	1	3	2	5	1,070	2.4	No	7	8	Yes	Yes

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Best Hospitals 2015-16: Neurology & Neurosurgery

Rank	Hospital	Overall Specialty Score	Reputation with specialists	Survival	Patient safety	Success in preventing pressure ulcers	Success in preventing deaths from treatable complications after surgery	Success in preventing collapsed lung during biopsy, catheter insertion and other procedures	Success in preventing major bleeding and bruising after surgery	Success in preventing respiratory failure after surgery	Success in preventing surgical incisions from reopening afterwards	Success in preventing harm to patients during surgery	Patient volume	Nursing intensity	Nurse Magnet recognition	NAEC-designated epilepsy center	NIA-designated Alzheimer's center	Advanced technologies	Key patient services	Trauma center	Intensivist on staff	Current AHA responder
1	Mayo Clinic, Rochester, Minn.	100.0	37.6	8	5	4	5	5	3	5	3	5	4,812	2.6	Yes	Yes	Yes	5	9	Yes	Yes	Yes
2	Massachusetts General Hospital, Boston	89.3	30.8	6	5	5	5	5	1	5	2	2	4,994	2.4	Yes	Yes	Yes	5	9	Yes	Yes	Yes
3	Johns Hopkins Hospital, Baltimore	88.9	35.8	8	1	1	4	1	1	2	2	1	2,744	2.1	Yes	Yes	Yes	5	9	Yes	Yes	Yes
4	UCSF Medical Center, San Francisco	87.0	28.1	6	5	4	3	5	3	4	3	5	2,400	2.7	Yes	Yes	Yes	5	9	Yes	Yes	Yes
5	New York-Presbyterian University Hospital of Columbia and Cornell, N.Y.	85.6	20.8	8	3	3	4	3	2	4	2	3	6,915	2.1	No	Yes	Yes	5	9	Yes	Yes	Yes
6	Brigham and Women's Hospital, Boston	80.6	9.1	7	5	5	4	5	5	5	4	5	3,502	2.4	Yes	Yes	Yes	5	9	Yes	Yes	Yes
7	UCLA Medical Center, Los Angeles	79.9	11.6	6	5	5	4	5	4	4	2	5	2,919	3.1	Yes	Yes	Yes	5	9	Yes	Yes	Yes
8	Cleveland Clinic	78.8	19.8	8	3	1	4	4	2	3	3	2	4,785	2.3	Yes	Yes	No	5	9	No	Yes	Yes
9	NYU Langone Medical Center, New York	77.6	5.8	9	4	2	5	2	2	4	2	5	1,855	2.7	Yes	Yes	Yes	5	9	Yes	Yes	Yes
10	Northwestern Memorial Hospital, Chicago	75.5	3.9	9	4	2	5	3	2	4	3	4	2,434	1.8	Yes	Yes	Yes	5	9	Yes	Yes	Yes
11	Barnes-Jewish Hospital/Washington University, St. Louis	74.2	9.1	7	2	3	2	3	1	3	2	2	5,115	2.1	Yes	Yes	Yes	5	9	Yes	Yes	Yes
12	Emory University Hospital, Atlanta	72.3	4.2	8	5	5	4	5	5	2	1	5	3,920	1.9	Yes	Yes	Yes	5	9	No	Yes	Yes
13	Hospitals of the University of Pennsylvania-Penn Presbyterian, Philadelphia	71.9	7.0	6	4	1	3	5	3	4	4	4	3,234	2.4	Yes	Yes	Yes	5	9	Yes	Yes	Yes
14	Mount Sinai Hospital, New York	71.2	5.1	7	3	1	2	2	4	4	3	3	3,108	2.0	Yes	Yes	Yes	5	9	Yes	Yes	Yes
15	Rush University Medical Center, Chicago	70.4	5.0	9	1	1	3	1	1	3	4	2	3,035	2.2	Yes	Yes	Yes	5	9	Yes	Yes	Yes
16	Houston Methodist Hospital, Houston	70.2	4.8	9	4	4	4	2	2	4	1	5	3,875	1.8	Yes	Yes	No	5	9	No	Yes	Yes
17	UPMC-University of Pittsburgh Medical Center	68.4	4.1	6	1	2	3	1	1	2	3	1	8,453	1.8	Yes	Yes	Yes	5	9	Yes	Yes	Yes
18	Cedars-Sinai Medical Center, Los Angeles	67.6	2.2	8	4	4	4	2	2	4	3	4	3,389	2.5	Yes	Yes	No	5	9	Yes	Yes	Yes
19	University of Kansas Hospital, Kansas City	65.9	0.7	8	2	3	4	3	3	1	2	2	2,105	2.1	Yes	Yes	Yes	5	9	Yes	Yes	Yes
20	IU Health Academic Health Center, Indianapolis	65.6	1.6	7	2	4	2	1	2	2	2	4	4,446	2.0	Yes	Yes	Yes	5	9	Yes	Yes	Yes
21	St. Joseph's Hospital and Medical Center, Phoenix	64.9	11.2	7	1	1	5	1	2	1	1	2	5,261	1.8	No	Yes	Yes	3	9	Yes	Yes	Yes
