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Methodology

U.S. News & World Report 2016-17 Best Hospitals: Specialty Rankings

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To Whom It May Concern:

Executive Summary

U.S. News & World Report began publishing hospital rankings in 1990 to identify the best medical centers in various specialties 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," the specialty rankings have appeared annually since 1990, and their focus on identifying hospitals that excel in treating the most difficult patients has not changed. In May 2015, however, U.S. News introduced a complementary set of ratings to evaluate hospital performance in five lower-acuity procedures and complications. Four procedures were added in August 2016 for the launch of 2016-17 Best Hospitals: Procedures and Conditions (formerly Best Hospitals for Common Care).

The Best Hospitals specialty rankings assess hospital performance in 16 specialties from Cancer to Urology. In 12 specialties, ranking is determined by an extensive data-driven analysis that combines measures of performance in three primary dimensions of healthcare: structure, process, and outcomes. Ranking in the other four specialties relies on hospital reputation as determined by physician surveys.

Structural measures include hospital volume, nurse staffing and other resources that define the hospital environment. The data source for most 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 and the American Nurses Credentialing Center's roster of hospitals recognized as Nurse Magnet facilities.

Process is represented by two factors. One is a hospital's reputation for developing and sustaining a system that delivers high-quality care, as determined by the surveys of board-certified physicians cited above. The other, which is shared with the outcomes dimension, is an indicator of patient safety. The basis for this is that the extent to which patients are protected from preventable death and harm is largely a function of process. When a patient needlessly dies or suffers injury, this reflects both an outcomes result and a failure of process.

Outcomes performance relies mostly on survival (i.e., risk-adjusted mortality). Mortality data come from the Medicare Provider Analysis and Review (MedPAR) database maintained by the Centers for Medicare & Medicaid Services (CMS).

For all states except Maryland, patient safety data come from the Standard Analytical Files (SAF), also known as the Medicare claims files, maintained by CMS. The SAF provide detailed claims data for Medicare beneficiaries in fee-for-service Medicare. For Maryland hospitals, data for

this component were taken from the state Health Services Cost Review Commission (HSCRC) all-payer database; analysis was likewise limited to fee-for-service Medicare beneficiaries, to be equivalent to the patient population in the SAF. This change addressed incomplete coding of present on admission (POA) indicators for Maryland hospitals in the CMS datasets for the years of analyses under consideration for the rankings. For both datasets, analyses were restricted to only patients 65 years of age or older.

All hospitals included in the AHA universe of community hospitals are automatically considered for ranking. No application, data submission, or other action is required.

To be initially eligible for ranking, a hospital must meet a minimum of one of four conditions: be a teaching hospital, be affiliated with a medical school, have at least 200 beds or have at least 100 beds *and* offer at least four medical technologies from a list of eight that U.S. News deems significant for a Best Hospitals patient population.

Eligibility for ranking 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 2016-17 rankings, 154 of approximately 5,000 evaluated U.S. hospitals were ranked in at least one specialty.

Since 1990, the Best Hospitals Honor Roll has recognized a small group of hospitals with high rankings in multiple Best Hospitals specialties. The Honor Roll has been extensively revised for 2016-17 to give more weight to rankings driven by data than to those driven by reputation, and to unify the rankings and ratings by incorporating the Best Hospitals Procedures and Conditions ratings. See section ***V. Honor Roll*** for more details.

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I. Introduction

For families facing a serious or complex medical problem, finding the right hospital is both critical and daunting. Yet decision tools beyond doctors' recommendations did not exist until 1990, when U.S. News & World Report introduced "America's Best Hospitals." That modest initial assessment took the form of short alphabetical lists of hospitals that were rated—not ranked—in 12 specialties. In 1991 and thereafter, hospitals were ranked.

The 2016-17 Best Hospitals rankings were drawn from a universe of 4,667 facilities.* The defined universe was the American Hospital Association's (AHA's) Annual Survey of Hospitals, which also provided some rankings data. Two or more AHA hospitals were combined for ranking purposes in a small number of cases because they function as a single hospital in one or more specialties but report to AHA as separate facilities.

In 12 of the 16 adult specialty rankings, hospitals received a composite score based on data from multiple sources. Both ranked and unranked hospitals, accompanied by substantive data, are published online at www.usnews.com/besthospitals/rankings. A print edition publishes ranked hospitals showing somewhat less data than the online source.

It is important to understand that the rankings 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 multiple comorbidities. Relatively commonplace conditions and procedures, such as uncomplicated heart bypass surgery, knee replacement, and heart failure are the focus of Best Hospitals: Procedures and Conditions,† 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,‡ Research Triangle Park, N.C., has produced the rankings from 2005 to the present. Over time, the methodology has been refined and extended—by incorporating patient safety data in 2009, for example, and a measure for

* 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.

† Best Hospitals: Procedures and Conditions, which was launched in May 2015 and rates hospital performance in a set of frequently encountered procedures and conditions, is a separate project.

‡ RTI International is a trade name of Research Triangle Institute.

voluntary data transparency in one specialty in 2016-17. Large-scale enhancements are always under consideration.

The roster of specialties has been revised over the years as well. AIDS care, for example, was included in 1990 but was dropped in 1998 because it was clear that most AIDS care had shifted to outpatient settings. Pediatrics was moved out of the Best Hospitals universe in 2007 when separate Best Children's Hospitals rankings were created. No Best Hospitals specialties were added or removed for 2016-17.[§] The current 16 specialty rankings are:

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

A. Data-Driven Rankings

As in previous years, rankings in 12 of the 16 specialties were based largely on hard data. The data-driven rankings assign an overall score to hospitals in all specialties other than Ophthalmology, Psychiatry, Rehabilitation, and Rheumatology.

The overall score reflects performance in three interlocked dimensions of healthcare: structure, process, and outcomes. The relationship was described by Avedis Donabedian in 1966; his model's fundamental soundness has been widely accepted.[1-5]

Structure refers to hospital resources related directly to patient care. Examples in the Best Hospitals rankings methodology include intensity of nurse staffing, availability of desirable technologies and patient services, and special status conferred by a recognized external body, such as designation as a Nurse Magnet hospital by the American Nurses Credentialing Center (ANCC) or as

[§] Because the rankings are released in the middle of the year, U.S. News labels them with the current and following years when referring to them. This applies to Best Children's Hospitals as well.

a National Cancer Institute (NCI) comprehensive or clinical cancer center by the National Institutes of Health (NIH).

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. Although patient safety overlaps with both process and outcomes, we consider it a fourth component in the Best Hospitals methodology, evaluated separately from structure, process, and outcomes.

For the 2016-17 rankings, a fifth component, public transparency, was added for Cardiology & Heart Surgery. Hospitals received credit for participating in American College of Cardiology (ACC) or the Society of Thoracic Surgeons (STS) data-reporting initiatives if they also agreed to allow their ACC- and/or STS-calculated results to be publicly reported on the organizations' websites.

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

The five major components of the data-driven rankings are briefly described below and in more detail later.

Structure

These elements represent volume (i.e., discharges), technology, and other features that characterize the hospital environment. Some elements such as nurse staffing, intensivists, and Nurse Magnet status are included in all specialties, while other elements are specialty-specific. The source for many of these data elements in the 2016-17 rankings was the 2014 AHA Annual Survey, the

most recent available. The source of volume data was the Medicare Provider Analysis and Review (MedPAR) database maintained by the Centers for Medicare & Medicaid Services (CMS). These databases contain information on all traditional (fee-for-service) Medicare beneficiaries who use hospital inpatient services. In addition, some inpatients covered by Medicare Advantage managed care—estimated at fewer than 10% of such individuals--are included in the Best Hospitals analysis. The MedPAR database captures only a small part of the Medicare managed-care population.

Process

The process component of the overall 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 2016-17 rankings, were conducted in 2014, 2015, and 2016.

Prior to the 2014 survey, 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.[**] The sample was increased by more than 50,000 physicians in 2014, by more than 85,000 in 2015, and by more than 100,000 in 2016. The 2016 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 sampling approach for the physician survey can be found in section ***II.D. Process.***

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, that they consider best for patients with serious or difficult conditions. Up to five hospitals could be listed. (The 2016-17 questionnaire and associated contact materials are shown in ***Appendix A***.)

[**] The database does not include medical students, residents, retirees, or deceased physicians.

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—only patients receiving care under Medicare (fee-for-service and, if available, managed-care) and who were 65 years of age or older were included in the analyses. For each hospital and specialty, Truven Health Analytics 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 (FY2012, FY2013, and FY2014) of Medicare claims submitted for reimbursement to CMS data.

Patient Safety

Patient safety is related to healthcare delivery and is used to quantify instances when patients may be harmed or put at risk but do not die. For all states except Maryland, data for this component come from the Standard Analytical Files (SAF) maintained by CMS, as explained in Section E; for Maryland hospitals, data for this component were taken from the Health Services Cost Review Commission (HSCRC) all-payer database.

For both datasets used, only patients receiving fee-for-service care under Medicare and who were 65 years of age or older were included in the analyses. The timeframe for these data was the same 3-year period used for volume and mortality analyses in the Best Hospitals rankings. For the 2016-17 rankings, the CMS and HSCRC files used were for federal FY 2012, 2013, and 2014 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 Agency for Healthcare Research and Quality (AHRQ) Patient Safety Indicator (PSI) QI software version 5.01.

Public Transparency (Cardiology and Heart Surgery Only)

For the 2016-17 rankings, a new component worth 3% of the overall score was added for the Cardiology & Heart Surgery specialty. Hospitals received credit for participation in transparency initiatives by publicly reporting quality metrics through websites maintained by the American College of Cardiology (www.cardiosmart.org) and the Society of Thoracic Surgeons (www.sts.org). Publicly reporting evidence-based hospital performance metrics has been associated with improved quality of care and improved hospital performance.[8-13] Given the relationship between public reporting and outcomes, the rankings are likely to include additional measures of transparency in future years.

Weighting

For the 2016-17 rankings, the weight for the outcomes component was increased from 32.5% last year to 37.5%. The weight for Patient Safety was reduced from 10% to 5%. For Cardiology & Heart Surgery only, the weight for the process component was reduced from 27.5% to 24.5% to accommodate the new public transparency component, which is worth 3% of the score. The 2016-17 weights for Cardiology & Heart Surgery and all other specialties are shown in ***Table 1.***

Table 1. 2016-17 Overall Weight by Component

Component	Cardiology & Heart Surgery Weight (%)	Weight, All Other Specialties (%)
Outcomes	37.5	37.5
Structure	30.0	30.0
Process	24.5	27.5
Patient safety	5.0	5.0
Public transparency	3.0	0.0

B. Reputation-Only Rankings

In four of the 16 specialties—Ophthalmology, Psychiatry, Rehabilitation and Rheumatology—ranking reflects 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 data-driven 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."[14])
- ***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, procedures and conditions.

- ***Section V*** summarizes changes in the methodology from 2005 to the present.
- ***Section VI*** describes improvements under consideration.

II. Data-Driven Rankings

This section describes hospital eligibility criteria and the procedures used to derive the overall score for the 12 data-driven specialties. Hospitals ranked in 2016-17 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 4,667 community hospitals included in the FY2014 AHA universe were automatically considered for ranking;†† no request, application or other action was necessary. For the data-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 that met *any* of the following criteria was initially eligible:

- Member, Council of Teaching Hospitals (COTH)
- Medical school affiliation (AMA or American Osteopathic Association [AOA])
- At least 200 hospital beds set up and staffed (from FY2014 AHA Annual Survey of Hospitals, variable BDTOT)
- Availability of at least four of eight important key technologies (see ***Advanced Technologies***) *and* at least 100 hospital beds set up and staffed

Hospitals that met Stage 1 and responded to the AHA Annual Survey of Hospitals in 2012 and 2013 but not in 2014 remained eligible. For such hospitals, we used survey data from 2013. Nonresponders lacking data from the current survey and one of the previous two surveys were evaluated without AHA data. A total of 2,259 hospitals successfully passed the first stage of the eligibility process.

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

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

reimbursement in FY2012, FY2013, and FY2014 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.[#] Specific proportions of medical and surgical discharges were 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 data-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.

A total of 1.889 hospitals met the volume criteria in at least one specialty, and two other hospitals became eligible because they had a 1% or higher reputation score in at least one specialty. In all, 1,891 unique hospitals were deemed eligible for at least 1 of the 12 data-driven specialties under the full criteria.

In Geriatrics, an additional step excluded hospitals classified in the AHA survey data as surgical hospitals or as specializing in heart or orthopedics. The basis for the exclusions was that Geriatrics as defined in Best Hospitals represents a broad swath of patients across all service lines. A surgical or specialty hospital treats subsets of those patients whose clinical needs may not be comparable. This change is reflected in the count of eligible Geriatric hospitals provided in ***Table 2***.

[#] Prior to RTI'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 ≥ 1% Reputation Score	Final Total Eligible
Cancer	207 (37)	902	0	902
Cardiology & Heart Surgery[a]	1333 (500)	620	0	620
Diabetes & Endocrinology	112 (0)	1,116	1	1,117
Ear, Nose & Throat	25 (3)	536	3	539
Gastroenterology & GI Surgery	440 (116)	1,580	0	1,580
Geriatrics[b]	2,387 (0)	1,517	0	1,517
Gynecology	25 (5)	780	5	785
Nephrology	180 (0)	1,663	0	1,663
Neurology & Neurosurgery	261 (35)	1,349	0	1,349
Orthopedics	293 (269)	1,636	0	1,636
Pulmonology	940 (0)	1,665	2	1,667
Urology	37 (17)	1,520	1	1,521
Total (unique hospitals)[c]	Not Applicable	1,889	2	1,891

[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.

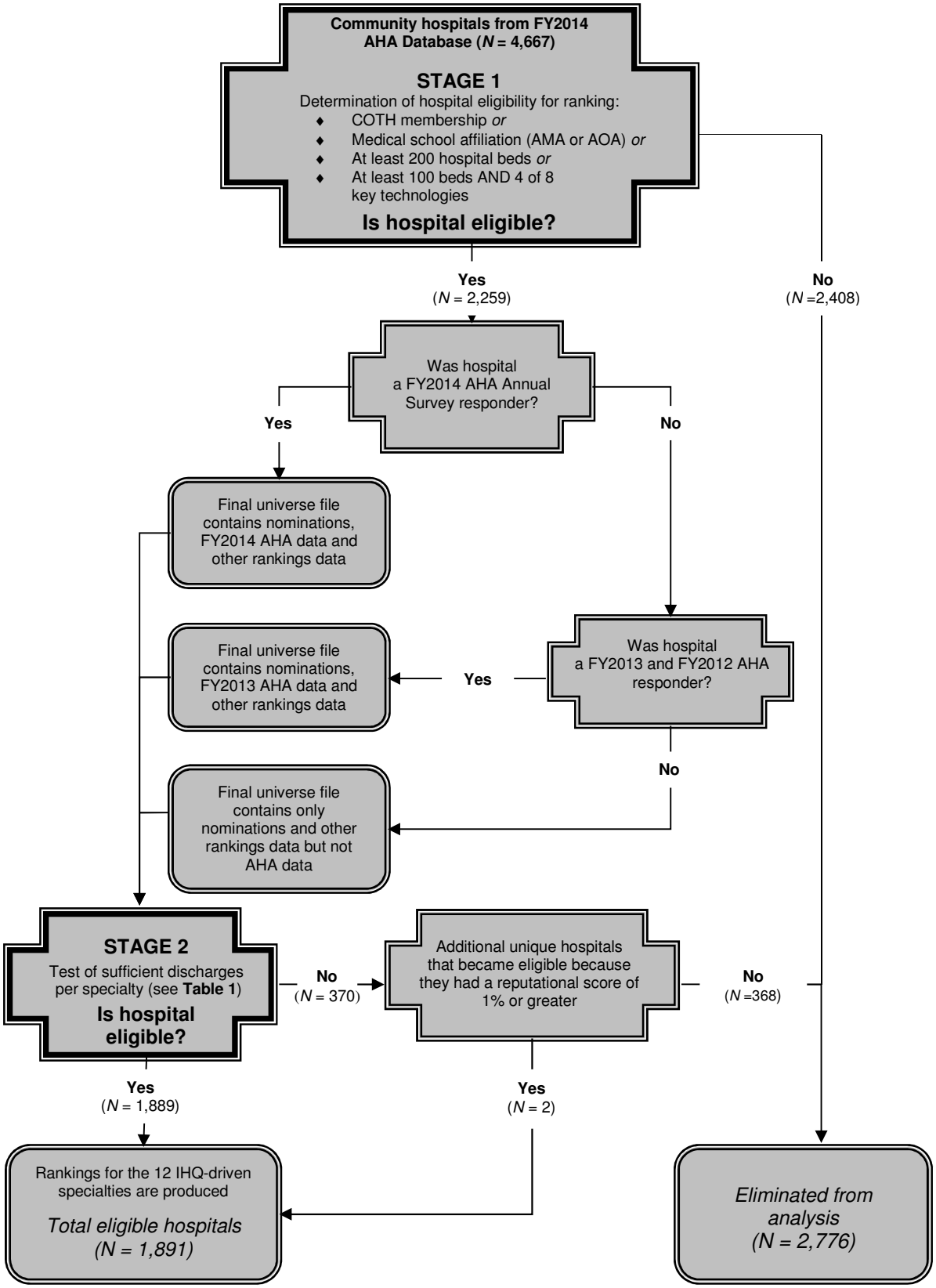
[c] The total values are not sums. The same hospitals may be eligible for multiple specialties. This line represents the total unique hospitals in each category across all specialties.