22	UC San Diego Health	63.5	0.7	6	5	4	5	2	4	3	3	4	1,475	1.9	Yes	Yes	Yes	5	9	Yes	Yes	Yes
23	Ochsner Medical Center, New Orleans	62.5	0.1	8	3	3	2	4	3	4	2	3	3,133	2.0	Yes	Yes	No	5	8	Yes	Yes	Yes
24	Stanford Health-Stanford Hospital, Stanford, Calif.	62.1	3.4	6	4	2	4	4	4	4	2	3	2,148	2.4	Yes	Yes	No	5	9	Yes	Yes	Yes
25	Beaumont Hospital, Royal Oak, Mich.	62.0	0.1	7	3	2	4	3	2	4	2	4	5,235	1.8	Yes	Yes	No	5	9	Yes	Yes	Yes
26	University of Colorado Hospital, Aurora	61.4	0.7	7	5	5	4	5	2	5	2	5	1,409	1.9	Yes	Yes	No	5	9	Yes	Yes	Yes
27	Duke University Hospital, Durham, N.C.	61.2	6.3	5	2	1	2	3	2	4	2	5	3,220	2.2	Yes	Yes	No	5	9	Yes	Yes	Yes
28	Hackensack University Medical Center, Hackensack, N.J.	60.9	0.9	6	4	3	5	4	3	4	3	3	2,839	2.5	Yes	Yes	No	5	9	Yes	Yes	Yes
29	University of Wisconsin Hospital and Clinics, Madison	60.8	1.1	7	2	2	5	2	2	4	1	2	2,408	1.9	Yes	Yes	Yes	5	9	Yes	Yes	Yes
30	Thomas Jefferson University Hospital, Philadelphia	60.6	3.0	6	2	1	4	3	1	3	4	4	5,168	2.3	Yes	Yes	No	5	9	Yes	Yes	Yes
31	Vanderbilt University Medical Center, Nashville	60.4	3.9	6	3	2	4	2	3	2	3	5	3,165	2.1	Yes	Yes	No	5	9	Yes	Yes	Yes
32	Mayo Clinic, Phoenix	60.3	2.8	5	5	3	5	4	3	5	3	5	1,438	4.2	No	Yes	Yes	5	9	No	Yes	Yes
33	University of Alabama Hospital at Birmingham	59.9	3.4	7	1	1	1	2	2	3	3	4	4,539	1.9	Yes	Yes	No	5	8	Yes	Yes	Yes
33	University of Iowa Hospitals and Clinics, Iowa City	59.9	2.4	7	4	2	3	5	2	2	4	4	3,304	1.8	Yes	Yes	No	5	9	Yes	Yes	Yes
35	University of Michigan Hospitals and Health Centers, Ann Arbor	59.8	3.8	6	4	2	2	5	3	3	2	5	2,609	2.7	No	Yes	No	5	9	Yes	Yes	Yes
36	Ohio State University Wexner Medical Center, Columbus	59.0	1.0	8	1	3	1	2	1	2	1	2	3,571	2.1	Yes	Yes	No	5	9	Yes	Yes	Yes
36	University of California, Davis Medical Center, Sacramento	59.0	0.1	6	3	4	4	2	2	4	3	2	1,521	2.7	Yes	Yes	Yes	5	9	Yes	Yes	Yes
38	Florida Hospital Orlando	58.8	0.0	6	4	4	4	2	3	4	3	3	7,939	2.0	Yes	Yes	No	5	9	No	Yes	Yes
38	Riverside Methodist Hospital-Ohio Health, Columbus	58.8	0.3	6	3	4	2	2	3	3	3	3	6,087	1.8	Yes	Yes	No	5	9	Yes	Yes	Yes
40	UF Health Shands Hospital, Gainesville, Fla.	58.7	3.1	6	3	3	2	3	2	2	2	4	3,952	1.9	Yes	Yes	No	5	9	Yes	Yes	Yes
41	UR Medicine Strong Memorial Hospital, Rochester, N.Y.	58.6	1.1	7	2	2	1	1	3	4	4	2	3,563	1.9	Yes	Yes	No	5	9	Yes	Yes	Yes
42	University Hospitals Case Medical Center, Cleveland	58.5	1.3	6	3	2	4	2	1	4	3	4	3,453	2.3	Yes	Yes	No	5	9	Yes	Yes	Yes
43	Baylor University Medical Center, Dallas	58.0	0.8	7	1	1	1	1	2	3	3	1	4,067	1.8	Yes	Yes	No	5	9	Yes	Yes	Yes
43	University of Chicago Medical Center	58.0	2.8	7	3	4	3	3	1	3	2	5	1,370	2.4	No	Yes	No	5	9	Yes	Yes	Yes
45	Harper University Hospital, Detroit	57.7	0.7	10	1	2	3	3	2	1	1	1	1,298	1.3	No	Yes	No	5	9	No	Yes	Yes
46	Abbott Northwestern Hospital, Minneapolis	57.6	0.4	7	4	5	4	3	2	4	2	3	2,886	2.2	Yes	Yes	No	5	9	No	Yes	Yes
46	Henry Ford Hospital, Detroit	57.6	1.9	8	2	3	3	2	2	4	1	2	3,464	1.8	No	Yes	No	5	9	Yes	Yes	Yes
46	Mayo Clinic, Jacksonville, Fla.	57.6	1.0	7	5	3	4	4	2	5	4	5	1,854	2.1	No	Yes	Yes	5	9	No	Yes	Yes
46	St. Luke's Episcopal Hospital, Houston	57.6	1.8	7	3	4	2	2	4	2	1	5	3,115	1.7	Yes	Yes	No	5	7	No	Yes	Yes
46	Wake Forest Baptist Medical Center, Winston-Salem, N.C.	57.6	0.6	7	3	2	3	4	4	2	3	2	3,972	1.5	Yes	Yes	No	5	9	Yes	Yes	Yes