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

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.

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



For the 2016-17 rankings, the FY2014 AHA Annual Survey Database was the source of most structural elements. Additional components came from external organizations including the National Cancer Institute (NCI), American Nurses Credentialing Center (ANCC), Foundation for the Accreditation of Cellular Therapy (FACT), National Institute on Aging (NIA), National Association of Epilepsy Centers (NAEC), CMS and HSCRC.

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,[15] with an average annual response rate of 85%. 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. (The specific mapping of Best Hospitals variables to AHA data elements is shown in ***Appendix B***.)

Hospitals that did not respond to the 2014 AHA Annual Survey but responded to the 2013 survey were evaluated using their 2013 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 data-driven specialties.

Advanced Technologies

The elements in this measure are reviewed every year in each specialty to remain consistent with the key technologies and advanced care expected from a "best hospital." In the 2016-17 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 2016-17 index follow. The definitions are taken largely from the 2014 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.

[§§] 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.

- **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.G. Calculation of the Overall Score for the Data-Driven Specialties***). ***Table 3*** presents the complete list of key technologies considered for each specialty in 2016-17.

Number of Patients

This measure reflects the volume of medical and surgical discharges in indicated specialty-specific MS-DRG groupings submitted for CMS reimbursement in FY2012, FY2013, and FY2014 combined. The list of MS-DRGs in each specialty is displayed in ***Appendix C***. Volume is part of the structural score in all 12 data-driven specialties. Volumes include all cases involving patients 65 years of age or older, including transfers, that appeared in MedPAR for the specified MS-DRGs that met the minimum severity thresholds (see ***Appendix C***). In prior years, this measure included Medicare patients younger than 65; patients under 65 were excluded in 2016-17.

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 measure 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.

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 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 hospitals in the top quartile in the rankings = a*b + (1-a)*c.

The value displayed in print is the unadjusted raw volume. ***Table 4*** provides the minimum volume, 75th percentile volume and maximum volume in each specialty along with the average volume for hospitals below the 75th percentile.

Table 4. Discharge Distribution by Specialty

Specialty	Minimum Volume	75th Percentile Volume	Maximum Volume	Average Volume, 1-75th percentile
Cancer	207	718	5,638	418.2
Cardiology & Heart Surgery	1,346	4,276	16,921	2,689.8
Diabetes & Endocrinology	94	257	1,294	169.8
Ear, Nose & Throat	3	70	439	39.1
Gastroenterology & GI Surgery	440	1,725	10,101	1,017.3
Geriatrics	2,387	9,149	45,383	5,272.9
Gynecology	5	125	596	57.8
Nephrology	180	714	4,294	404.5
Neurology & Neurosurgery	261	1,541	7,024	835.2
Orthopedics	293	1,458	9,954	771.9
Pulmonology	671	3,027	11,894	1,851.3
Urology	24	195	1,460	103.5

Nurse Staffing

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

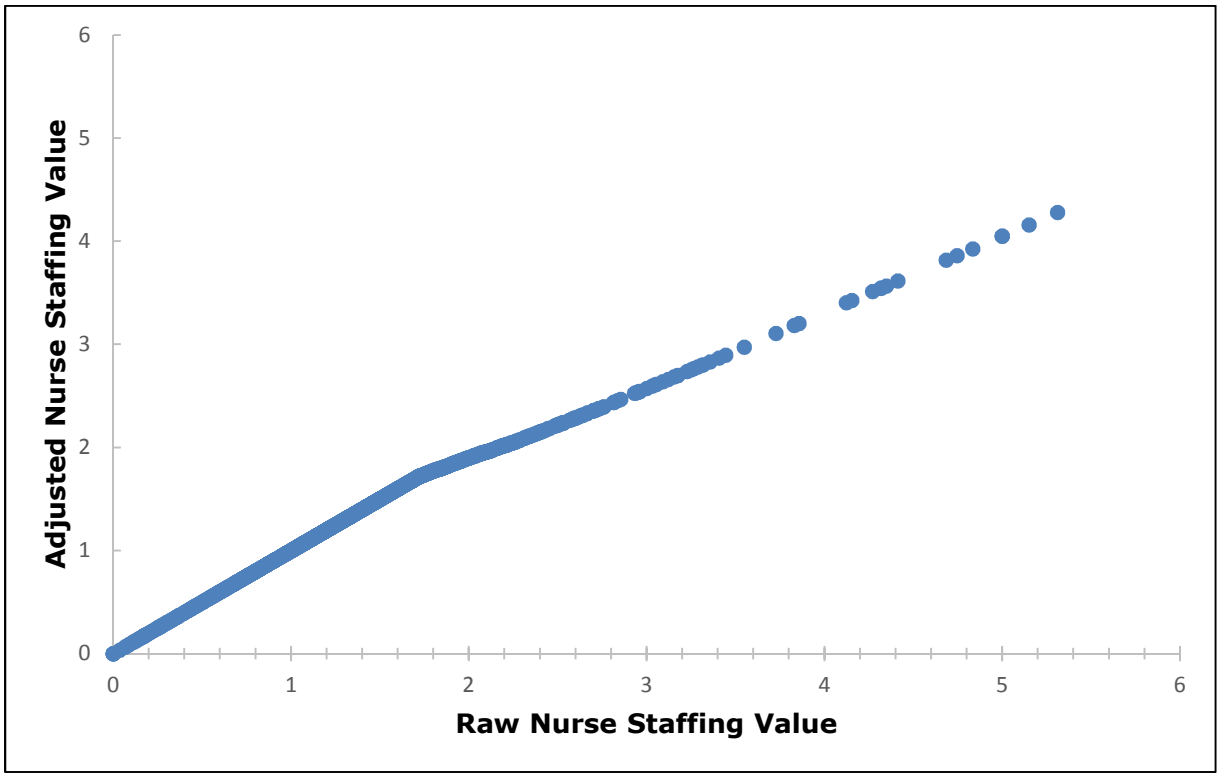
considered. The denominator is the adjusted average daily census of patients, a variable created by AHA for U.S. News.

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 were similarly adjusted to reduce the influence of wide variation. Therefore, the nurse staffing value for hospitals in the top quartile, which was at or above a nurse staffing value of 1.72 for 2016-17, is equal to a*b + (1-a)*c, where:

a = amount over the 75th percentile (.01, .02… .25),
b = 1.17, the average nurse staffing volume for hospitals in the bottom 75th percentile, and
c = an individual hospital's raw nurse staffing value.

Figure 2 shows the nurse staffing values before and after adjustment.

Figure 2. Nurse Staffing Values Before and After Adjustment



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."[15] 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."[15]

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 2016-17 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

[†††] The top two levels of this designation are equivalent to the top two levels of the American College of Surgeons trauma center certification and can be used by hospitals in states that do not have state-certified trauma centers.

Alzheimer's center, which 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 condition 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.

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.

Intensivists

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.[16,17] The intensivist measure was added in 2009. The 2016-17 rankings award 1 point to hospitals with at least one intensivist, whether on staff or through another arrangement. Previously hospitals had to have at least one FTE staff intensivist. Credit was determined from the FY2014 AHA Annual Survey.

External Organizations

The following describes sources and organizations other than AHA, CMS and HSCRC that provided data for additional structural measures.

NCI-Designated Cancer Center

This indicator was added in 2002. The National Cancer Institute (NCI), 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]

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.[18]

Hospitals designated as NCI clinical or comprehensive cancer centers as of March 1, 2016, 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/CCIList.

Nurse Magnet Status

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 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 April 1, 2016. The current list of Magnet-recognized organizations is shown at http://www.nursecredentialing.org/Magnet/FindaMagnetFacility.

The Nurse Magnet measure was updated in 2016-17 to better reflect program coverage for hospitals that are part of a multicampus system or an arrangement with another hospital outside the system. These combined entities received full credit in 2016-17 (1 point) only if both the primary (flagship) hospital and the secondary hospital in the combination had Nurse Magnet recognition as of April 1, 2016. If the primary hospital had Nurse Magnet recognition but the specialty or secondary hospital did not, the combined entity received half credit (0.5 point). If the primary hospital lacked Nurse Magnet recognition, the combined entity received no credit.

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, 2016. 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.[19] 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, 2016, 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 Accreditation

Foundation for the Accreditation of Cellular Therapy (FACT) accreditation was added to Cancer in 2007. This designation indicates that as of March 1, 2016, 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. Normalizations were done separately for each specialty. Equation (1) is the formula for normalization:

$$Normalized\ Value = (X_i - Minimum_i) / (Maximum_i - Minimum_i), \quad (1)$$

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 Advanced Technologies 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 Advanced Technologies index in Cancer would be (5-0)/(8-0) = 0.63. For all structural measures other than Nurse Staffing, the lowest *possible* value is 0 even when the lowest *observed* value is greater than 0. For Nurse Staffing, the lowest possible value was made equal to the lowest observed value.

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 overall score.

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	4.29	5.00	5.29	5.00	5.00		5.29	5.00	4.09	5.00	5.00	5.00
FACT accreditation	2.86											
Intensivists	2.86	3.33	3.53	3.33	3.33	3.53	3.53	3.33	2.73	3.33	3.33	3.33
NAEC-designated epilepsy center									2.73			
NCI-designated cancer center	2.86											
NIA-designated Alzheimer's center						5.29			2.73			
Number of patients	5.71	6.67	7.06	6.67	6.67	7.06	7.06	6.67	5.45	6.67	6.67	6.67
Nurse Magnet status	2.86	3.33	3.53	3.33	3.33	3.53	3.53	3.33	2.73	3.33	3.33	3.33
Nurse staffing	5.71	6.67	7.06	6.67	6.67	7.06	7.06	6.67	5.45	6.67	6.67	6.67
Patient services	2.86	3.33	3.53	3.33	3.33	3.53	3.53	3.33	2.73	3.33	3.33	3.33
Trauma center		1.67		1.67	1.67			1.67	1.36	1.67	1.67	1.67

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.[20-29] We calculated specialty-specific, risk-adjusted mortality rates for each hospital as an outcomes measure, taking volume of cases and severity of illness into account. Mortality is worth 37.5% of the overall 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 a pooled FY2012, FY2013, and FY2014 MedPAR data set, 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 (and a small proportion of managed care) Medicare patients' diagnoses, procedures, length of stay in the hospital and discharge status. For the 2016-17 Best Hospitals rankings, only patients who were 65 years of age or older at the time of care were included in the analyses. The data were "grouped" using the 3M Health Information Systems APR-DRGs and MS Grouper software version 31.0, 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.[6,30,31]

The MedPAR records include 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.[32] 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.[33]

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 2010-11 Best Hospitals Rankings 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 2016-17).[###] 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 dropped in 2006 but 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 wide range of MS-DRGs. The Geriatrics specialty rankings now include all MS-DRGs generally appropriate to a Medicare or elderly population, but for the mortality analysis only patients who are at least 75 years of age are included. The basic mortality analyses of the data for this group followed the same procedures as for the other data-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."[34] This change means that patients legitimately transferred for appropriate care are lost to analysis, 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 (75^{th}–100^{th} percentile) of transfer-in rates, 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 (see ***Table 7***). 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 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. Therefore, if:

a = amount over the 75th percentile (.01, .02, … .25),

b = all-case mortality rate (see ***Table 7***), and

c = an individual hospital's mortality rate,

then the mortality for hospitals with transfer rates in the top quartile = 2a*b + (1-2a)*c.

Table 7. Transfer Rate Distribution and All-Case Mortality by Specialty

Specialty	Minimum	25th Percentile	75th Percentile	Maximum	All-Case Mortality Rate
Cancer	0.00	1.00	9.69	41.55	0.96
Cardiology & Heart Surgery	0.00	2.93	15.15	67.60	0.96
Diabetes & Endocrinology	0.00	0.15	3.87	30.43	0.85
Ear, Nose & Throat	0.00	0.40	7.21	48.31	0.99
Gastroenterology & GI Surgery	0.00	0.31	5.64	44.42	0.97
Geriatrics	0.00	0.49	7.27	45.08	1.01
Gynecology	0.00	0.35	3.77	36.00	0.72
Nephrology	0.00	0.21	4.29	54.05	1.01
Neurology & Neurosurgery	0.00	0.73	10.64	67.28	0.98
Orthopedics	0.00	0.25	3.25	37.47	0.97
Pulmonology	0.00	0.27	5.13	46.34	0.99
Urology	0.00	0.15	3.83	33.33	0.98

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 below-average mortality rates (or unduly helping those with above-average mortality rates), the maximum weight on the specialty average is 0.25. Therefore, if:

a = amount below the 25th percentile (.01, .02, … .25),

b = average mortality rate for all hospitals, and

c = an individual hospital's mortality rate,

then the mortality for hospitals with transfer rates in the bottom quartile = a*b + (1-a)*c.

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.[35] Quality of care in the inpatient setting can affect patients' health and functional status for many weeks following discharge. 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."[36]

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 made because of concern that 30-day mortality might penalize hospitals that see large numbers of 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 data-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. 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

[****] 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. The analyses relies on the APR-DRG and MS-DRG grouper systems to account for patient severity and risk of mortality in the MedPAR dataset rather than removing these cases from analyses.

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. Therefore, if:

a = amount below the 25th percentile (.01, .02, … .25),

b = average, high-volume mortality rate for hospitals at or above 25th percentile (see ***Table 8***), and

c = an individual hospital's mortality rate,

then the mortality for hospitals with discharges volume in the bottom quartile is = a*b + (1-a)*c.

Table 8. Discharges Excluding Transfers and Distribution by Specialty

Specialty	Minimum Volume	25th-Percentile Volume	Maximum Volume	Average High-Volume Mortality Rate
Cancer	121	323	5,530	0.95
Cardiology & Heart Surgery	1,003	2,016	14,317	0.94
Diabetes & Endocrinology	87	140	1,259	0.84
Ear, Nose & Throat	3	49	435	0.83
Gastroenterology & GI Surgery	397	788	10,024	0.95
Geriatrics	2,110	3,971	44,904	1.00
Gynecology	5	49	586	0.63
Nephrology	85	300	4,282	0.98
Neurology & Neurosurgery	250	602	6,397	0.98
Orthopedics	249	557	9,863	0.93
Pulmonology	518	1,457	11,814	0.98
Urology	24	74	1,452	0.94

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.[37]

For the 2016-17 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 the ranking score, 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.

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	1.37	1.37	1.28	1.18	1.09	1.00	0.91	0.82	0.72	0.63
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	1.59	1.59	1.44	1.30	1.15	1.00	0.85	0.70	0.56	0.41
Ear, Nose & Throat	1.59	1.59	1.44	1.30	1.15	1.00	0.85	0.70	0.56	0.41
Gastroenterology & GI Surgery	1.35	1.35	1.26	1.17	1.09	1.00	0.91	0.83	0.74	0.65
Geriatrics	1.35	1.35	1.26	1.18	1.09	1.00	0.91	0.82	0.74	0.65
Gynecology	1.67	1.67	1.50	1.34	1.17	1.00	0.83	0.66	0.50	0.33
Nephrology	1.46	1.46	1.35	1.23	1.12	1.00	0.88	0.77	0.65	0.54
Neurology & Neurosurgery	1.51	1.51	1.38	1.26	1.13	1.00	0.87	0.74	0.62	0.49
Orthopedics	1.53	1.53	1.40	1.26	1.13	1.00	0.87	0.74	0.60	0.47
Pulmonology	1.30	1.30	1.23	1.15	1.08	1.00	0.92	0.85	0.77	0.70
Urology	1.57	1.57	1.43	1.29	1.14	1.00	0.86	0.71	0.57	0.43

D. Process

For the 2016-17 rankings, the process component is worth 27.5% of the overall score in all specialties except for Cardiology & Heart Surgery, in which the process component is worth 24.5% of the total score. The weight is different in this specialty to accommodate the new public transparency measure.

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 we regard the nomination of hospitals by board-certified specialists as a reasonable process measure.

To collect these nominations, a survey of board-certified physicians across the country is conducted each year. As with past years, the 2016-17 rankings use nominations from the most

recent 3 years of physician surveys (2014, 2015, and 2016). 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. 2014, 2015, and 2016 Reputation Weights by Survey Year

Sample Source	Reputation Weight (%)
2014 Physician Survey	33.3
2015 Physician Survey	33.3
2016 Physician Survey	33.3

The sections below describe the 2016 survey. The approaches used for the 2014 and 2015 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 data-driven and reputation-only specialties in the rankings. Therefore, this section presents the methodology and results for both.

2016 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, in 2015 to over 80,000, and in 2016 to over 100,000.†††† The significantly larger sample sizes each year have yielded a greater number of survey responses and improved precision of survey estimates. The increase in the past 3 years was through adding physicians via the web using the Doximity online panel of physicians. Doximity is the largest online professional network of U.S. physicians.

The sample for the 2016 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

†††† Samples drawn each year are not unique and include physicians who were sampled in previous years.

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 December 2015, when the non-Doximity sample was selected. RTI also used address information from the AMA Masterfile, under license from MMS, Inc., to verify addresses.

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	9,672	7,388
Cardiology & Heart Surgery	Cardiovascular diseases, thoracic surgery	14,814	10,759
Diabetes & Endocrinology	Endocrinology, diabetes & metabolism	2,406	2,657
Ear, Nose & Throat	Otolaryngology	5,341	3,553
Gastroenterology & GI Surgery	Gastroenterology, colon and rectal surgery	6,819	6,850
Geriatrics	Geriatrics	3,489	5,229
Gynecology	Gynecology, obstetrics & gynecology	15,279	16,592
Nephrology	Nephrology	4,049	3,916
Neurology & Neurosurgery	Neurology, neurological surgery	8,673	6,944
Ophthalmology	Ophthalmology	8,174	7,948
Orthopedics	Orthopedic surgery	10,240	8,860
Psychiatry	Psychiatry	13,482	20,026
Pulmonology	Pulmonary diseases	5,717	4,529
Rehabilitation	Physical medicine & rehabilitation	3,622	4,201
Rheumatology	Rheumatology	1,972	2,493
Urology	Urology	4,165	4,511

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 117,914 physicians across the 16 specialties from January to March 2016. Physicians received an initial email invitation with a link to the survey. The survey asked physicians to supply the names of up to five hospitals in their specialty that provide the best care to patients with serious conditions, without considering location or expense. Nonresponding physicians received one follow-up email reminder with a link to the survey. In addition, eligible Doximity members received alerts when they logged on or used the Doximity app inviting them to participate.

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 but was conducted via mail instead of web. It asked physicians to supply the names of up to five 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***.

Up to four mailings were sent to sampled Doximity nonmembers. Each mailing included a cover letter, questionnaire, and business reply envelope. The first survey mailing also included a token incentive—a $2 bill, a ballpoint pen or both. The survey was conducted from January 5 through March 31, 2016.

Response Rates

The overall response rate for the 2014, 2015, and 2016 surveys was 13.6% using American Association of Public Opinion Research (AAPOR) standard response rate 6,[‡‡‡] which treats undeliverables as ineligibles. The 2016 combined response rate for the Doximity member and nonmember surveys was 9.1% using AAPOR standard response rate 6. Below, we provide more detail on the response rates to the 2016 Doximity member survey and nonmember survey.

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

Member survey. Of the 117,914 Doximity members, 10,288 completed the web survey by March 2, 2016. The final response rate was 8.7% using AAPOR standard response rate 2. ***Table 12*** shows response rates by region and specialty.

Table 12. Member Survey Response Rates by Region and Specialty, 2016

Specialty	Midwest (%)	Northeast (%)	South (%)	West (%)	Total (%)
Cancer	13.7	12.1	7.1	5.0	9.6
Cardiology & Heart Surgery	12.7	8.5	5.7	5.6	8.0
Diabetes & Endocrinology	18.7	9.9	7.5	5.7	10.2
Ear, Nose & Throat	17.3	18.2	8.4	10.0	13.0
Gastroenterology & GI Surgery	16.8	9.1	5.6	4.9	8.8
Geriatrics	5.3	5.8	3.6	3.7	4.7
Gynecology	5.1	6.5	2.7	2.7	4.1
Nephrology	13.1	14.7	5.8	5.0	9.7
Neurology & Neurosurgery	18.8	15.9	8.1	8.1	12.7
Ophthalmology	13.8	15.4	10.0	14.2	13.2
Orthopedics	10.4	13.6	4.9	4.2	8.1
Psychiatry	5.9	8.2	2.6	3.4	5.4
Pulmonology	14.4	9.2	5.0	6.0	8.4
Rehabilitation	19.3	20.4	9.8	6.0	14.4
Rheumatology	13.8	15.9	8.0	7.7	11.8
Urology	14.4	14.4	7.3	8.0	10.8
Overall Response Rate	**12.2**	**11.2**	**5.8**	**5.8**	**8.7**

Nonmember survey. Of the 3,200 physicians sampled in 2016, 496 were deemed ineligible. Of the remaining 2,704 physicians, 705 returned the completed questionnaire by the April 1 deadline. That represents a final response rate of 26.1% 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, 2016

Specialty	Midwest (%)	Northeast (%)	South (%)	West (%)	Total (%)
Cancer	33.3	17.1	33.3	27.8	28.4
Diabetes & Endocrinology	18.2	26.1	25.0	20.6	23.1
Ear, Nose & Throat	34.3	33.3	28.6	33.3	31.7
Gastroenterology & GI Surgery	29.0	36.6	26.2	21.2	28.2
Geriatrics	38.7	20.0	27.9	28.1	27.8
Gynecology	13.9	20.6	20.0	19.4	18.7
Heart & Heart Surgery	34.3	27.9	20.0	24.2	25.6
Nephrology	22.6	18.9	27.9	15.8	22.4
Neurology & Neurosurgery	23.5	31.0	29.1	24.2	27.4
Ophthalmology	36.4	26.8	30.5	40.0	32.9
Orthopedics	27.0	22.6	22.0	25.7	24.1
Psychiatry	10.7	31.8	9.3	18.4	18.3
Pulmonology	27.8	32.6	28.6	28.6	29.4
Rehabilitation	27.0	25.6	17.0	21.1	22.4
Rheumatology	28.6	39.5	33.3	22.5	31.5
Urology	22.2	35.3	21.2	20.5	24.0
Overall Response Rate	**26.8**	**27.9**	**25.3**	**24.5**	**26.1**

Survey Response Weighting

The weighting approach for the 2016 survey is described below. The approaches used for previous surveys are provided in the corresponding methodology reports for those years, which are available at www.rti.org/besthospitals.

For the 2016 Doximity member survey, we used poststratification weights for age by 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. We investigated whether hospital affiliation affected survey response. Although we did observe that physicians at certain hospitals had higher response rates than physicians at other hospitals, we did not find any systematic bias in the

[§§§§] Age categories were collapsed for females because there were too few female physicians over 55 in the sample.

reputation scores. This is because any given hospital is affiliated with only a small percentage of the total number of sampled physicians.

In each specialty, the sample for the 2016 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 2016 reputation score. ***Table 14*** shows the reputation weight for Doximity members and nonmembers in each specialty for 2016. 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 3 years were then averaged to create the final weighted reputation values that appear in the methodology report.

Log Transformation

The weighted 3-year reputation values are displayed in the ranking tables. However, before incorporating them into the 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. Because 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.

Table 14. 2016 Reputation Weights for Doximity Members and Nonmembers by Specialty

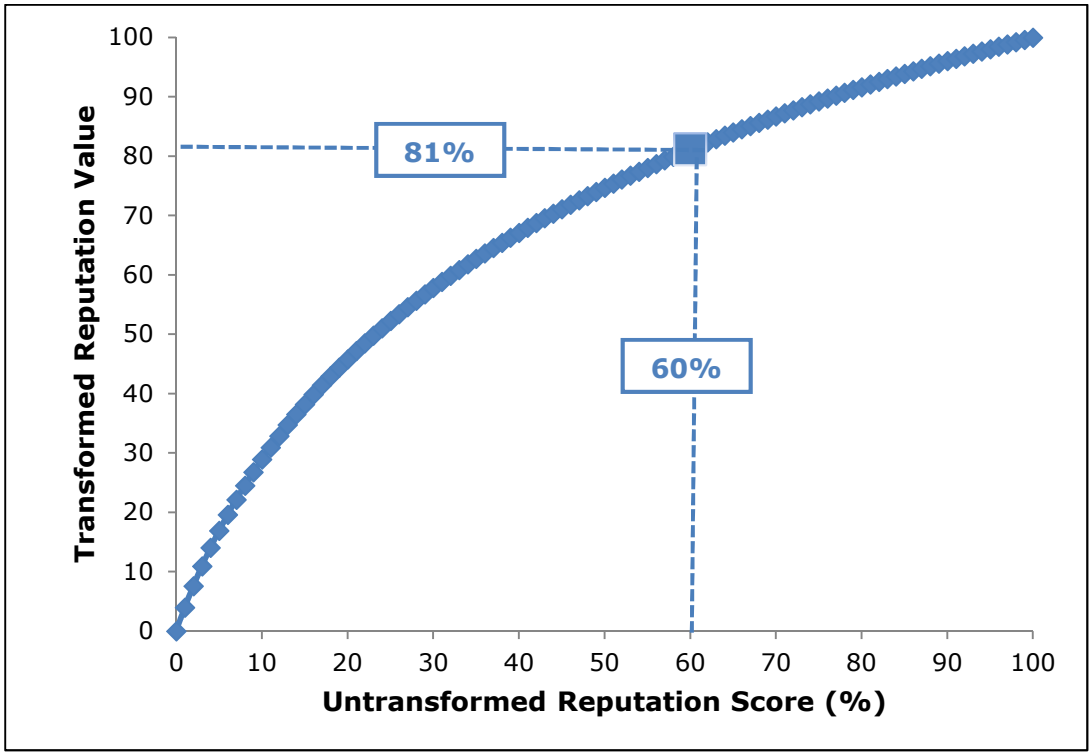
Best Hospitals Specialty	Reputation Weight	
	Doximity Member (%)	Doximity Nonmember (%)
Cancer	56.7	43.3
Cardiology & Heart Surgery	57.9	42.1
Diabetes & Endocrinology	47.5	52.5
Ear, Nose & Throat	60.1	39.9
Gastroenterology & GI Surgery	49.9	50.1
Geriatrics	40.0	60.0
Gynecology	47.9	52.1
Nephrology	50.8	49.2
Neurology & Neurosurgery	55.5	44.5
Ophthalmology	50.7	49.3
Orthopedics	53.6	46.4
Psychiatry	40.2	59.8
Pulmonology	55.8	44.2
Rehabilitation	46.3	53.7
Rheumatology	44.2	55.8
Urology	48.0	52.0

The transformed data are then scaled to a minimum of 0 and maximum of 100. ***Figure 3*** 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 3. 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. In Cardiology & Heart Surgery only, the weight in the 2016-17 rankings was further reduced to 24.5%.

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 Cancer was 80, for example, it received 0.80 x 27.5, or 22 points, for reputation.

E. Patient Safety Score

Care that harms patients is an important aspect of both outcomes and process. A patient safety score is therefore a critical component in evaluating and determining the best-performing hospitals.

For the 2016-17 rankings, the weight of the patient safety score was reduced from 10% of the total score to 5%, and one of its constituent measures was removed. This was done to address concerns about the patient safety indicators (PSIs) in general and the removed measure, PSI 03, in particular.[38]

In previous years, the data source for the patient safety score was the same 3-year sample from the MedPAR data set that was used for the volume and mortality analyses. For 2016-17, the rankings used two new sources of data for calculating patient safety scores. For the majority of states, the rankings used data from the CMS Standard Analytical Files (SAF) in lieu of MedPAR. This change was motivated by the need to have information on the date each procedure was performed to improve a number of the PSI calculations.

Data from the HSCRC all-payer database were used in lieu of MedPAR for hospitals in Maryland. This change was made to address incomplete coding of Present on Admission (POA) indicators in the CMS datasets for the years of rankings analyses. The timeframe used in these analyses is the same that is used for the volume and mortality analyses in the Best Hospitals rankings (i.e., FY2012, FY2013, and FY2014). For both datasets used, only patients receiving fee-for-service care under Medicare and who were 65 years of age or older were included in the analyses.

Data from SAF and HSCRC were analyzed using the AHRQ PSI QI software version 5.01.

Background

Prior to the 2009 rankings, mortality was the sole outcome measure in the 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*,[39] 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 PSIs, a set of 20 provider-level and 7 area-level indicators of potentially adverse events.[40] 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.[41-43] However, we believe that PSIs incorporate important information separate from other measures used in the rankings. Including PSIs in addition to mortality allows us to measure aspects of quality of care that involve harm to patients and increased service utilization (for example, to correct such harm) but that do not cause patient deaths. Hospital stays with patient safety events have been found to be more costly and longer in length than stays without patient safety events.[44-48] Patient safety events have also been associated with higher 90-day readmission rates, compared with readmissions rates for patients without safety events.[44]

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*,[7] with 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.*[49,50] 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. controlling for the influence of hospital case mix on measured PSIs.

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.

The Best Hospitals patient safety score includes five indicators in the AHRQ's PSI index as well as one additional indicator, PSI 04, which is not part of the composite AHRQ PSI measure. This indicator identifies deaths generally deemed to be avoidable. Additional indicators may be added to the patient safety score as the measures become more refined.

Table 15. Comparison of AHRQ Patient Safety Indicators 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	✓	✓

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. PSI 03 and PSI 08 were added in 2014-15. However, PSI 08 was dropped from the Best Hospitals patient safety score in the 2015-16 rankings due to low incidence. For the 2016-17 rankings, PSI 03 was dropped due to concerns that the measure was overly sensitive to missing POA data in the record, which could confound comparisons.

2. Weighting the Index 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 six individual PSIs. Until the 2011-12 rankings, each PSI was weighted according to each hospital's population at risk, as is done for mortality. 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 lower than the 5th percentile are set to the 5th percentile and values higher 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 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***. The percentiles are used for display purposes only. For the 2016-17 rankings, the continuous PSI value was used in calculating a hospital's score. The patient safety scores in ***Table 16*** indicate the cutoffs that determine an individual hospital's level of patient safety.