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Best Hospitals 2015-16: Orthopedics

Rank	Hospital	Overall Specialty Score	Reputation with specialists	Survival	Patient safety	Success in preventing pressure ulcers	Success in preventing deaths from treatable complications after surgery	Success in preventing collapsed lung during biopsy, catheter insertion and other procedures	Success in preventing major bleeding and bruising after surgery	Success in preventing respiratory failure after surgery	Success in preventing surgical incisions from reopening afterwards	Success in preventing harm to patients during surgery	Patient volume	Nursing intensity	Nurse Magnet recognition	Advanced technologies	Patient services	Trauma center	Intensivist on staff
1	Hospital for Special Surgery, New York	100.0	40.3	10	5	3	5	5	5	5	2	5	9,952	3.2	Yes	2	7	Yes	Yes
2	Mayo Clinic, Rochester, Minn.	89.7	42.0	9	5	4	5	5	3	5	3	5	7,459	2.6	Yes	2	7	Yes	Yes
3	Cleveland Clinic	73.5	22.5	10	3	1	4	4	2	3	3	2	3,472	2.3	Yes	2	7	No	Yes
4	Massachusetts General Hospital, Boston	69.8	16.5	8	5	5	5	5	1	5	2	2	3,564	2.4	Yes	2	7	Yes	Yes
5	Hospital for Joint Diseases, NYU Langone Medical Center, New York	69.5	7.1	10	4	2	5	2	2	4	2	5	4,171	2.7	Yes	2	7	Yes	Yes
6	Rush University Medical Center, Chicago	68.7	12.4	10	1	1	3	1	1	3	4	2	3,030	2.2	Yes	2	7	Yes	Yes
7	Brigham and Women's Hospital, Boston	65.4	6.9	8	5	5	4	5	5	5	4	5	2,929	2.4	Yes	2	7	Yes	Yes
8	UCLA Medical Center, Los Angeles	64.6	4.3	9	5	5	4	5	4	4	2	5	2,358	3.1	Yes	2	7	Yes	Yes
9	Northwestern Memorial Hospital, Chicago	64.5	3.2	10	4	2	5	3	2	4	3	4	3,220	1.8	Yes	2	7	Yes	Yes
10	New England Baptist Hospital, Boston	63.5	1.7	10	5	5	5	5	5	5	4	5	3,990	4.4	No	2	5	No	Yes
10	UPMC-University of Pittsburgh Medical Center	63.5	9.3	8	1	2	3	1	1	2	3	1	6,683	1.8	Yes	2	7	Yes	Yes
12	Cedars-Sinai Medical Center, Los Angeles	62.9	2.7	9	4	4	4	2	2	4	3	4	4,535	2.5	Yes	2	7	Yes	Yes
13	UCSF Medical Center, San Francisco	62.3	3.4	9	5	4	3	5	3	4	3	5	2,447	2.7	Yes	2	7	Yes	Yes
14	Thomas Jefferson University Hospital, Philadelphia	60.8	3.4	9	2	1	4	3	1	3	4	4	4,839	2.3	Yes	2	7	Yes	Yes
15	University of California, Davis Medical Center, Sacramento	60.6	2.4	10	3	4	4	2	2	4	3	2	1,670	2.7	Yes	2	7	Yes	Yes
16	Beaumont Hospital, Royal Oak, Mich.	60.3	1.3	8	3	2	4	3	2	4	2	4	7,642	1.8	Yes	2	7	Yes	Yes
17	Barnes-Jewish Hospital/Washington University, St. Louis	60.2	7.3	8	2	3	2	3	1	3	2	2	3,986	2.1	Yes	2	7	Yes	Yes
17	University of Iowa Hospitals and Clinics, Iowa City	60.2	4.3	10	4	2	3	5	2	2	4	4	2,062	1.8	Yes	2	7	Yes	Yes
19	Abbott Northwestern Hospital, Minneapolis	60.0	0.9	10	4	5	4	3	2	4	2	3	4,962	2.2	Yes	2	7	No	Yes
20	Johns Hopkins Hospital, Baltimore	59.5	12.0	8	1	1	4	1	1	2	2	1	1,290	2.1	Yes	2	7	Yes	Yes
21	Stanford Health-Stanford Hospital, Stanford, Calif.	59.1	2.3	8	4	2	4	4	4	4	2	3	3,175	2.4	Yes	2	7	Yes	Yes
22	Houston Methodist Hospital, Houston	58.8	2.0	10	4	4	4	2	2	4	1	5	3,936	1.8	Yes	2	7	No	Yes
23	Scripps La Jolla Hospitals and Clinics, La Jolla, Calif.	58.6	0.8	8	5	4	4	2	5	5	3	3	3,221	3.0	Yes	2	7	Yes	Yes
24	Hospitals of the University of Pennsylvania-Penn Presbyterian, Philadelphia	57.8	3.4	8	4	1	3	5	3	4	4	4	2,343	2.4	Yes	2	7	Yes	Yes
25	Duke University Hospital, Durham, N.C.	57.3	7.1	7	2	1	2	3	2	4	2	5	3,254	2.2	Yes	2	7	Yes	Yes
25	University of Colorado Hospital, Aurora	57.3	1.2	9	5	5	4	5	2	5	2	5	1,282	1.9	Yes	2	7	Yes	Yes
27	University Hospitals Case Medical Center, Cleveland	56.5	2.2	8	3	2	4	2	1	4	3	4	2,129	2.3	Yes	2	7	Yes	Yes
27	University of Washington Medical Center, Seattle	56.5	3.6	10	3	1	4	5	1	3	2	5	1,124	2.3	Yes	1	7	No	Yes
29	Morristown Medical Center, Morristown, N.J.	56.3	0.1	8	3	2	4	4	1	5	1	5	3,643	2.7	Yes	2	7	Yes	Yes
30	Lehigh Valley Hospital, Allentown, Pa.	56.0	0.0	8	3	4	3	3	3	1	4	4	4,498	2.0	Yes	2	7	Yes	Yes
31	Emory University Hospital, Atlanta	55.8	0.5	9	5	5	4	5	5	2	1	5	2,565	1.9	Yes	2	6	No	Yes
31	UC San Diego Health	55.8	0.6	9	5	4	5	2	4	3	3	4	1,455	1.9	Yes	2	7	Yes	Yes
33	Mayo Clinic, Phoenix	55.2	1.0	10	5	3	5	4	3	5	3	5	2,033	4.2	No	2	7	No	Yes
34	University of Kansas Hospital, Kansas City	55.0	0.3	10	2	3	4	3	3	1	2	2	1,917	2.1	Yes	2	7	Yes	Yes
34	Virginia Commonwealth University Medical Center, Richmond	55.0	1.0	10	1	1	1	4	2	2	2	2	1,743	2.2	Yes	2	6	Yes	Yes
36	Cadence Health-Central DuPage Hospital, Winfield, Ill.	54.6	0.0	8	4	4	4	4	5	4	1	3	2,795	1.8	Yes	2	6	Yes	Yes
36	St. Cloud Hospital, St. Cloud, Minn.	54.6	0.0	9	3	4	4	1	3	4	3	2	2,920	2.0	Yes	2	6	Yes	Yes
38	University of Wisconsin Hospital and Clinics, Madison	54.3	0.9	9	2	2	5	2	2	4	1	2	1,945	1.9	Yes	2	7	Yes	Yes
39	Christ Hospital, Cincinnati	53.9	0.5	10	2	4	3	3	3	2	1	1	2,912	1.8	Yes	2	7	No	Yes
39	Lancaster General Hospital, Lancaster, Pa.	53.9	0.3	8	3	1	4	3	2	4	4	3	5,010	1.7	Yes	2	7	Yes	Yes
39	Tampa General Hospital	53.9	1.5	8	1	3	2	2	1	1	2	1	3,909	2.2	Yes	2	7	Yes	Yes
42	IU Health Academic Health Center, Indianapolis	53.7	0.4	9	2	4	2	1	2	2	2	4	2,532	2.0	Yes	2	7	Yes	Yes
43	New York-Presbyterian University Hospital of Columbia and Cornell, N.Y.	53.5	4.7	8	3	3	4	3	2	4	2	3	3,264	2.1	No	2	7	Yes	Yes
43	St. Francis Hospital, Roslyn, N.Y.	53.5	0.0	9	3	1	4	4	3	2	1	5	1,020	1.9	Yes	2	7	Yes	Yes
45	Ochsner Medical Center, New Orleans	53.4	0.1	8	3	3	2	4	3	4	2	3	2,780	2.0	Yes	2	7	Yes	Yes
46	John Muir Medical Center, Walnut Creek, Calif.	53.3	0.0	8	2	3	2	2	5	2	2	1	2,826	2.9	Yes	2	6	Yes	Yes
47	Hackensack University Medical Center, Hackensack, N.J.	52.5	0.1	7	4	3	5	4	3	4	3	3	2,793	2.5	Yes	2	7	Yes	Yes
47	Nebraska Orthopaedic Hospital, Omaha	52.5	0.5	10	5	5	5	5	5	5	3	4	1,064	2.8	No	2	4	No	No
49	Good Samaritan Hospital, Cincinnati	52.3	0.0	8	4	2	4	4	2	4	4	2	2,756	1.6	Yes	2	7	No	Yes
50	University of Alabama Hospital at Birmingham	52.2	0.9	9	1	1	1	2	2	3	3	4	2,437	1.9	Yes	2	6	Yes	Yes

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Best Hospitals 2015-16: Pulmonology

Rank	Hospital	Overall Specialty Score	Reputation with specialists	Survival	Patient safety	Success in preventing pressure ulcers	Success in preventing deaths from treatable complications after surgery	Success in preventing collapsed lung during biopsy, catheter insertion and other procedures	Success in preventing major bleeding and bruising after surgery	Success in preventing respiratory failure after surgery	Success in preventing surgical incisions from reopening afterwards	Success in preventing harm to patients during surgery	Patient volume	Nursing intensity	Nurse Magnet recognition	Advanced technologies	Patient services	Trauma center	Intensivist on staff
1	Mayo Clinic, Rochester, Minn.	100.0	40.5	9	5	4	5	5	3	5	3	5	7,863	2.6	Yes	6	8	Yes	Yes
2	National Jewish Health, Denver-University of Colorado Hospital, Aurora	96.0	53.2	9	5	5	4	5	2	5	2	5	2,850	1.9	Yes	6	8	Yes	Yes
3	Cleveland Clinic	84.1	26.8	9	3	1	4	4	2	3	3	2	6,227	2.3	Yes	6	8	No	Yes
4	Massachusetts General Hospital, Boston	80.3	14.8	7	5	5	5	5	1	5	2	2	6,199	2.4	Yes	6	8	Yes	Yes
5	Brigham and Women's Hospital, Boston	77.1	6.9	8	5	5	4	5	5	5	4	5	5,326	2.4	Yes	6	8	Yes	Yes
6	UC San Diego Health	75.4	7.0	9	5	4	5	2	4	3	3	4	3,028	1.9	Yes	6	8	Yes	Yes
7	Duke University Hospital, Durham, N.C.	74.2	11.9	7	2	1	2	3	2	4	2	5	5,865	2.2	Yes	6	8	Yes	Yes
8	Barnes-Jewish Hospital/Washington University, St. Louis	72.9	9.5	7	2	3	2	3	1	3	2	2	6,323	2.1	Yes	6	8	Yes	Yes
9	UCLA Medical Center, Los Angeles	72.8	5.1	7	5	5	4	5	4	4	2	5	5,341	3.1	Yes	6	8	Yes	Yes
10	Hospitals of the University of Pennsylvania-Penn Presbyterian, Philadelphia	72.6	10.5	6	4	1	3	5	3	4	4	4	5,945	2.4	Yes	6	8	Yes	Yes
11	UPMC-University of Pittsburgh Medical Center	71.8	9.6	7	1	2	3	1	1	2	3	1	10,536	1.8	Yes	6	8	Yes	Yes
12	New York-Presbyterian University Hospital of Columbia and Cornell, N.Y.	71.3	9.2	7	3	3	4	3	2	4	2	3	10,954	2.1	No	6	8	Yes	Yes
13	Johns Hopkins Hospital, Baltimore	70.1	20.3	6	1	1	4	1	1	2	2	1	2,833	2.1	Yes	6	8	Yes	Yes
14	IU Health Academic Health Center, Indianapolis	69.2	0.3	10	2	4	2	1	2	2	2	4	7,401	2.0	Yes	6	8	Yes	Yes
15	University of Michigan Hospitals and Health Centers, Ann Arbor	68.2	7.7	7	4	2	2	5	3	3	2	5	4,977	2.7	No	6	8	Yes	Yes
16	Vanderbilt University Medical Center, Nashville	68.0	5.1	7	3	2	4	2	3	2	3	5	4,236	2.1	Yes	6	8	Yes	Yes
17	Houston Methodist Hospital, Houston	67.7	1.8	9	4	4	4	2	2	4	1	5	5,739	1.8	Yes	6	8	No	Yes
17	UCSF Medical Center, San Francisco	67.7	10.2	4	5	4	3	5	3	4	3	5	2,562	2.7	Yes	6	8	Yes	Yes
17	University of Kansas Hospital, Kansas City	67.7	1.2	10	2	3	4	3	3	1	2	2	3,883	2.1	Yes	5	8	Yes	Yes
20	University of Washington Medical Center, Seattle	67.2	7.5	8	3	1	4	5	1	3	2	5	1,827	2.3	Yes	6	8	No	Yes
21	Yale-New Haven Hospital, New Haven, Conn.	67.1	1.4	8	2	3	4	1	1	3	2	2	11,599	1.5	Yes	5	8	Yes	Yes