Table 16. Patient Safety Scores Based on PSI Value

Indicator	1 if <	2 if <	3 if <	4 if <	5 if ≥
PSI 04: Death among surgical inpatients with serious treatable complications	-0.73	-0.11	0.17	0.74	0.74
PSI 06: Iatrogenic pneumothorax	-0.79	-0.09	0.40	1.02	1.02
PSI 09: Postoperative hemorrhage or hematoma	-0.82	-0.22	0.26	0.84	0.84
PSI 11: Postoperative respiratory failure	-0.84	-0.11	0.31	0.88	0.88
PSI 14: Postoperative wound dehiscence	0.30	0.39	0.41	0.44	0.44
PSI 15: Accidental puncture or laceration	-0.85	-0.19	0.31	0.85	0.85
Patient Safety Score	**-0.40**	**-0.12**	**0.11**	**0.40**	**0.40**

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 2016-17 rankings, we have 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 3 years of data, we pool all observations in our calculations. By pooling 3 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. Public Transparency (Cardiology & Heart Surgery Only)

A public transparency component was added to the analysis for Cardiology & Heart Surgery in the 2016-17 rankings. This measure rewards hospitals for voluntarily reporting cardiac-care performance data to the public via one or both of two important clinical registries: the National

Cardiovascular Disease Registry (NCDR), which is maintained by the American College of Cardiology (ACC), and the Adult Cardiac Surgery Database (ACSD), maintained by the Society of Thoracic Surgeons (STS). Clinicians initially created these and other clinical registries to foster quality improvement.

More recently, public transparency has been identified as an important additional application for registry-based quality measurement. The STS initiated voluntary public reporting for ACSD-participating hospitals in 2010. In late 2015, the ACC began a similar program for two of the 10 registries that comprise the NCDR, the CathPCI Registry and the ICD Registry.

Transparency via clinical registries can facilitate informed decision making by patients, which in turn may boost patient engagement in their healthcare. Transparency also creates opportunities for researchers to externally validate the results of hospital rankings such as Best Hospitals.

In the 2016-17 rankings, hospitals received up to 3 points for participating in public reporting with ACC and STS regardless of the specific ratings each registry reported. Hospitals that voluntarily publicly reported via one group but not the other received 2 points for this measure. Hospitals that publicly reported via both received 3 points. Hospitals that supplied data to the ACC or the STS but did not allow the results to be made public received 0 points for this measure.

Details of Participation Requirements (ACC)

To receive credit for ACC public reporting, hospitals must have participated in either the ICD Registry and/or the CathPCI Registry and voluntarily agreed to allow data from these registries to be posted on an ACC website, www.CardioSmart.org. To receive credit, the hospital had to have a public reporting status of "Participating with ACC" for at least one of those registries as of April 15, 2016. The publicly reported data include the following measures from each registry.

ICD Registry

- Angiotensin Converting Enzyme Inhibitor/Angiotensin Receptor Blocker (ACE/ARB) Therapy at Discharge for ICD Implant Patients With Left Ventricular Systolic Dysfunction (LVSD)
- Beta Blocker at Discharge for ICD Implant Patients With a Previous Myocardial Infarction
- Beta Blocker at Discharge for ICD Implant Patients With LVSD
- Composite: Discharge Medications (ACE/ARB and beta blockers) in Eligible ICD Implant Patients

CathPCI Registry

- Proportion of Patients With Aspirin Prescribed at Discharge
- Proportion of Patients With a P2Y12 Inhibitor Prescribed at Discharge (Patients With Stents)
- Proportion of Patients With a Statin Prescribed at Discharge
- Composite: Discharge Medications (Aspirin, P2Y 12 Inhibitor, and Statin) in Eligible PCI Patients

Details of Participation Requirements (STS)

To receive credit for STS public reporting, STS Adult Cardiac Surgery Database participants had to have their scores and data publicly displayed on the STS website (http://www.sts.org) as of February 2016. STS ACSD public reporting currently includes outcomes for the following surgeries:

- Coronary artery bypass graft (CABG)
- Isolated aortic valve replacement (AVR)
- AVR plus CABG surgeries

G. Calculation of the Overall Score for the Data-Driven Specialties

All Specialties Except Cardiology & Heart Surgery

For 2016-17, The U.S. News ranking score reflects the followings weights for each of the major components:

- Structure = 30%
- Process = 27.5%
- Outcomes = 37.5%
- Patient safety = 5%

Relative structural measure weights can be found in ***Table 6.***

Rankings for the top 50 hospitals in each specialty, by U.S. News score, are shown in ***Appendix D***.

Equation (2) shows the formula for calculating the raw, overall score for each specialty except Cardiology & Heart Surgery. A hospital's raw score in a specialty can be thought of as a simple weighted sum of the four ranking components, as shown below:

$$Raw\ score = \{.3\left(\sum_{i=1}^{n_s} S_i\right) + .275\sum_{i=1}^{n_p} P_i + .375\left(\sum_{i=1}^{n_o} O_i\right) + .05PS_i\}, \quad (2)$$

where

S_i = normalized value for structural measure *i,*

P_i = normalized value for process measure (reputation) *i*,

O_i = normalized value for outcomes measure (survival) *i,*

PS_i = normalized hospital-wide patient safety score.

This formula is illustrative only, however; it *cannot* be used to calculate a score for an individual hospital or replicate a published score.

For presentation purposes, raw scores were transformed to a scale that assigns a U.S. News score of 100 to the top hospital. The formula for the transformation is shown in Equation (3):

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

Cardiology & Heart Surgery

For Cardiology & Heart Surgery, the U.S. News score included a fifth component—public transparency. This fifth component accounts for 3% of the overall score in the 2016-17 rankings. To accommodate this component, process weight was reduced to 24.5%. The U.S. News score for Cardiology & Heart Surgery reflects the following weights for each major component:

- Structure = 30%
- Process = 24.5%
- Outcomes = 37.5%
- Patient safety = 5%
- Public transparency = 3%

The formula for calculating the raw score for Cardiology & Heart Surgery is shown in Equation (4), as shown below:

$$Raw\ score = \{.3\left(\sum_{i=1}^{n_s} S_i\right) + .245\sum_{i=1}^{n_p} P_i + .375\left(\sum_{i=1}^{n_o} O_i\right) + .05PS_i + .03PT_i\}, \quad (4)$$

where

S_i = normalized value for Cardiology & Heart Surgery structural measure *i,*

P_i = normalized value for Cardiology & Heart Surgery process measure (reputation) *i*,

O_i = normalized value for Cardiology & Heart Surgery outcomes measure (survival) *i*,

PS_i = normalized hospital-wide patient safety score,

PT_i = normalized public transparency score.

As with the other specialties, raw scores were transformed to a scale that assigned a score of 100 to the top hospital.

III. Reputation-Only Specialties

Available data for the four reputation-only specialties are more limited than for the data-driven specialties. Life-threatening conditions and procedures are rare in Ophthalmology, Psychiatry, and Rehabilitation, rendering mortality irrelevant. Inpatient volume in Rheumatology is extremely low, making calculation of mortality unreliable. Reliable structural measures also are unavailable in these four specialties. Therefore, reputation alone—the process component—determines ranking. This section describes the eligibility and procedures used to develop the rankings for these four specialties.

A. Eligibility

In specialties driven solely by reputation, hospitals have never had to meet the same eligibility standards as in the data-driven specialties. Starting with the 2015-16 rankings, a hospital had to have a reputation score of 1% or greater, roughly equal to at least three nominations within the past 3 years. Previously, a hospital was eligible if it received one or more physician nominations in the past 3 years. This change was made to restrict eligibility to hospitals that are more consistently nominated. Ranked hospitals were those nominated by at least 5% of responding physicians within the last 3 years.

B. Process

The data-driven specialties and 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 data-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. Number of Ranked Hospitals

This year, 154 different hospitals were ranked in at least one data-driven or reputation-only Best Hospitals specialty. An additional 24 specialty hospitals that closely coordinate care with a partner hospital shared one or two specialty-specific rankings with that partner.

V. Honor Roll

The Honor Roll, which since 1990 has recognized excellence across a broad range of Best Hospitals specialties, was revamped for 2016-17. The updated methodology factors in the Procedures and Conditions ratings and reduces the role of reputation in the Honor Roll rankings. The 2016-17 Honor Roll was determined as follows.

1. In each of the 12 data-driven specialty rankings, the No. 1-ranked hospital received 25 Honor Roll points and lower-ranked hospitals progressively received one less point down to No. 21. All hospitals ranked 21–50 received 5 points. A hospital ranked No. 1 in all 12 data-driven specialties would have received 300 points.

2. In each of the four reputation-only specialties, the No. 1-ranked hospital received 10 Honor Roll points, the No. 2 hospital received 9 points and lower-ranked hospitals progressively received one less point down to No. 10. All hospitals from No. 10 to the last ranked hospital received 1 point. A hospital ranked No. 1 in all four reputation-only specialties would have received 40 points.

3. In the nine procedures and conditions for which U.S. News published 2016-17 ratings,[*****] hospitals received 12 Honor Roll points for each rating of High Performing. Hospitals that were rated High Performing in all nine procedures and conditions received 108 points.

[*****] Chronic obstructive pulmonary disease (COPD); congestive heart failure (CHF); coronary artery bypass surgery (CABG); hip replacement; knee replacement; abdominal aortic aneurysm repair; aortic valve repair or replacement (AVR); colon cancer surgery, and lung cancer surgery.

4. The 2016-17 Honor Roll recognizes the 20 hospitals that earned the most points out of the possible total of 448 across the 16 specialties and nine procedures and conditions. The Honor Roll is ranked from No. 1 to No. 20, based on points.

The 2016-17 Honor Roll appears in ***Appendix F***.

VI. History of Methodology Changes by RTI

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

Summary of 2016-17 Changes

- **Component weight**. The overall weight for the patient safety index was lowered from 10% in 2015-16 to 5% in 2016-17. The overall weight for outcomes was correspondingly increased from 32.5% last year to 37.5%.

- **Intensivists**. Hospitals now receive 1 point for having at least one intensivist whether on staff or through another privileged arrangement. Previously, intensivists were required to be on staff.

- **Nurse Magnet**. The Nurse Magnet measure was updated to better reflect program coverage for hospitals that are part of a multicampus system or an arrangement with another hospital outside the system. These combined entities only received full credit in 2016-17 (1 point) if all hospitals in the combination had Nurse Magnet recognition as of April 1, 2016. If the primary hospital had Nurse Magnet recognition but the specialty or secondary hospital(s) did not, the combined entity received half credit (0.5 point).

- **Public transparency**. In Cardiology & Heart Surgery only, a new measure was added rewarding hospitals for participation in transparency in public reporting of heart outcomes with the ACC and STS.

- **Use of SAF file for patient safety**. In previous years, the data source for the patient safety score was the same 3-year sample from the MedPAR data set that was used for the volume and mortality analyses. For 2016-17, the rankings used data from the CMS SAF instead of MedPAR. This change was motivated by the need to have more accurate procedure data for a number of the PSI calculations.

- **Patient safety score.** PSI 03, decubitus ulcer, was dropped due to concerns that the measure was overly sensitive to missing POA data in the record, which could confound comparisons.

- **Medicare beneficiaries under 65 years of age**. These patients were excluded from calculations of volume and survival in order to maximize the homogeneity of the population included in the analysis. Consequently, published volumes for many hospitals were lower for 2016-17 than for prior years' rankings.

- **Data for Maryland hospitals**. For Maryland hospitals, data from the state's HSCRC all-payer database was used for patient safety. This change was made to address incomplete coding of POA indicators in the CMS datasets for some of the years of analyses under consideration for the rankings.

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, we now use 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 because it does not reflect 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 three 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 overall score. 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 x 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 score. Previously, ties were not allowed and were broken by examining the scores out to 3 decimal points.

- **Cut-offs 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 score did not change from that used in 2010.

- **Updated scoring for the Patient Safety Index**. The Patient Safety Index was 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 $\geq 75^{th}$ percentile, 25^{th}–74^{th} 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.** We revised the method for adjusting the scores for hospitals with low discharges on both volume and mortality. 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 hospital's 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.

- **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.

- **Intensivist on staff added.** Hospitals now receive credit in all data-driven specialties for having intensivists on staff.

- **Patient Safety Index added.** A Best Hospitals Patient Safety Index was created and applied to all data-driven specialties.

- **DRG groupings updated.** DRG groupings were updated for all data-driven specialties, consistent with typical year-to-year changes.

- **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 the hospital where they work.

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 data-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 data-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 and 2006 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.

VII. 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. Below, we describe several methodological improvements that are being considered.

- **Evaluate transparency measures for other specialties**. We will continue to evaluate new measures for transparency of outcomes, similar to the ACC and STS public transparency measure added in Cardiology & Heart Surgery.

- **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 (HCAHPS) 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.

VIII. 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.

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Appendix A

2016-17 Physician Survey Materials

Survey Cover Letter

January 20, 2016

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

Dear Dr. «last name»,

We are asking you, as part of a select group of specialists, to name the best hospitals for the sickest patients in [psychiatry] 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 associated with psychiatry. The survey is being conducted by RTI International on behalf of U.S. News.

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 2016-17 Best Hospitals rankings. The rankings will be published at www.usnews.com in early August 2016.

Your responses will be kept confidential and will be released only as part of a summary of the overall responses from our national sample.

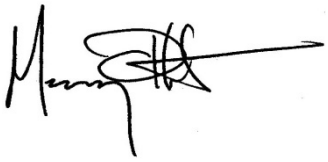
If you have any questions, please feel free to contact us at (866) 309-4561 or at BestHospitals@rti.org.

Please submit your responses by March 15, 2016. You can return the survey in the postpaid envelope provided. If you prefer, you can fax the survey to (800) 476-9721.

[INCENTIVE GROUP ONLY: The enclosed two-dollar bill is a token of our appreciation for your help.]

Thank you for your time and expertise.

Sincerely,



Dr. Murrey Olmsted
Project Director, Best Hospitals
RTI International

«ID»

Best Hospitals

Your nominations will be reflected in the 2016-17 *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.			
b.			
c.			
d.			
e.			

Fax response to (800) XXX-XXXX

or return in postpaid envelope.

Conducted by:

RTI INTERNATIONAL

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 2016-17 data-driven rankings, were taken from the 2014 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, CAOSSYSor 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

Nurse Staffing

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
HOSPCHOS, 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
HOSPCHOS, 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
HOSPCHOS, 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
HOSPCHOS, 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, AIRBSYSor AIRBVEN=1
WMGTHOS, WMGTSYS or WMGTVEN=1

Gastroenterology & GI Surgery Patient Services (8 points possible)

1 point awarded if…
GNTCHOS, GNTCSYS or GNTCVEN=1
HOSPCHOS, 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
HOSPCHOS, HOSPCSYS or HOSPCVEN=1
PAINHOS, PAINSYS or PAINVEN=1
PALHOS, PALSYSor 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
HOSPCHOS, 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
HOSPCHOS, 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
HOSPCHOS, 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
HOSPCHOS, 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
HOSPCHOS, 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
HOSPCHOS, 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…
TPINT > 0