22	Beaumont Hospital, Royal Oak, Mich.	67.0	0.5	8	3	2	4	3	2	4	2	4	10,023	1.8	Yes	5	8	Yes	Yes
22	Scripps La Jolla Hospitals and Clinics, La Jolla, Calif.	67.0	0.1	8	5	4	4	2	5	5	3	3	4,453	3.0	Yes	5	8	Yes	Yes
24	Northwestern Memorial Hospital, Chicago	66.9	1.8	9	4	2	5	3	2	4	3	4	4,083	1.8	Yes	5	8	Yes	Yes
24	University of California, Davis Medical Center, Sacramento	66.9	0.1	10	3	4	4	2	2	4	3	2	3,731	2.7	Yes	5	8	Yes	Yes
26	Froedtert Hospital and the Medical College of Wisconsin, Milwaukee	66.2	0.3	9	3	2	2	2	4	4	2	4	4,226	1.8	Yes	6	8	Yes	Yes
27	NYU Langone Medical Center, New York	65.5	1.5	8	4	2	5	2	2	4	2	5	3,238	2.7	Yes	5	8	Yes	Yes
27	Spectrum Health, Grand Rapids, Mich.	65.5	0.0	7	4	4	4	4	2	4	2	2	9,560	1.6	Yes	6	8	Yes	Yes
29	UF Health Shands Hospital, Gainesville, Fla.	65.3	1.7	8	3	3	2	3	2	2	2	4	4,944	1.9	Yes	6	8	Yes	Yes
30	Lehigh Valley Hospital, Allentown, Pa.	65.2	0.1	8	3	4	3	3	3	1	4	4	7,308	2.0	Yes	5	8	Yes	Yes
31	Akron General Medical Center, Ohio	65.1	0.4	9	3	3	5	3	3	1	4	2	5,797	1.3	Yes	5	8	Yes	Yes
31	University of Wisconsin Hospital and Clinics, Madison	65.1	1.1	9	2	2	5	2	2	4	1	2	3,692	1.9	Yes	6	8	Yes	Yes
33	Stanford Health-Stanford Hospital, Stanford, Calif.	64.8	5.1	5	4	2	4	4	4	4	2	3	3,321	2.4	Yes	6	8	Yes	Yes
34	Bethesda North Hospital, Cincinnati	64.7	0.0	8	5	4	4	5	5	4	3	4	5,561	1.8	Yes	5	8	Yes	Yes
34	University of North Carolina Hospitals, Chapel Hill	64.7	2.1	9	1	1	2	1	2	1	1	4	4,177	1.8	Yes	6	8	Yes	Yes
34	University of Tennessee Medical Center, Knoxville	64.7	0.1	9	4	2	2	5	4	4	2	3	5,960	1.5	Yes	5	8	Yes	Yes
37	Wake Forest Baptist Medical Center, Winston-Salem, N.C.	64.6	1.3	9	3	2	3	4	4	2	3	2	6,512	1.5	Yes	5	8	Yes	Yes
38	Cedars-Sinai Medical Center, Los Angeles	63.9	1.2	6	4	4	4	2	2	4	3	4	6,359	2.5	Yes	6	8	Yes	Yes
39	Christiana Care Hospital, Newark, Del.	63.1	0.0	7	3	2	2	2	3	4	3	4	9,227	2.0	Yes	5	8	Yes	Yes
40	Mayo Clinic, Phoenix	62.9	1.6	9	5	3	5	4	3	5	3	5	3,028	4.2	No	5	8	No	Yes
40	Ochsner Medical Center, New Orleans	62.9	0.1	7	3	3	2	4	3	4	2	3	6,437	2.0	Yes	6	8	Yes	Yes
42	Florida Hospital Orlando	62.7	0.8	5	4	4	4	2	3	4	3	3	14,385	2.0	Yes	6	8	No	Yes
42	St. Luke's Hospital, Kansas City, Mo.	62.7	0.0	7	5	5	3	5	5	5	4	5	2,916	1.7	Yes	5	8	Yes	Yes
42	Tampa General Hospital	62.7	2.1	8	1	3	2	2	1	1	2	1	3,755	2.2	Yes	6	8	Yes	Yes
45	Miami Valley Hospital, Dayton, Ohio	62.6	0.0	9	1	2	3	2	1	1	1	1	7,336	2.2	Yes	5	8	Yes	Yes
45	Morristown Medical Center, Morristown, N.J.	62.6	0.7	7	3	2	4	4	1	5	1	5	5,821	2.7	Yes	5	8	Yes	Yes
47	Advocate Christ Medical Center, Oak Lawn, Ill.	62.2	0.3	6	4	3	2	2	4	4	4	5	6,559	2.2	Yes	5	8	Yes	Yes
47	Fairview Hospital, Cleveland	62.2	0.0	8	3	2	4	3	4	3	2	3	3,683	1.7	Yes	5	8	Yes	Yes
49	Banner-University Medical Center Tucson, Ariz.	62.1	0.0	9	3	4	3	2	2	5	3	1	3,182	1.9	Yes	5	7	Yes	Yes
50	Mercy Health St. Mary's Hospital, Grand Rapids, Mich.	62.0	0.0	10	1	1	4	5	2	2	4	1	4,219	1.1	Yes	5	8	Yes	Yes

Top 10

Top 20

Best Hospitals 2015-16: Urology

Best Hospitals 2015-16: Urology																				
Rank	Hospital	Overall Specialty Score	Reputation with specialists	Survival	Patient safety	Success in preventing pressure ulcers	Success in preventing deaths from treatable complications after surgery	Success in preventing collapsed lung during biopsy, catheter insertion and other procedures	Success in preventing major bleeding and bruising after surgery	Success in preventing respiratory failure after surgery	Success in preventing surgical incisions from reopening afterwards	Success in preventing harm to patients during surgery	Patient volume	Nursing intensity	Nurse Magnet recognition	Advanced technologies	Patient services	Trauma center	Intensivist on staff	
1	Mayo Clinic, Rochester, Minn.	100.0	26.9	9	5	4	5	5	3	5	3	5	1,205	2.6	Yes	6	9	Yes	Yes	
2	Cleveland Clinic	99.4	52.3	9	3	1	4	4	2	3	3	2	1,207	2.3	Yes	6	9	No	Yes	
3	UCLA Medical Center, Los Angeles	96.0	19.2	9	5	5	4	5	4	4	2	5	1,019	3.1	Yes	6	9	Yes	Yes	
4	Johns Hopkins Hospital, Baltimore	90.7	40.7	7	1	1	4	1	1	2	2	1	887	2.1	Yes	6	9	Yes	Yes	
5	UCSF Medical Center, San Francisco	83.9	8.9	8	5	4	3	5	3	4	3	5	839	2.7	Yes	6	9	Yes	Yes	
6	New York-Presbyterian University Hospital of Columbia and Cornell, N.Y.	83.7	10.6	9	3	3	4	3	2	4	2	3	1,944	2.1	No	6	9	Yes	Yes	
7	Vanderbilt University Medical Center, Nashville	82.8	10.6	8	3	2	4	2	3	2	3	5	1,043	2.1	Yes	6	9	Yes	Yes	
8	Northwestern Memorial Hospital, Chicago	81.5	5.2	10	4	2	5	3	2	4	3	4	641	1.8	Yes	6	9	Yes	Yes	
9	Duke University Hospital, Durham, N.C.	81.4	13.5	8	2	1	2	3	2	4	2	5	830	2.2	Yes	6	9	Yes	Yes	
10	University of Michigan Hospitals and Health Centers, Ann Arbor	80.3	8.4	9	4	2	2	5	3	3	2	5	1,200	2.7	No	6	9	Yes	Yes	
11	Barnes-Jewish Hospital/Washington University, St. Louis	78.7	5.9	9	2	3	2	3	1	3	2	2	1,154	2.1	Yes	6	9	Yes	Yes	
12	Hospitals of the University of Pennsylvania-Penn Presbyterian, Philadelphia	77.1	4.5	8	4	1	3	5	3	4	4	4	863	2.4	Yes	6	9	Yes	Yes	
13	NYU Langone Medical Center, New York	76.8	5.3	9	4	2	5	2	2	4	2	5	345	2.7	Yes	6	9	Yes	Yes	
14	Brigham and Women's Hospital, Boston	76.2	3.8	7	5	5	4	5	5	5	4	5	589	2.4	Yes	6	9	Yes	Yes	
15	Memorial Sloan Kettering Cancer Center, New York	75.9	10.8	10	4	3	5	2	1	5	3	4	995	1.9	No	6	8	No	Yes	
16	Massachusetts General Hospital, Boston	75.0	6.5	6	5	5	5	5	1	5	2	2	711	2.4	Yes	6	9	Yes	Yes	
17	IU Health Academic Health Center, Indianapolis	74.9	5.0	7	2	4	2	1	2	2	2	4	1,264	2.0	Yes	6	9	Yes	Yes	
18	Stanford Health-Stanford Hospital, Stanford, Calif.	74.7	3.7	8	4	2	4	4	4	4	2	3	464	2.4	Yes	6	9	Yes	Yes	
19	Houston Methodist Hospital, Houston	74.4	4.7	9	4	4	4	2	2	4	1	5	780	1.8	Yes	6	9	No	Yes	
20	University of Wisconsin Hospital and Clinics, Madison	73.6	0.9	10	2	2	5	2	2	4	1	2	867	1.9	Yes	6	9	Yes	Yes	
21	Florida Hospital Orlando	73.0	1.3	7	4	4	4	2	3	4	3	3	1,957	2.0	Yes	6	9	No	Yes	
22	Emory University Hospital, Atlanta	72.9	1.3	9	5	5	4	5	5	2	1	5	998	1.9	Yes	6	9	No	Yes	