Appendix C

2016-17 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	2.3266
016	S	Autologous bone marrow transplant w CC/MCC	Include all	1	1.8146
017	S	Autologous bone marrow transplant w/o CC/MCC	Include all	1	2.2522
023	S	Cranio w major dev impl/acute complex CNS PDX w MCC or chemo implant	Include procedures: 0010	1	0.7589
054	M	Nervous system neoplasms w MCC	Include all	1	0.9255
055	M	Nervous system neoplasms w/o MCC	Include all	2	1.0102
146	M	Ear, nose, mouth & throat malignancy w MCC	Include all	1	1.0929
147	M	Ear, nose, mouth & throat malignancy w CC	Include all	2	1.1156
148	M	Ear, nose, mouth & throat malignancy w/o CC/MCC	Include all	2	1.4690
180	M	Respiratory neoplasms w MCC	Include all	1	0.7656
181	M	Respiratory neoplasms w CC	Include all	2	0.8178
182	M	Respiratory neoplasms w/o CC/MCC	Include all	2	0.8553
374	M	Digestive malignancy w MCC	Include all	1	0.8598
375	M	Digestive malignancy w CC	Include all	2	0.8984
376	M	Digestive malignancy w/o CC/MCC	Include all	2	0.8614
435	M	Malignancy of hepatobiliary system or pancreas w MCC	Include all	1	0.8636
436	M	Malignancy of hepatobiliary system or pancreas w CC	Include all	2	0.9076
437	M	Malignancy of hepatobiliary system or pancreas w/o CC/MCC	Include all	2	0.8890
456	S	Spinal fus exc cerv w spinal curv/malig/infec or 9+ fus w MCC	Include diagnoses: 1702, 1985, 20973	1	0.9980
457	S	Spinal fus exc cerv w spinal curv/malig/infec or 9+ fus w CC	See MS-DRG 456	2	1.2300
458	S	Spinal fus exc cerv w spinal curv/malig/infec or 9+ fus w/o CC/MCC	See MS-DRG 456	2	1.0773
542	M	Pathological fractures & musculoskelet & conn tiss malig w MCC	Exclude diagnoses: 4463-4, 7331, 73310-6, 73319, 73393-8	1	0.8485
543	M	Pathological fractures & musculoskelet & conn tiss malig w CC	See MS-DRG 542	2	0.9391
544	M	Pathological fractures & musculoskelet & conn tiss malig w/o CC/MCC	See MS-DRG 542	2	1.1007
582	S	Mastectomy for malignancy w CC/MCC	Include all	2	1.1689
583	S	Mastectomy for malignancy w/o CC/MCC	Include all	2	1.8465
595	M	Major skin disorders w MCC	Include diagnoses: 1720, 1722-9, 20931-6	1	1.0649
596	M	Major skin disorders w/o MCC	See MS-DRG 595	2	1.1859
597	M	Malignant breast disorders w MCC	Include all	1	1.0810
598	M	Malignant breast disorders w CC	Include all	2	1.0836
599	M	Malignant breast disorders w/o CC/MCC	Include all	2	1.0693
656	S	Kidney & ureter procedures for neoplasm w MCC	Include all	1	0.7657
657	S	Kidney & ureter procedures for neoplasm w CC	Include all	2	0.9351
658	S	Kidney & ureter procedures for neoplasm w/o CC/MCC	Include all	2	1.0230
686	M	Kidney & urinary tract neoplasms w MCC	Include all	2	0.7940
687	M	Kidney & urinary tract neoplasms w CC	Include all	2	0.8198
688	M	Kidney & urinary tract neoplasms w/o CC/MCC	Include all	3	0.5519
715	S	Other male reproductive system O.R. proc for malignancy w CC/MCC	Include all	2	0.9893
716	S	Other male reproductive system O.R. proc for malignancy w/o CC/MCC	Include all	2	1.3910
722	M	Malignancy, male reproductive system w MCC	Include all	1	0.7427
723	M	Malignancy, male reproductive system w CC	Include all	2	0.7818

MS-DRG	Medical/ Surgical	DRG Title	ICD-9-CM	Severity	Weight
724	M	Malignancy, male reproductive system w/o CC/MCC	Include all	2	0.7996
736	S	Uterine & adnexa proc for ovarian or adnexal malignancy w MCC	Include all	1	0.9024
737	S	Uterine & adnexa proc for ovarian or adnexal malignancy w CC	Include all	2	1.2400
738	S	Uterine & adnexa proc for ovarian or adnexal malignancy w/o CC/MCC	Include all	2	1.8278
739	S	Uterine,adnexa proc for non-ovarian/adnexal malig w MCC	Include all	1	0.8860
740	S	Uterine,adnexa proc for non-ovarian/adnexal malig w CC	Include all	2	1.1106
741	S	Uterine,adnexa proc for non-ovarian/adnexal malig w/o CC/MCC	Include all	2	1.0929
754	M	Malignancy, female reproductive system w MCC	Include all	1	0.9296
755	M	Malignancy, female reproductive system w CC	Include all	2	1.0060
756	M	Malignancy, female reproductive system w/o CC/MCC	Include all	2	1.1955
808	M	Major hematol/immun diag exc sickle cell crisis & coagul w MCC	Include diagnoses: 99685	1	1.8243
809	M	Major hematol/immun diag exc sickle cell crisis & coagul w CC	See MS-DRG 809	2	2.3266
810	M	Major hematol/immun diag exc sickle cell crisis & coagul w/o CC/MCC	See MS-DRG 809	2	2.3266
820	S	Lymphoma & leukemia w major O.R. procedure w MCC	Include all	1	0.9960
821	S	Lymphoma & leukemia w major O.R. procedure w CC	Include all	2	1.0726
822	S	Lymphoma & leukemia w major O.R. procedure w/o CC/MCC	Include all	2	1.0191
823	S	Lymphoma & non-acute leukemia w other O.R. proc w MCC	Include all	1	0.8251
824	S	Lymphoma & non-acute leukemia w other O.R. proc w CC	Include all	2	0.9841
825	S	Lymphoma & non-acute leukemia w other O.R. proc w/o CC/MCC	Include all	2	0.9848
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	1.1232
827	S	Myeloprolif disord or poorly diff neopl w maj O.R. proc w CC	See MS-DRG 826	2	1.1587
828	S	Myeloprolif disord or poorly diff neopl w maj O.R. proc w/o CC/MCC	See MS-DRG 826	2	1.0481
829	S	Myeloprolif disord or poorly diff neopl w other O.R. proc w CC/MCC	See MS-DRG 826	2	1.1639
830	S	Myeloprolif disord or poorly diff neopl w other O.R. proc w/o CC/MCC	See MS-DRG 826	2	1.2306
834	M	Acute leukemia w/o major O.R. procedure w MCC	Include all	1	1.1224
835	M	Acute leukemia w/o major O.R. procedure w CC	Include all	2	1.1801
836	M	Acute leukemia w/o major O.R. procedure w/o CC/MCC	Include all	2	1.4356
837	M	Chemo w acute leukemia as sdx or w high dose chemo agent w MCC	Include all	1	1.7381
838	M	Chemo w acute leukemia as sdx w CC or high dose chemo agent	Include all	2	2.3266
839	M	Chemo w acute leukemia as sdx w/o CC/MCC	Include all	2	2.3266
840	M	Lymphoma & non-acute leukemia w MCC	Include all	1	0.8112
841	M	Lymphoma & non-acute leukemia w CC	Include all	2	0.8406
842	M	Lymphoma & non-acute leukemia w/o CC/MCC	Include all	2	0.9372
843	M	Other myeloprolif dis or poorly diff neopl diag w MCC	Exclude diagnosis: v10, v711	3	0.8359
844	M	Other myeloprolif dis or poorly diff neopl diag w CC	See MS-DRG 844	3	0.9171
845	M	Other myeloprolif dis or poorly diff neopl diag w/o CC/MCC	See MS-DRG 844	3	0.8487
846	M	Chemotherapy w/o acute leukemia as secondary diagnosis w MCC	Include all	3	1.4218
847	M	Chemotherapy w/o acute leukemia as secondary diagnosis w CC	Include all	3	1.7947
848	M	Chemotherapy w/o acute leukemia as secondary diagnosis w/o CC/MCC	Include all	3	2.3266

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	1.5975
002	S	Heart transplant or implant of heart assist system w/o MCC	Include all	1	1.7382
163	S	Major chest procedures w MCC	Include procedures: 3712, 3724, 3731, 3791, 3805, 3815, 3835, 3845, 3855, 3865, 3885, 3954	1	1.7062
164	S	Major chest procedures w CC	See MS-DRG: 163	2	1.9246
165	S	Major chest procedures w/o CC/MCC	See MS-DRG: 164	2	2.0405
215	S	Other heart assist system implant	Include all	1	1.4079
216	S	Cardiac valve & oth maj cardiothoracic proc w card cath w MCC	Include all	1	1.0861
217	S	Cardiac valve & oth maj cardiothoracic proc w card cath w CC	Include all	2	1.0950
218	S	Cardiac valve & oth maj cardiothoracic proc w card cath w/o CC/MCC	Include all	2	1.1263
219	S	Cardiac valve & oth maj cardiothoracic proc w/o card cath w MCC	Include all	1	1.1372
220	S	Cardiac valve & oth maj cardiothoracic proc w/o card cath w CC	Include all	2	1.1578
221	S	Cardiac valve & oth maj cardiothoracic proc w/o card cath w/o CC/MCC	Include all	2	1.2005
222	S	Cardiac defib implant w cardiac cath w AMI/HF/shock w MCC	Include all	1	1.2284
223	S	Cardiac defib implant w cardiac cath w AMI/HF/shock w/o MCC	Include all	1	1.1570
224	S	Cardiac defib implant w cardiac cath w/o AMI/HF/shock w MCC	Include all	3	1.5826
225	S	Cardiac defib implant w cardiac cath w/o AMI/HF/shock w/o MCC	Include all	3	1.3124
226	S	Cardiac defibrillator implant w/o cardiac cath w MCC	Include all	1	1.0495
227	S	Cardiac defibrillator implant w/o cardiac cath w/o MCC	Include all	1	1.1008
228	S	Other cardiothoracic procedures w MCC	Include all	1	2.0405
229	S	Other cardiothoracic procedures w CC	Include all	2	2.0405
230	S	Other cardiothoracic procedures w/o CC/MCC	Include all	2	2.0405
231	S	Coronary bypass w PTCA w MCC	Include all	1	1.4164
232	S	Coronary bypass w PTCA w/o MCC	Include all	2	1.6671
233	S	Coronary bypass w cardiac cath w MCC	Include all	2	1.2138
234	S	Coronary bypass w cardiac cath w/o MCC	Include all	3	1.3170
235	S	Coronary bypass w/o cardiac cath w MCC	Include all	2	1.1769
236	S	Coronary bypass w/o cardiac cath w/o MCC	Include all	3	1.2314
237	S	Major cardiovasc procedures w MCC	Include all	1	1.2000
238	S	Major cardiovascular procedures w/o MCC	Include all	2	1.1507
242	S	Permanent cardiac pacemaker implant w MCC	Include all	2	0.8348
243	S	Permanent cardiac pacemaker implant w CC	Include all	2	0.8506
244	S	Permanent cardiac pacemaker implant w/o CC/MCC	Include all	3	0.8978
245	S	AICD Generator Procedures	Include all	2	0.9768
246	S	Perc cardiovasc proc w drug-eluting stent w MCC or 4+ vessels/stents	Include all	2	1.1359
247	S	Perc cardiovasc proc w drug-eluting stent w/o MCC	Include all	3	1.0981
248	S	Perc cardiovasc proc w non-drug-eluting stent w MCC or 4+ ves/stents	Include all	2	1.1152
249	S	Perc cardiovasc proc w non-drug-eluting stent w/o MCC	Include all	3	1.0810
250	S	Perc cardiovasc proc w/o coronary artery stent w MCC	Include all	3	1.0583
251	S	Perc cardiovasc proc w/o coronary artery stent or AMI w/o MCC	Include all	3	1.1466
252	S	Other vascular procedures w MCC	Include all	2	0.9455
253	S	Other vascular procedures w CC	Include all	2	1.0380
254	S	Other vascular procedures w/o CC/MCC	Include all	3	0.9969
260	S	Cardiac pacemaker revision except device replacement w MCC	Include all	1	1.0269

MS-DRG	Medical/ Surgical	DRG Title	ICD-9-CM	Severity	Weight
261	S	Cardiac pacemaker revision except device replacement w CC	Include all	2	1.0442
262	S	Cardiac pacemaker revision except device replacement w/o CC/MCC	Include all	2	0.9762
265	S	ACID lead procedures	Include all	2	1.0584
280	M	Acute myocardial infarction, discharged alive w MCC	Include all	1	0.8860
281	M	Acute myocardial infarction, discharged alive w CC	Include all	2	0.9883
282	M	Acute myocardia infarction, discharged alive w/o CC/MCC	Include all	2	1.1123
283	M	Acute myocardial infarction, expired w MCC	Include all	1	0.8738
284	M	Acute myocardial infarction, expired w CC	Include all	2	0.8435
285	M	Acute myocardial infarction, expired w/o CC/MCC	Include all	2	0.8924
286	M	Circulatory disorders except AMI, w card cath w MCC	Include all	2	1.1124
287	M	Circulatory disorders except AMI, w card cath w/o MCC	Include all	3	1.2534
288	M	Acute & subacute endocarditis w MCC	Include all	1	1.4649
289	M	Acute & subacute endocarditis w CC	Include all	2	1.6661
290	M	Acute & subacute endocarditis w/o CC/MCC	Include all	2	1.8425
291	M	Heart failure & shock w MCC	Include all	1	0.8862
292	M	Heart failure & shock w CC	Include all	2	0.9403
293	M	Heart failure & shock w/o CC/MCC	Include all	2	0.9004
306	M	Cardiac congenital & valvular disorders w MCC	Include all	1	0.9472
308	M	Cardiac arrhythmia & conduction disorders w MCC	Include all	1	0.9141
309	M	Cardiac arrhythmia & conduction disorders w CC	Include all	2	0.9984
314	M	Other circulatory system diagnoses w MCC	Include all	2	1.1172
315	M	Other circulatory system diagnoses w CC	Include all	2	1.3834
316	M	Other circulatory system diagnoses w/o CC/MCC	Include all	3	1.5816

Diabetes & Endocrinology

MS-DRG	Medical/ Surgical	DRG Title	ICD-9-CM	Severity	Weight
614	S	Adrenal & pituitary procedures w CC/MCC	Include all	2	1.7089
615	S	Adrenal & pituitary procedures w/o CC/MCC	Include all	2	1.4610
619	S	O.R. procedures for obesity w MCC	Include all	1	1.2562
620	S	O.R. procedures for obesity w CC	Include all	2	2.0078
621	S	O.R. procedures for obesity w/o CC/MCC	Include all	2	2.0755
622	S	Skin grafts & wound debrid for endoc, nutrit & metab dis w MCC	Include all	1	0.7504
623	S	Skin grafts & wound debrid for endoc, nutrit & metab dis w CC	Include all	2	1.0592
624	S	Skin grafts & wound debrid for endoc, nutrit & metab dis w/o CC/MCC	Include all	2	1.4102
625	S	Thyroid, parathyroid & thyroglossal procedures w MCC	Include all	1	0.8007
626	S	Thyroid, parathyroid & thyroglossal procedures w CC	Include all	2	1.5988
627	S	Thyroid, parathyroid & thyroglossal procedures w/o CC/MCC	Include all	2	1.4373
628	S	Other endocrine, nutrit & metab O.R. proc w MCC	Include all	1	0.7388
629	S	Other endocrine, nutrit & metab O.R. proc w CC	Include all	2	0.9965
630	S	Other endocrine, nutrit & metab O.R. proc w/o CC/MCC	Include all	2	1.2372
637	M	Diabetes w MCC	Include all	3	0.9360
638	M	Diabetes w CC	Include all	3	1.0461
639	M	Diabetes w/o CC/MCC	Include all	3	1.0881
640	M	Misc disorders of nutrition, metabolism, fluids/electrolyes w MCC	Exclude diagnosis: 77934	3	0.7357
643	M	Endocrine disorders w MCC	Include all	3	0.7465
644	M	Endocrine disorders w CC	Include all	3	0.8226

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	1.0052
012	S	Tracheostomy for face,mouth & neck diagnoses w CC	Include all	1	1.0361
013	S	Tracheostomy for face,mouth & neck diagnoses w/o CC/MCC	Include all	1	1.1581
129	S	Major head & neck procedures w CC/MCC or major device	Include all	2	0.9538
130	S	Major head & neck procedures w/o CC/MCC	Include all	2	0.9036
131	S	Cranial/Facial Procedures w CC/MCC	Include all	3	1.9678
132	S	Cranial/Facial Procedures w/o CC/MCC	Include all	3	2.2040
133	S	Other ear, nose, mouth & throat O.R. procedures w CC/MCC	Include all	3	1.7501
134	S	Other ear, nose, mouth & throat O.R. procedures w/o CC/MCC	Include all	3	2.2040
139	S	Salivary gland procedures	Include all	3	0.7803
146	M	Ear, nose, mouth & throat malignancy w MCC	Include all	1	0.9695
147	M	Ear, nose, mouth & throat malignancy w CC	Include all	2	0.9896
148	M	Ear, nose, mouth & throat malignancy w/o CC/MCC	Include all	2	1.3032
152	M	Otitis media & URI w MCC	Include all	3	0.8894
154	M	Other ear, nose, mouth and throat diagnosis w MCC	Include all	3	0.7129
155	M	Other ear, nose, mouth and throat diagnosis w CC	Include all	3	0.7089
156	M	Other ear, nose, mouth and throat diagnosis w/o CC/MCC	Include all	3	0.7140