23	Cedars-Sinai Medical Center, Los Angeles	72.7	1.8	8	4	4	4	2	2	4	3	4	961	2.5	Yes	6	9	Yes	Yes	
23	University of Washington Medical Center, Seattle	72.7	5.5	9	3	1	4	5	1	3	2	5	550	2.3	Yes	6	9	No	Yes	
25	UC San Diego Health	72.4	1.2	9	5	4	5	2	4	3	3	4	377	1.9	Yes	6	9	Yes	Yes	
26	Mount Sinai Hospital, New York	71.8	1.4	8	3	1	2	2	4	4	3	3	1,002	2.0	Yes	6	9	Yes	Yes	
27	St. Luke's Hospital, Kansas City, Mo.	71.4	0.0	9	5	5	3	5	5	5	4	5	289	1.7	Yes	6	8	Yes	Yes	
28	Wake Forest Baptist Medical Center, Winston-Salem, N.C.	71.3	1.8	8	3	2	3	4	4	2	3	2	1,021	1.5	Yes	6	9	Yes	Yes	
29	Tampa General Hospital	71.0	0.1	10	1	3	2	2	1	1	2	1	871	2.2	Yes	6	9	Yes	Yes	
30	University of Colorado Hospital, Aurora	70.6	0.6	8	5	5	4	5	2	5	2	5	487	1.9	Yes	6	9	Yes	Yes	
31	Keck Medical Center of USC, Los Angeles	70.5	7.8	9	1	5	3	1	4	1	1	3	799	3.1	No	6	8	No	Yes	
32	UPMC-University of Pittsburgh Medical Center	70.4	2.3	8	1	2	3	1	1	2	3	1	1,209	1.8	Yes	6	9	Yes	Yes	
33	University Hospitals Case Medical Center, Cleveland	70.0	0.6	9	3	2	4	2	1	4	3	4	547	2.3	Yes	6	9	Yes	Yes	
34	Ohio State University Wexner Medical Center, Columbus	69.9	1.3	8	1	3	1	2	1	2	1	2	1,314	2.1	Yes	6	9	Yes	Yes	
35	Mayo Clinic, Phoenix	69.8	1.3	10	5	3	5	4	3	5	3	5	564	4.2	No	6	8	No	Yes	
36	Rush University Medical Center, Chicago	69.5	0.5	10	1	1	3	1	1	3	4	2	586	2.2	Yes	6	9	Yes	Yes	
37	UF Health Shands Hospital, Gainesville, Fla.	69.4	0.3	9	3	3	2	3	2	2	2	4	905	1.9	Yes	6	9	Yes	Yes	
38	Memorial Hermann-Texas Medical Center, Houston	69.3	1.0	9	3	4	2	2	2	2	2	5	349	2.3	Yes	6	8	Yes	Yes	
38	University of Kansas Hospital, Kansas City	69.3	2.2	8	2	3	4	3	3	1	2	2	599	2.1	Yes	6	9	Yes	Yes	
40	University of California, Davis Medical Center, Sacramento	68.8	0.9	8	3	4	4	2	2	4	3	2	511	2.7	Yes	6	9	Yes	Yes	
40	University of Iowa Hospitals and Clinics, Iowa City	68.8	2.3	8	4	2	3	5	2	2	4	4	456	1.8	Yes	6	9	Yes	Yes	
42	Hackensack University Medical Center, Hackensack, N.J.	68.5	0.8	7	4	3	5	4	3	4	3	3	677	2.5	Yes	6	9	Yes	Yes	
42	Sanford USD Medical Center, Sioux Falls, S.D.	68.5	0.0	8	4	3	4	5	3	3	2	1	228	3.1	Yes	6	9	Yes	Yes	
44	Nebraska Medical Center, Omaha	68.4	0.0	10	1	1	2	2	2	4	1	4	494	2.3	Yes	6	8	Yes	Yes	
44	Thomas Jefferson University Hospital, Philadelphia	68.4	0.9	8	2	1	4	3	1	3	4	4	728	2.3	Yes	6	9	Yes	Yes	
46	Avera McKennan Hospital and University Health Center, Sioux Falls, S.D.	67.9	0.0	10	4	4	4	4	3	4	2	4	310	1.6	Yes	6	8	Yes	Yes	
47	Loyola University Medical Center, Maywood, Ill.	67.5	2.3	8	3	2	4	2	3	2	2	5	601	1.7	Yes	6	8	Yes	Yes	
47	University of Alabama Hospital at Birmingham	67.5	0.9	9	1	1	1	2	2	3	3	4	905	1.9	Yes	6	8	Yes	Yes	
49	Banner Good Samaritan Medical Center, Phoenix	67.4	0.0	10	2	2	4	1	4	3	1	3	412	2.1	Yes	6	9	Yes	Yes	
49	Carolinas Medical Center, Charlotte, N.C.	67.4	0.1	8	3	4	2	2	2	2	3	5	680	1.9	Yes	6	9	Yes	Yes	
49	Lehigh Valley Hospital, Allentown, Pa.	67.4	0.3	8	3	4	3	3	3	1	4	4	758	2.0	Yes	6	9	Yes	Yes	
49	University of North Carolina Hospitals, Chapel Hill	67.4	0.8	9	1	1	2	1	2	1	1	4	830	1.8	Yes	6	9	Yes	Yes	