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	1.0510
327	S	Stomach, esophageal & duodenal proc w CC	Include all	2	1.2671
328	S	Stomach, esophageal & duodenal proc w/o CC/MCC	Include all	3	1.4274
329	S	Major small & large bowel procedures w MCC	Include all	1	0.9337
330	S	Major small & large bowel procedures w CC	Include all	2	1.1235
331	S	Major small & large bowel procedures w/o CC/MCC	Include all	2	1.2412
332	S	Rectal resection w MCC	Include all	1	0.9013
333	S	Rectal resection w CC	Include all	1	1.1916
334	S	Rectal resection w/o CC/MCC	Include all	2	1.3235
335	S	Peritoneal adhesiolysis w MCC	Include all	1	0.8498
336	S	Peritoneal adhesiolysis w CC	Include all	2	1.1320
337	S	Peritoneal adhesiolysis w/o CC/MCC	Include all	2	1.2908
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	0.9193
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	1.3144
346	S	Minor small & large bowel procedures w/o CC/MCC	See MS-DRG 345	3	1.0815
356	S	Other digestive system O.R. procedures w MCC	Include all	2	0.8665
357	S	Other digestive system O.R. procedures w CC	Include all	2	1.0605
358	S	Other digestive system O.R. procedures w/o CC/MCC	Include all	3	1.2044

MS-DRG	Medical/ Surgical	DRG Title	ICD-9-CM	Severity	Weight
368	M	Major esophageal disorders w MCC	Include all	1	0.9867
369	M	Major esophageal disorders w CC	Include all	2	1.1940
370	M	Major esophageal disorders w/o CC/MCC	Include all	2	1.4069
371	M	Major gastrointestinal disorders & peritoneal infections w MCC	Include all	1	0.7931
372	M	Major gastrointestinal disorders & peritoneal infections w CC	Include all	2	0.8980
373	M	Major gastrointestinal disorders & peritoneal infections w/o CC/MCC	Include all	2	1.1581
374	M	Digestive malignancy w MCC	Include all	1	0.9628
375	M	Digestive malignancy w CC	Include all	2	1.0061
376	M	Digestive malignancy w/o CC/MCC	Include all	2	0.9646
377	M	G.I. hemorrhage w MCC	Include all	1	0.7315
378	M	G.I. hemorrhage w CC	Include all	2	0.7698
379	M	G.I. hemorrhage w/o CC/MCC	Include all	2	0.8290
380	M	Complicated peptic ulcer w MCC	Include all	1	0.8583
381	M	Complicated peptic ulcer w CC	Include all	2	0.9272
382	M	Complicated peptic ulcer w/o CC/MCC	Include all	2	1.1998
383	M	Uncomplicated peptic ulcer w MCC	Include all	3	0.8969
385	M	Inflammatory bowel disease w MCC	Include all	1	1.4974
386	M	Inflammatory bowel disease w CC	Include all	2	1.8507
387	M	Inflammatory bowel disease w/o CC/MCC	Include all	2	1.8507
388	M	G.I. obstruction w MCC	Include all	3	0.7321
389	M	G.I. obstruction w CC	Include all	3	0.7443
391	M	Esophagitis, gastroent & misc digest disorders w MCC	Include all	3	0.8783
393	M	Other digestive system diagnoses w MCC	Include all	1	0.8606
394	M	Other digestive system diagnoses w CC	Include all	2	0.9286
405	S	Pancreas, liver & shunt procedures w MCC	Include all	1	1.2189
406	S	Pancreas, liver & shunt procedures w CC	Include all	1	1.3152
407	S	Pancreas, liver & shunt procedures w/o CC/MCC	Include all	2	1.4672
408	S	Biliary tract proc except only cholecyst w or w/o c.d.e. w MCC	Include all	2	0.9938
409	S	Biliary tract proc except only cholecyst w or w/o c.d.e. w CC	Include all	2	1.1025
410	S	Biliary tract proc except only cholecyst w or w/o c.d.e. w/o CC/MCC	Include all	3	1.8507
411	S	Cholecystectomy w c.d.e. w MCC	Include all	1	0.9260
412	S	Cholecystectomy w c.d.e. w CC	Include all	2	1.0939
413	S	Cholecystectomy w c.d.e. w/o CC/MCC	Include all	2	1.3448
414	S	Cholecystectomy except by laparoscope w/o c.d.e. w MCC	Include all	1	0.9140
415	S	Cholecystectomy except by laparoscope w/o c.d.e. w CC	Include all	2	1.0997
417	S	Laparoscopic cholecystectomy w/o c.d.e. w MCC	Include all	3	0.9301
418	S	Laparoscopic cholecystectomy w/o c.d.e. w CC	Include all	3	1.1680
420	S	Hepatobiliary diagnostic procedures w MCC	Include all	1	1.1363
421	S	Hepatobiliary diagnostic procedures w CC	Include all	2	1.1045
422	S	Hepatobiliary diagnostic procedures w/o CC/MCC	Include all	2	1.3519
423	S	Other hepatobiliary or pancreas O.R. procedures w MCC	Include all	3	1.0184
424	S	Other hepatobiliary or pancreas O.R. procedures w CC	Include all	3	0.9964
425	S	Other hepatobiliary or pancreas O.R. procedures w/o CC/MCC	Include all	3	1.7583
432	M	Cirrhosis & alcoholic hepatitis w MCC	Include all	1	1.6699
433	M	Cirrhosis & alcoholic hepatitis w CC	Include all	2	1.8074
434	M	Cirrhosis & alcoholic hepatitis w/o CC/MCC	Include all	2	1.8507
435	M	Malignancy of hepatobiliary system or pancreas w MCC	Include all	1	0.9671
436	M	Malignancy of hepatobiliary system or pancreas w CC	Include all	2	1.0163
437	M	Malignancy of hepatobiliary system or pancreas w/o CC/MCC	Include all	2	0.9955
438	M	Disorders of pancreas except malignancy w MCC	Include all	1	1.2196
439	M	Disorders of pancreas except malignancy w CC	Include all	2	1.5594
440	M	Disorders of pancreas except malignancy w/o CC/MCC	Include all	2	1.6583

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	1.1752
442	M	Disorders of liver except malig,cirr,alc hepa w CC	See MS-DRG 442	2	1.2897

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	1.0383
002	S	Heart transplant or implant of heart assist system w/o MCC	Include all	1	1.0489
003	S	ECMO or trach w MV 96+ hrs or PDX exc face, mouth & neck w maj O.R.	Include all	1	1.0400
004	S	Trach w MV 96+ hrs or PDX exc face, mouth & neck w/o maj O.R.	Include all	1	1.0281
005	S	Liver transplant w MCC or intestinal transplant	Include all	1	1.0877
006	S	Liver transplant w/o MCC	Include all	1	0.9323
007	S	Lung transplant	Include all	1	0.9323
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	1.0290
012	S	Tracheostomy for face,mouth & neck diagnoses w CC	Include all	1	1.0324
013	S	Tracheostomy for face,mouth & neck diagnoses w/o CC/MCC	Include all	1	1.0399
014	S	Allogeneic bone marrow transplant	Include all	1	1.1164
016	S	Autologous bone marrow transplant w CC/MCC	Include all	1	0.9945
017	S	Autologous bone marrow transplant w/o CC/MCC	Include all	1	0.9323
020	S	Intracranial vascular procedures w PDX hemorrhage w MCC	Include all	1	1.0047
021	S	Intracranial vascular procedures w PDX hemorrhage w CC	Include all	1	1.0567
022	S	Intracranial vascular procedures w PDX hemorrhage w/o CC/MCC	Include all	1	1.1164
023	S	Cranio w major dev impl/acute complex CNS PDX w MCC or chemo implant	Include all	1	1.0172
024	S	Cranio w major dev impl/acute complex CNS PDX w/o MCC	Include all	1	1.0211
025	S	Craniotomy & endovascular intracranial procedures w MCC	Include all	1	1.0117
026	S	Craniotomy & endovascular intracranial procedures w CC	Include all	1	1.0232
027	S	Craniotomy & endovascular intracranial procedures w/o CC/MCC	Include all	1	1.0162
028	S	Spinal procedures w MCC	Include all	1	1.0083
029	S	Spinal procedures w CC or spinal neurostimulators	Include all	2	0.9981
030	S	Spinal procedures w/o CC/MCC	Include all	2	1.0089
031	S	Ventricular shunt procedures w MCC	Include all	1	1.0121
032	S	Ventricular shunt procedures w CC	Include all	2	0.9794
033	S	Ventricular shunt procedures w/o CC/MCC	Include all	2	0.9781
034	S	Carotid artery stent procedure w MCC	Include all	1	1.0154
035	S	Carotid artery stent procedure w CC	Include all	2	0.9854
036	S	Carotid artery stent procedure w/o CC/MCC	Include all	2	0.9923
037	S	Extracranial procedures w MCC	Include all	2	0.9966
038	S	Extracranial procedures w CC	Include all	2	0.9879
039	S	Extracranial procedures w/o CC/MCC	Include all	3	1.0143
040	S	Periph & cranial nerve & other nerv syst proc w MCC	Include all	2	1.0079
041	S	Periph/cranial nerve & other nerv syst proc w CC or periph neurostim	Include all	2	1.0056
042	S	Periph & cranial nerve & other nerv syst proc w/o CC/MCC	Include all	3	0.9624
052	M	Spinal disorders & injuries w CC/MCC	Include all	2	1.0832
053	M	Spinal disorders & injuries w/o CC/MCC	Include all	2	1.0111
054	M	Nervous system neoplasms w MCC	Include all	1	1.0110

MS-DRG	Medical/ Surgical	DRG Title	ICD-9-CM	Severity	Weight
055	M	Nervous system neoplasms w/o MCC	Include all	2	1.0108
056	M	Degenerative nervous system disorders w MCC	Include all	1	1.0247
057	M	Degenerative nervous system disorders w/o MCC	Include all	2	1.0095
058	M	Multiple sclerosis & cerebellar ataxia w MCC	Include all	1	0.9945
059	M	Multiple sclerosis & cerebellar ataxia w CC	Include all	2	0.9856
060	M	Multiple sclerosis & cerebellar ataxia w/o CC/MCC	Include all	2	0.9814
061	M	Acute ischemic stroke w use of thrombolytic agent w MCC	Include all	1	1.0071
062	M	Acute ischemic stroke w use of thrombolytic agent w CC	Include all	2	1.0154
063	M	Acute ischemic stroke w use of thrombolytic agent w/o CC/MCC	Include all	2	1.0173
064	M	Intracranial hemorrhage or cerebral infarction w MCC	Include all	1	1.0118
065	M	Intracranial hemorrhage or cerebral infarction w CC	Include all	2	1.0030
066	M	Intracranial hemorrhage or cerebral infarction w/o CC/MCC	Include all	2	1.0089
067	M	Nonspecific cva & precerebral occlusion w/o infarct w MCC	Include all	1	0.9972
068	M	Nonspecific cva & precerebral occlusion w/o infarct w/o MCC	Include all	2	0.9982
069	M	Transient ischemia	Include all	3	0.9818
070	M	Nonspecific cerebrovascular disorders w MCC	Include all	2	1.0021
071	M	Nonspecific cerebrovascular disorders w CC	Include all	2	0.9974
072	M	Nonspecific cerebrovascular disorders w/o CC/MCC	Include all	3	0.9995
073	M	Cranial & peripheral nerve disorders w MCC	Include all	1	0.9843
074	M	Cranial & peripheral nerve disorders w/o MCC	Include all	2	0.9976
075	M	Viral meningitis w CC/MCC	Include all	2	1.0217
076	M	Viral meningitis w/o CC/MCC	Include all	2	1.0002
077	M	Hypertensive encephalopathy w MCC	Include all	1	1.0200
078	M	Hypertensive encephalopathy w CC	Include all	2	0.9957
079	M	Hypertensive encephalopathy w/o CC/MCC	Include all	2	1.0377
080	M	Nontraumatic stupor & coma w MCC	Include all	1	1.0104
081	M	Nontraumatic stupor & coma w/o MCC	Include all	2	1.0098
082	M	Traumatic stupor & coma, coma >1 hr w MCC	Include all	1	1.0564
083	M	Traumatic stupor & coma, coma >1 hr w CC	Include all	1	1.0668
084	M	Traumatic stupor & coma, coma >1 hr w/o CC/MCC	Include all	1	1.0590
085	M	Traumatic stupor & coma, coma <1 hr w MCC	Include all	1	1.0182
086	M	Traumatic stupor & coma, coma <1 hr w CC	Include all	2	1.0081
087	M	Traumatic stupor & coma, coma <1 hr w/o CC/MCC	Include all	2	1.0209
088	M	Concussion w MCC	Include all	3	1.0378
089	M	Concussion w CC	Include all	3	1.0119
090	M	Concussion w/o CC/MCC	Include all	3	0.9323
091	M	Other disorders of nervous system w MCC	Include all	3	1.0172
092	M	Other disorders of nervous system w CC	Include all	3	0.9920
093	M	Other disorders of nervous system w/o CC/MCC	Include all	3	1.0374
094	M	Bacterial & tuberculous infections of nervous system w MCC	Include all	1	1.0025
095	M	Bacterial & tuberculous infections of nervous system w CC	Include all	2	1.0148
096	M	Bacterial & tuberculous infections of nervous system w/o CC/MCC	Include all	2	1.0256
097	M	Non-bacterial infect of nervous sys exc viral meningitis w MCC	Include all	1	1.0087
098	M	Non-bacterial infect of nervous sys exc viral meningitis w CC	Include all	2	1.0365
099	M	Non-bacterial infect of nervous sys exc viral meningitis w/o CC/MCC	Include all	2	1.0220
100	M	Seizures w MCC	Include all	2	1.0047
101	M	Seizures w/o MCC	Include all	3	0.9944
102	M	Headaches w MCC	Include all	3	0.9802
103	M	Headaches w/o MCC	Include all	3	1.0012
113	S	Orbital procedures w CC/MCC	Include all	2	1.0389
114	S	Orbital procedures w/o CC/MCC	Include all	2	1.1164
115	S	Extraocular procedures except orbit	Include all	3	1.0489