Top 10

Top 20

Appendix E

2015-16 Best Hospitals Rankings, Reputation-Only

Specialties

Best Hospitals 2015-16: Ophthalmology

Rank	Hospital	Reputation (%)	
1	Bascom Palmer Eye Institute-Anne Bates Leach Eye Hospital, Miami	66.7	
2	Wills Eye Hospital, Thomas Jefferson University Hospital, Philadelphia	58.5	
3	Wilmer Eye Institute, Johns Hopkins Hospital, Baltimore	56.3	
4	Massachusetts Eye and Ear Infirmary, Massachusetts General Hospital, Boston	32.5	
5	Stein and Doheny Eye Institutes, UCLA Medical Center, Los Angeles	27.6	Top 5
6	Cleveland Clinic	13.5	
7	University of Iowa Hospitals and Clinics, Iowa City	12.4	
8	Duke University Hospital, Durham, N.C.	12.2	
9	USC Eye Institute-Keck Medical Center of USC, Los Angeles	9.1	
10	W.K. Kellogg Eye Center, University of Michigan, Ann Arbor	8.3	Top 10
11	New York Eye and Ear Infirmary, N.Y.	7.8	
12	Emory University Hospital, Atlanta	5.4	
13	Barnes-Jewish Hospital/Washington University, St. Louis	5.3	

Best Hospitals 2015-16: Psychiatry

Rank Hospital		Reputation (%)	
1	New York-Presbyterian University Hospital of Columbia and Cornell, N.Y.	26.7	
2	Massachusetts General Hospital, Boston	26.4	
3	Johns Hopkins Hospital, Baltimore	25.9	
4	McLean Hospital, Belmont, Mass.	23.5	
5	Menninger Clinic, Houston	19.6	Top 5
6	Sheppard and Enoch Pratt Hospital, Baltimore	15.6	
7	Resnick Neuropsychiatric Hospital at UCLA, Los Angeles	13.3	
8	Mayo Clinic, Rochester, Minn.	11.4	
9	UPMC-University of Pittsburgh Medical Center	7.8	
10	Yale-New Haven Hospital, New Haven, Conn.	6.4	Top 10
11	Austen Riggs Center, Stockbridge, Mass.	6.0	
12	UCSF Medical Center, San Francisco	5.9	
13	Hospitals of the University of Pennsylvania-Penn Presbyterian, Philadelphia	5.3	

Best Hospitals 2015-16: Rehabilitation

Rank	Hospital	Reputation (%)	
1	Rehabilitation Institute of Chicago	52.6	
2	TIRR Memorial Hermann, Houston	28.9	
3	Kessler Institute for Rehabilitation, West Orange, N.J.	27.4	
4	University of Washington Medical Center, Seattle	23.4	
4	Mayo Clinic, Rochester, Minn.	22.6	Top 5
6	Spaulding Rehabilitation Hospital, Massachusetts General Hospital, Boston	18.3	
7	Craig Hospital, Englewood, Colo.	15.8	
8	MossRehab, Elkins Park, Pa.	10.5	
9	Shepherd Center, Atlanta	10.1	
9	Rusk Rehabilitation at NYU Langone Medical Center, New York	9.2	Top 10
11	UPMC-University of Pittsburgh Medical Center	8.5	
12	New York-Presbyterian University Hospital of Columbia and Cornell, N.Y.	6.1	
13	MedStar National Rehabilitation Hospital, Washington, D.C.	5.2	

Best Hospitals 2015-16: Rheumatology

Rank	Hospital	Reputation (%)	
1	Johns Hopkins Hospital, Baltimore	49.9	
2	Cleveland Clinic	49.1	
3	Hospital for Special Surgery, New York-Presbyterian University Hospital of Columbia and Cornell, N.Y	43.4	
4	Mayo Clinic, Rochester, Minn.	38.4	
5	Brigham and Women's Hospital, Boston	24.0	Top 5
6	Massachusetts General Hospital, Boston	16.8	
7	UCLA Medical Center, Los Angeles	16.1	
8	UPMC-University of Pittsburgh Medical Center	15.2	
9	Hospital for Joint Diseases, NYU Langone Medical Center, New York	14.9	
10	UCSF Medical Center, San Francisco	9.9	Top 10
11	University of Alabama Hospital at Birmingham	7.6	
12	Duke University Hospital, Durham, N.C.	6.6	
13	Northwestern Memorial Hospital, Chicago	6.0	
13	Stanford Health-Stanford Hospital, Stanford, Calif.	6.0	
15	Barnes-Jewish Hospital/Washington University, St. Louis	5.7	

Appendix F

2015-16 Best Hospitals Honor Roll

2015-16 Best Hospitals Honor Roll

Rank	Hospital	Points	Specialties
1	Massachusetts General Hospital, Boston	29	16
2	Mayo Clinic, Rochester, Minn.	29	15
3	Johns Hopkins Hospital, Baltimore	26	15
3	UCLA Medical Center, Los Angeles	26	15
5	Cleveland Clinic	26	14
6	Brigham and Women's Hospital, Boston	22	12
7	New York-Presbyterian University Hospital of Columbia and Cornell, N.Y.	20	12
8	UCSF Medical Center, San Francisco	18	12
9	Hospitals of the University of Pennsylvania-Penn Presbyterian, Philadelphia	15	11
10	Barnes-Jewish Hospital/Washington University, St. Louis	14	12
11	Northwestern Memorial Hospital, Chicago	14	9
12	NYU Langone Medical Center, New York	12	9
13	UPMC-University of Pittsburgh Medical Center	11	8
14	Duke University Hospital, Durham, N.C.	9	6
15	Stanford Health-Stanford Hospital, Stanford, Calif.	8	6