MS-DRG	Medical/ Surgical	DRG Title	ICD-9-CM	Severity	Weight
116	S	Intraocular procedures w CC/MCC	Include all	3	1.1164
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	1.0117
122	M	Acute major eye infections w/o CC/MCC	Include all	2	1.0583
123	M	Neurological eye disorders	Include all	3	1.0062
124	M	Other disorders of the eye w MCC	Include all	2	0.9710
125	M	Other disorders of the eye w/o MCC	Include all	3	0.9993
129	S	Major head & neck procedures w CC/MCC or major device	Include all	2	0.9880
130	S	Major head & neck procedures w/o CC/MCC	Include all	2	0.9512
131	S	Cranial/facial procedures w CC/MCC	Include all	3	1.0041
132	S	Cranial/facial procedures w/o CC/MCC	Include all	3	0.9323
133	S	Other ear, nose, mouth & throat O.R. procedures w CC/MCC	Include all	3	0.9934
134	S	Other ear, nose, mouth & throat O.R. procedures w/o CC/MCC	Include all	3	0.9323
135	S	Sinus & mastoid procedures w CC/MCC	Include all	2	0.9610
136	S	Sinus & mastoid procedures w/o CC/MCC	Include all	2	1.0877
137	S	Mouth procedures w CC/MCC	Include all	3	1.0269
138	S	Mouth procedures w/o CC/MCC	Include all	3	0.9323
139	S	Salivary gland procedures	Include all	3	1.0359
146	M	Ear, nose, mouth & throat malignancy w MCC	Include all	1	1.1164
147	M	Ear, nose, mouth & throat malignancy w CC	Include all	2	1.0772
148	M	Ear, nose, mouth & throat malignancy w/o CC/MCC	Include all	2	1.1164
149	M	Dysequilibrium	Include all	3	0.9910
150	M	Epistaxis w MCC	Include all	3	0.9802
151	M	Epistaxis w/o MCC	Include all	3	0.9844
152	M	Otitis media & URI w MCC	Include all	3	0.9937
153	M	Otitis media & URI w/o MCC	Include all	3	0.9933
154	M	Other Ear, Nose, Mouth, and Throat Diagnoses with MCC	Include all	3	0.9992
155	M	Other Ear, Nose, Mouth, and Throat Diagnoses with CC	Include all	3	0.9908
156	M	Other Ear, Nose, Mouth, and Throat Diagnoses without CC/MCC	Include all	3	1.0171
157	M	Dental & Oral Diseases w MCC	Include all	3	1.0389
158	M	Dental & Oral Diseases w CC	Include all	3	1.0079
159	M	Dental & Oral Diseases w/o CC/MCC	Include all	3	0.9323
163	S	Major chest procedures w MCC	Include all	1	0.9972
164	S	Major chest procedures w CC	Include all	2	0.9963
165	S	Major chest procedures w/o CC/MCC	Include all	2	1.0027
166	S	Other resp system O.R. procedures w MCC	Include all	2	0.9929
167	S	Other resp system O.R. procedures w CC	Include all	2	1.0011
168	S	Other resp system O.R. procedures w/o CC/MCC	Include all	3	1.0399
175	M	Pulmonary embolism w MCC	Include all	1	1.0056
176	M	Pulmonary embolism w/o MCC	Include all	1	0.9958
177	M	Respiratory infections & inflammations w MCC	Include all	1	0.9964
178	M	Respiratory infections & inflammations w CC	Include all	2	0.9908
179	M	Respiratory infections & inflammations w/o CC/MCC	Include all	2	1.0090
180	M	Respiratory neoplasms w MCC	Include all	1	1.0234
181	M	Respiratory neoplasms w CC	Include all	2	1.0333
182	M	Respiratory neoplasms w/o CC/MCC	Include all	2	1.1164
183	M	Major chest trauma w MCC	Include all	1	1.0612
184	M	Major chest trauma w CC	Include all	1	1.1164
185	M	Major chest trauma w/o CC/MCC	Include all	1	1.1164
186	M	Pleural effusion w MCC	Include all	3	0.9940
187	M	Pleural effusion w CC	Include all	3	0.9936
188	M	Pleural effusion w/o CC/MCC	Include all	3	0.9872

MS-DRG	Medical/ Surgical	DRG Title	ICD-9-CM	Severity	Weight
189	M	Pulmonary edema & respiratory failure	Include all	2	1.0287
190	M	Chronic obstructive pulmonary disease w MCC	Include all	3	0.9958
191	M	Chronic obstructive pulmonary disease w CC	Include all	3	0.9937
192	M	Chronic obstructive pulmonary disease w/o CC/MCC	Include all	3	0.9930
193	M	Simple pneumonia & pleurisy w MCC	Include all	3	0.9978
194	M	Simple pneumonia & pleurisy w CC	Include all	3	0.9946
195	M	Simple pneumonia & pleurisy w/o CC/MCC	Include all	3	1.0167
196	M	Interstitial lung disease w MCC	Include all	3	1.0261
197	M	Interstitial lung disease w CC	Include all	3	0.9986
198	M	Interstitial lung disease w/o CC/MCC	Include all	3	1.1072
199	M	Pneumothorax w MCC	Include all	1	1.0228
200	M	Pneumothorax w CC	Include all	2	1.0306
201	M	Pneumothorax w/o CC/MCC	Include all	2	1.0308
202	M	Bronchitis & asthma w CC/MCC	Include all	3	0.9911
203	M	Bronchitis & asthma w/o CC/MCC	Include all	3	0.9784
204	M	Respiratory signs & symptoms	Include all	3	1.0005
205	M	Other respiratory system diagnoses w MCC	Include all	3	1.0008
206	M	Other respiratory system diagnoses w/o MCC	Include all	3	1.0378
207	M	Respiratory system diagnosis w ventilator support 96+ hours	Include all	2	1.0116
208	M	Respiratory system diagnosis w ventilator support <96 hours	Include all	2	1.0084
215	S	Other heart assist system implant	Include all	1	1.1019
216	S	Cardiac valve & oth maj cardiothoracic proc w card cath w MCC	Include all	1	0.9979
217	S	Cardiac valve & oth maj cardiothoracic proc w card cath w CC	Include all	2	0.9913
218	S	Cardiac valve & oth maj cardiothoracic proc w card cath w/o CC/MCC	Include all	2	0.9803
219	S	Cardiac valve & oth maj cardiothoracic proc w/o card cath w MCC	Include all	1	0.9940
220	S	Cardiac valve & oth maj cardiothoracic proc w/o card cath w CC	Include all	2	1.0035
221	S	Cardiac valve & oth maj cardiothoracic proc w/o card cath w/o CC/MCC	Include all	2	1.0024
222	S	Cardiac defib implant w cardiac cath w AMI/HF/shock w MCC	Include all	1	1.0321
223	S	Cardiac defib implant w cardiac cath w AMI/HF/shock w/o MCC	Include all	1	1.0087
224	S	Cardiac defib implant w cardiac cath w/o AMI/HF/shock w MCC	Include all	3	1.0288
225	S	Cardiac defib implant w cardiac cath w/o AMI/HF/shock w/o MCC	Include all	3	1.0000
226	S	Cardiac defibrillator implant w/o cardiac cath w MCC	Include all	1	1.0061
227	S	Cardiac defibrillator implant w/o cardiac cath w/o MCC	Include all	1	0.9944
228	S	Other cardiothoracic procedures w MCC	Include all	1	0.9937
229	S	Other cardiothoracic procedures w CC	Include all	2	1.0017
230	S	Other cardiothoracic procedures w/o CC/MCC	Include all	2	1.0226
231	S	Coronary bypass w PTCA w MCC	Include all	1	0.9878
232	S	Coronary bypass w PTCA w/o MCC	Include all	2	0.9868
233	S	Coronary bypass w cardiac cath w MCC	Include all	2	1.0236
234	S	Coronary bypass w cardiac cath w/o MCC	Include all	3	1.0210
235	S	Coronary bypass w/o cardiac cath w MCC	Include all	2	1.0111
236	S	Coronary bypass w/o cardiac cath w/o MCC	Include all	3	1.0129
237	S	Major cardiovasc procedures w MCC	Include all	1	1.0050
238	S	Major cardiovascular procedures w/o MCC	Include all	2	0.9939
239	S	Amputation for circ sys disorders exc upper limb & toe w MCC	Include all	1	0.9954
240	S	Amputation for circ sys disorders exc upper limb & toe w CC	Include all	2	1.0062
241	S	Amputation for circ sys disorders exc upper limb & toe w/o CC/MCC	Include all	2	1.0256
242	S	Permanent cardiac pacemaker implant w MCC	Include all	2	0.9880
243	S	Permanent cardiac pacemaker implant w CC	Include all	2	0.9934
244	S	Permanent cardiac pacemaker implant w/o CC/MCC	Include all	3	0.9931

MS-DRG	Medical/ Surgical	DRG Title	ICD-9-CM	Severity	Weight
245	S	AICD generator procedures	Include all	2	0.9905
246	S	Perc cardiovasc proc w drug-eluting stent w MCC or 4+ vessels/stents	Include all	2	1.0026
247	S	Perc cardiovasc proc w drug-eluting stent w/o MCC	Include all	3	0.9948
248	S	Perc cardiovasc proc w non-drug-eluting stent w MCC or 4+ ves/stents	Include all	2	0.9973
249	S	Perc cardiovasc proc w non-drug-eluting stent w/o MCC	Include all	3	1.0067
250	S	Perc cardiovasc proc w/o coronary artery stent w MCC	Include all	3	0.9897
251	S	Perc cardiovasc proc w/o coronary artery stent w/o MCC	Include all	3	0.9983
252	S	Other vascular procedures w MCC	Include all	2	0.9931
253	S	Other vascular procedures w CC	Include all	2	0.9895
254	S	Other vascular procedures w/o CC/MCC	Include all	3	0.9935
255	S	Upper limb & toe amputation for circ system disorders w MCC	Include all	1	1.0093
256	S	Upper limb & toe amputation for circ system disorders w CC	Include all	2	1.0011
257	S	Upper limb & toe amputation for circ system disorders w/o CC/MCC	Include all	2	1.0359
258	S	Cardiac pacemaker device replacement w MCC	Include all	3	1.0266
259	S	Cardiac pacemaker device replacement w/o MCC	Include all	3	0.9757
260	S	Cardiac pacemaker revision except device replacement w MCC	Include all	1	1.0125
261	S	Cardiac pacemaker revision except device replacement w CC	Include all	2	0.9932
262	S	Cardiac pacemaker revision except device replacement w/o CC/MCC	Include all	2	1.0023
263	S	Vein ligation & stripping	Include all	3	0.9323
264	S	Other circulatory system O.R. procedures	Include all	2	0.9923
265	S	AICD lead procedures	Include all	2	0.9863
280	M	Acute myocardial infarction, discharged alive w MCC	Include all	1	0.9931
281	M	Acute myocardial infarction, discharged alive w CC	Include all	2	0.9980
282	M	Acute myocardia infarction, discharged alive w/o CC/MCC	Include all	2	1.0061
283	M	Acute myocardial infarction, expired w MCC	Include all	1	1.0115
284	M	Acute myocardial infarction, expired w CC	Include all	2	1.0188
285	M	Acute myocardial infarction, expired w/o CC/MCC	Include all	2	1.0668
286	M	Circulatory disorders except AMI, w card cath w MCC	Include all	2	0.9983
287	M	Circulatory disorders except AMI, w card cath w/o MCC	Include all	3	0.9979
288	M	Acute & subacute endocarditis w MCC	Include all	1	1.0171
289	M	Acute & subacute endocarditis w CC	Include all	2	1.0084
290	M	Acute & subacute endocarditis w/o CC/MCC	Include all	2	1.0489
291	M	Heart failure & shock w MCC	Include all	1	0.9970
292	M	Heart failure & shock w CC	Include all	2	0.9945
293	M	Heart failure & shock w/o CC/MCC	Include all	2	0.9987
294	M	Deep vein thrombophlebitis w CC/MCC	Include all	3	1.0014
295	M	Deep vein thrombophlebitis w/o CC/MCC	Include all	3	0.9323
296	M	Cardiac arrest, unexplained w MCC	Include all	1	1.0190
297	M	Cardiac arrest, unexplained w CC	Include all	2	1.0251
298	M	Cardiac arrest, unexplained w/o CC/MCC	Include all	2	1.0085
299	M	Peripheral vascular disorders w MCC	Include all	1	0.9975
300	M	Peripheral vascular disorders w CC	Include all	2	0.9948
301	M	Peripheral vascular disorders w/o CC/MCC	Include all	2	0.9984
302	M	Atherosclerosis w MCC	Include all	3	1.0220
303	M	Atherosclerosis w/o MCC	Include all	3	0.9874
304	M	Hypertension w MCC	Include all	3	1.0164
305	M	Hypertension w/o MCC	Include all	3	0.9813
306	M	Cardiac congenital & valvular disorders w MCC	Include all	1	0.9812
307	M	Cardiac congenital & valvular disorders w/o MCC	Include all	2	0.9983

MS-DRG	Medical/ Surgical	DRG Title	ICD-9-CM	Severity	Weight
308	M	Cardiac arrhythmia & conduction disorders w MCC	Include all	1	0.9907
309	M	Cardiac arrhythmia & conduction disorders w CC	Include all	2	0.9926
310	M	Cardiac arrhythmia & conduction disorders w/o CC/MCC	Include all	2	0.9961
311	M	Angina pectoris	Include all	3	0.9971
312	M	Syncope & collapse	Include all	2	0.9993
313	M	Chest pain	Include all	3	1.0031
314	M	Other circulatory system diagnoses w MCC	Include all	2	1.0004
315	M	Other circulatory system diagnoses w CC	Include all	2	0.9955
316	M	Other circulatory system diagnoses w/o CC/MCC	Include all	3	1.0117
326	S	Stomach, esophageal & duodenal proc w MCC	Include all	2	0.9960
327	S	Stomach, esophageal & duodenal proc w CC	Include all	2	0.9997
328	S	Stomach, esophageal & duodenal proc w/o CC/MCC	Include all	3	0.9894
329	S	Major small & large bowel procedures w MCC	Include all	1	0.9936
330	S	Major small & large bowel procedures w CC	Include all	2	0.9961
331	S	Major small & large bowel procedures w/o CC/MCC	Include all	2	0.9988
332	S	Rectal resection w MCC	Include all	1	1.0006
333	S	Rectal resection w CC	Include all	1	0.9935
334	S	Rectal resection w/o CC/MCC	Include all	2	1.0117
335	S	Peritoneal adhesiolysis w MCC	Include all	1	0.9983
336	S	Peritoneal adhesiolysis w CC	Include all	2	0.9944
337	S	Peritoneal adhesiolysis w/o CC/MCC	Include all	2	0.9878
338	S	Appendectomy w complicated principal diag w MCC	Include all	3	0.9909
339	S	Appendectomy w complicated principal diag w CC	Include all	3	0.9820
340	S	Appendectomy w complicated principal diag w/o CC/MCC	Include all	3	0.9323
341	S	Appendectomy w/o complicated principal diag w MCC	Include all	3	1.0100
342	S	Appendectomy w/o complicated principal diag w CC	Include all	3	0.9933
343	S	Appendectomy w/o complicated principal diag w/o CC/MCC	Include all	3	1.0000
344	S	Minor small & large bowel procedures w MCC	Include all	2	0.9756
345	S	Minor small & large bowel procedures w CC	Include all	2	0.9876
346	S	Minor small & large bowel procedures w/o CC/MCC	Include all	3	0.9323
347	S	Anal & stomal procedures w MCC	Include all	1	0.9972
348	S	Anal & stomal procedures w CC	Include all	2	1.0156
349	S	Anal & stomal procedures w/o CC/MCC	Include all	2	0.9884
350	S	Inguinal & femoral hernia procedures w MCC	Include all	3	0.9921
351	S	Inguinal & femoral hernia procedures w CC	Include all	3	1.0180
352	S	Inguinal & femoral hernia procedures w/o CC/MCC	Include all	3	1.1164
353	S	Hernia procedures except inguinal & femoral w MCC	Include all	1	0.9972
354	S	Hernia procedures except inguinal & femoral w CC	Include all	2	1.0002
355	S	Hernia procedures except inguinal & femoral w/o CC/MCC	Include all	2	1.0004
356	S	Other digestive system O.R. procedures w MCC	Include all	2	0.9865
357	S	Other digestive system O.R. procedures w CC	Include all	2	0.9997
358	S	Other digestive system O.R. procedures w/o CC/MCC	Include all	3	1.1164
368	M	Major esophageal disorders w MCC	Include all	1	1.0033
369	M	Major esophageal disorders w CC	Include all	2	0.9897
370	M	Major esophageal disorders w/o CC/MCC	Include all	2	0.9924
371	M	Major gastrointestinal disorders & peritoneal infections w MCC	Include all	1	0.9890
372	M	Major gastrointestinal disorders & peritoneal infections w CC	Include all	2	0.9848
373	M	Major gastrointestinal disorders & peritoneal infections w/o CC/MCC	Include all	2	0.9929
374	M	Digestive malignancy w MCC	Include all	1	1.0411
375	M	Digestive malignancy w CC	Include all	2	1.0390
376	M	Digestive malignancy w/o CC/MCC	Include all	2	1.0469
377	M	G.I. hemorrhage w MCC	Include all	1	0.9921

MS-DRG	Medical/ Surgical	DRG Title	ICD-9-CM	Severity	Weight
378	M	G.I. hemorrhage w CC	Include all	2	0.9936
379	M	G.I. hemorrhage w/o CC/MCC	Include all	2	0.9992
380	M	Complicated peptic ulcer w MCC	Include all	1	0.9923
381	M	Complicated peptic ulcer w CC	Include all	2	0.9916
382	M	Complicated peptic ulcer w/o CC/MCC	Include all	2	1.0036
383	M	Uncomplicated peptic ulcer w MCC	Include all	3	1.0305
384	M	Uncomplicated peptic ulcer w/o MCC	Include all	3	0.9977
385	M	Inflammatory bowel disease w MCC	Include all	1	0.9873
386	M	Inflammatory bowel disease w CC	Include all	2	0.9982
387	M	Inflammatory bowel disease w/o CC/MCC	Include all	2	0.9860
388	M	G.I. obstruction w MCC	Include all	3	0.9918
389	M	G.I. obstruction w CC	Include all	3	0.9889
390	M	G.I. obstruction w/o CC/MCC	Include all	3	0.9818
391	M	Esophagitis, gastroent & misc digest disorders w MCC	Include all	3	0.9979
392	M	Esophagitis, gastroent & misc digest disorders w/o MCC	Include all	3	0.9918
393	M	Other digestive system diagnoses w MCC	Include all	1	1.0004
394	M	Other digestive system diagnoses w CC	Include all	2	0.9976
395	M	Other digestive system diagnoses w/o CC/MCC	Include all	2	1.0050
405	S	Pancreas, liver & shunt procedures w MCC	Include all	1	1.0177
406	S	Pancreas, liver & shunt procedures w CC	Include all	1	1.0221
407	S	Pancreas, liver & shunt procedures w/o CC/MCC	Include all	2	0.9915
408	S	Biliary tract proc except only cholecyst w or w/o c.d.e. w MCC	Include all	2	1.0276
409	S	Biliary tract proc except only cholecyst w or w/o c.d.e. w CC	Include all	2	0.9808
410	S	Biliary tract proc except only cholecyst w or w/o c.d.e. w/o CC/MCC	Include all	3	0.9323
411	S	Cholecystectomy w c.d.e. w MCC	Include all	1	1.0317
412	S	Cholecystectomy w c.d.e. w CC	Include all	2	0.9666
413	S	Cholecystectomy w c.d.e. w/o CC/MCC	Include all	2	1.0280
414	S	Cholecystectomy except by laparoscope w/o c.d.e. w MCC	Include all	1	0.9963
415	S	Cholecystectomy except by laparoscope w/o c.d.e. w CC	Include all	2	1.0113
416	S	Cholecystectomy except by laparoscope w/o c.d.e. w/o CC/MCC	Include all	2	0.9887
417	S	Laparoscopic cholecystectomy w/o c.d.e. w MCC	Include all	3	1.0083
418	S	Laparoscopic cholecystectomy w/o c.d.e. w CC	Include all	3	1.0192
419	S	Laparoscopic cholecystectomy w/o c.d.e. w/o CC/MCC	Include all	3	0.9928
420	S	Hepatobiliary diagnostic procedures w MCC	Include all	1	1.0010
421	S	Hepatobiliary diagnostic procedures w CC	Include all	2	1.0053
422	S	Hepatobiliary diagnostic procedures w/o CC/MCC	Include all	2	1.0877
423	S	Other hepatobiliary or pancreas O.R. procedures w MCC	Include all	3	1.0223
424	S	Other hepatobiliary or pancreas O.R. procedures w CC	Include all	3	0.9708
425	S	Other hepatobiliary or pancreas O.R. procedures w/o CC/MCC	Include all	3	0.9323
432	M	Cirrhosis & alcoholic hepatitis w MCC	Include all	1	1.0164
433	M	Cirrhosis & alcoholic hepatitis w CC	Include all	2	1.0265
434	M	Cirrhosis & alcoholic hepatitis w/o CC/MCC	Include all	2	1.1072
435	M	Malignancy of hepatobiliary system or pancreas w MCC	Include all	1	1.0274
436	M	Malignancy of hepatobiliary system or pancreas w CC	Include all	2	1.0370
437	M	Malignancy of hepatobiliary system or pancreas w/o CC/MCC	Include all	2	1.0618
438	M	Disorders of pancreas except malignancy w MCC	Include all	1	1.0051
439	M	Disorders of pancreas except malignancy w CC	Include all	2	0.9989
440	M	Disorders of pancreas except malignancy w/o CC/MCC	Include all	2	0.9991
441	M	Disorders of liver except malig,cirr,alc hepa w MCC	Include all	1	1.0082
442	M	Disorders of liver except malig,cirr,alc hepa w CC	Include all	2	1.0284
443	M	Disorders of liver except malig,cirr,alc hepa w/o CC/MCC	Include all	2	1.0299
444	M	Disorders of the biliary tract w MCC	Include all	3	1.0015

MS-DRG	Medical/ Surgical	DRG Title	ICD-9-CM	Severity	Weight
445	M	Disorders of the biliary tract w CC	Include all	3	0.9955
446	M	Disorders of the biliary tract w/o CC/MCC	Include all	3	0.9689
453	S	Combined anterior/posterior spinal fusion w MCC	Include all	1	1.0186
454	S	Combined anterior/posterior spinal fusion w CC	Include all	2	0.9921
455	S	Combined anterior/posterior spinal fusion w/o CC/MCC	Include all	2	0.9985
456	S	Spinal fus exc cerv w spinal curv/malig/infec or 9+ fus w MCC	Include all	1	0.9811
457	S	Spinal fus exc cerv w spinal curv/malig/infec or 9+ fus w CC	Include all	2	0.9991
458	S	Spinal fus exc cerv w spinal curv/malig/infec or 9+ fus w/o CC/MCC	Include all	2	1.0125
459	S	Spinal fusion except cervical w MCC	Include all	1	0.9977
460	S	Spinal fusion except cervical w/o MCC	Include all	2	0.9952
461	S	Bilateral or multiple major joint procs of lower extremity w MCC	Include all	1	0.9782
462	S	Bilateral or multiple major joint procs of lower extremity w/o MCC	Include all	2	1.0049
463	S	Wnd debrid & skn grft exc hand, for musculo-conn tiss dis w MCC	Include all	1	1.0059
464	S	Wnd debrid & skn grft exc hand, for musculo-conn tiss dis w CC	Include all	2	1.0000
465	S	Wnd debrid & skn grft exc hand, for musculo-conn tiss dis w/o CC/MCC	Include all	2	0.9965
466	S	Revision of hip or knee replacement w MCC	Include all	3	0.9957
467	S	Revision of hip or knee replacement w CC	Include all	3	0.9815
468	S	Revision of hip or knee replacement w/o CC/MCC	Include all	3	1.0125
469	S	Major joint replacement or reattachment of lower extremity w MCC	Include all	1	0.9864
470	S	Major joint replacement or reattachment of lower extremity w/o MCC	Include all	2	0.9953
471	S	Cervical spinal fusion w MCC	Include all	1	1.0157
472	S	Cervical spinal fusion w CC	Include all	2	1.0098
473	S	Cervical spinal fusion w/o CC/MCC	Include all	2	1.0073
474	S	Amputation for musculoskeletal sys & conn tissue dis w MCC	Include all	1	1.0139
475	S	Amputation for musculoskeletal sys & conn tissue dis w CC	Include all	2	1.0062
476	S	Amputation for musculoskeletal sys & conn tissue dis w/o CC/MCC	Include all	2	0.9953
477	S	Biopsies of musculoskeletal system & connective tissue w MCC	Include all	3	0.9862
478	S	Biopsies of musculoskeletal system & connective tissue w CC	Include all	3	0.9895
479	S	Biopsies of musculoskeletal system & connective tissue w/o CC/MCC	Include all	3	1.0027
480	S	Hip & femur procedures except major joint w MCC	Include all	2	0.9927
481	S	Hip & femur procedures except major joint w CC	Include all	2	0.9949
482	S	Hip & femur procedures except major joint w/o CC/MCC	Include all	3	1.0008
483	S	Major joint & limb reattachment proc of upper extremity w CC/MCC	Include all	1	0.9989
484	S	Major joint & limb reattachment proc of upper extremity w/o CC/MCC	Include all	1	1.0036
485	S	Knee procedures w pdx of infection w MCC	Include all	1	1.0369
486	S	Knee procedures w pdx of infection w CC	Include all	2	1.0097
487	S	Knee procedures w pdx of infection w/o CC/MCC	Include all	2	1.0029
488	S	Knee procedures w/o pdx of infection w CC/MCC	Include all	3	1.0529
489	S	Knee procedures w/o pdx of infection w/o CC/MCC	Include all	3	0.9323
490	S	Back & neck proc exc spinal fusion w CC/MCC or disc device/neurostim	Include all	2	0.9972
491	S	Back & neck proc exc spinal fusion w/o CC/MCC	Include all	3	0.9757
492	S	Lower extrem & humer proc except hip,foot,femur w MCC	Include all	2	1.0206
493	S	Lower extrem & humer proc except hip,foot,femur w CC	Include all	2	1.0316
494	S	Lower extrem & humer proc except hip,foot,femur w/o CC/MCC	Include all	3	1.0705
495	S	Local excision & removal int fix devices exc hip & femur w MCC	Include all	2	0.9749
496	S	Local excision & removal int fix devices exc hip & femur w CC	Include all	2	0.9999
497	S	Local excision & removal int fix devices exc hip & femur w/o CC/MCC	Include all	3	1.1164
498	S	Local excision & removal int fix devices of hip & femur w CC/MCC	Include all	3	1.0138

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	0.9323
500	S	Soft tissue procedures w MCC	Include all	3	1.0249
501	S	Soft tissue procedures w CC	Include all	3	1.0368
502	S	Soft tissue procedures w/o CC/MCC	Include all	3	1.1164
503	S	Foot procedures w MCC	Include all	3	1.0283
504	S	Foot procedures w CC	Include all	3	0.9989
505	S	Foot procedures w/o CC/MCC	Include all	3	0.9945
506	S	Major thumb or joint procedures	Include all	3	0.9989
507	S	Major shoulder or elbow joint procedures w CC/MCC	Include all	2	0.9778
508	S	Major shoulder or elbow joint procedures w/o CC/MCC	Include all	2	1.0442
509	S	Arthroscopy	Include all	3	1.0171
510	S	Shoulder,elbow or forearm proc,exc major joint proc w MCC	Include all	1	1.0198
511	S	Shoulder,elbow or forearm proc,exc major joint proc w CC	Include all	2	1.0070
512	S	Shoulder,elbow or forearm proc,exc major joint proc w/o CC/MCC	Include all	2	1.0270
513	S	Hand or wrist proc, except major thumb or joint proc w CC/MCC	Include all	3	1.0194
514	S	Hand or wrist proc, except major thumb or joint proc w/o CC/MCC	Include all	3	1.0000
515	S	Other musculoskelet sys & conn tiss O.R. proc w MCC	Include all	3	0.9982
516	S	Other musculoskelet sys & conn tiss O.R. proc w CC	Include all	3	0.9866
517	S	Other musculoskelet sys & conn tiss O.R. proc w/o CC/MCC	Include all	3	0.9896
533	M	Fractures of femur w MCC	Include all	1	1.0006
534	M	Fractures of femur w/o MCC	Include all	2	1.0107
535	M	Fractures of hip & pelvis w MCC	Include all	1	1.0020
536	M	Fractures of hip & pelvis w/o MCC	Include all	2	0.9993
537	M	Sprains, strains, & dislocations of hip, pelvis & thigh w CC/MCC	Include all	3	0.9790
538	M	Sprains, strains, & dislocations of hip, pelvis & thigh w/o CC/MCC	Include all	3	0.9323
539	M	Osteomyelitis w MCC	Include all	3	1.0110
540	M	Osteomyelitis w CC	Include all	3	1.0379
541	M	Osteomyelitis w/o CC/MCC	Include all	3	0.9323
542	M	Pathological fractures & musculoskelet & conn tiss malig w MCC	Include all	1	1.0017
543	M	Pathological fractures & musculoskelet & conn tiss malig w CC	Include all	2	0.9989
544	M	Pathological fractures & musculoskelet & conn tiss malig w/o CC/MCC	Include all	2	0.9843
545	M	Connective tissue disorders w MCC	Include all	3	1.0010
546	M	Connective tissue disorders w CC	Include all	3	1.0024
547	M	Connective tissue disorders w/o CC/MCC	Include all	3	0.9323
548	M	Septic arthritis w MCC	Include all	1	1.0171
549	M	Septic arthritis w CC	Include all	2	1.0084
550	M	Septic arthritis w/o CC/MCC	Include all	2	1.0283
551	M	Medical back problems w MCC	Include all	3	1.0141
552	M	Medical back problems w/o MCC	Include all	3	1.0092
553	M	Bone diseases & arthropathies w MCC	Include all	2	0.9948
554	M	Bone diseases & arthropathies w/o MCC	Include all	3	1.0042
555	M	Signs & symptoms of musculoskeletal system & conn tissue w MCC	Include all	3	1.0013
556	M	Signs & symptoms of musculoskeletal system & conn tissue w/o MCC	Include all	3	0.9939
557	M	Tendonitis, myositis & bursitis w MCC	Include all	3	0.9840
558	M	Tendonitis, myositis & bursitis w/o MCC	Include all	3	0.9824
559	M	Aftercare, musculoskeletal system & connective tissue w MCC	Include all	3	0.9956
560	M	Aftercare, musculoskeletal system & connective tissue w CC	Include all	3	0.9824
561	M	Aftercare, musculoskeletal system & connective tissue w/o CC/MCC	Include all	3	1.0256
562	M	Fx, sprn, strn & disl except femur, hip, pelvis & thigh w MCC	Include all	3	0.9909
563	M	Fx, sprn, strn & disl except femur, hip, pelvis & thigh w/o MCC	Include all	3	0.9999

MS-DRG	Medical/ Surgical	DRG Title	ICD-9-CM	Severity	Weight
564	M	Other musculoskeletal sys & connective tissue diagnoses w MCC	Include all	3	1.0129
565	M	Other musculoskeletal sys & connective tissue diagnoses w CC	Include all	3	0.9960
566	M	Other musculoskeletal sys & connective tissue diagnoses w/o CC/MCC	Include all	3	1.0489
570	S	Skin debridement with MCC	Include all	1	0.9782
571	S	Skin debridement with CC	Include all	2	0.9879
572	S	Skin debridement without CC/MCC	Include all	2	1.0350
573	S	Skin graft for skin ulcer or cellulitis w MCC	Include all	1	0.9726
574	S	Skin graft for skin ulcer or cellulitis w CC	Include all	2	0.9953
575	S	Skin graft for skin ulcer or cellulitis w/o CC/MCC	Include all	2	0.9590
576	S	Skin graft except for skin ulcer or cellulitis w MCC	Include all	1	1.0100
577	S	Skin graft except for skin ulcer or cellulitis w CC	Include all	2	0.9846
578	S	Skin graft except for skin ulcer or cellulitis w/o CC/MCC	Include all	2	1.0450
579	S	Other skin, subcut tiss & breast proc w MCC	Include all	2	0.9868
580	S	Other skin, subcut tiss & breast proc w CC	Include all	2	0.9815
581	S	Other skin, subcut tiss & breast proc w/o CC/MCC	Include all	3	1.0655
582	S	Mastectomy for malignancy w CC/MCC	Include all	2	0.9867
583	S	Mastectomy for malignancy w/o CC/MCC	Include all	2	0.9962
584	S	Breast biopsy, local excision & other breast procedures w CC/MCC	Include all	2	0.9651
585	S	Breast biopsy, local excision & other breast procedures w/o CC/MCC	Include all	3	0.9323
592	M	Skin ulcers w MCC	Include all	1	1.0211
593	M	Skin ulcers w CC	Include all	2	1.0130
594	M	Skin ulcers w/o CC/MCC	Include all	2	0.9868
595	M	Major skin disorders w MCC	Include all	1	0.9874
596	M	Major skin disorders w/o MCC	Include all	2	1.0151
597	M	Malignant breast disorders w MCC	Include all	1	1.0945
598	M	Malignant breast disorders w CC	Include all	2	1.0902
599	M	Malignant breast disorders w/o CC/MCC	Include all	2	1.1116
600	M	Non-malignant breast disorders w CC/MCC	Include all	3	0.9682
601	M	Non-malignant breast disorders w/o CC/MCC	Include all	3	1.0000
602	M	Cellulitis w MCC	Include all	1	0.9896
603	M	Cellulitis w/o MCC	Include all	2	0.9923
604	M	Trauma to the skin, subcut tiss & breast w MCC	Include all	1	0.9917
605	M	Trauma to the skin, subcut tiss & breast w/o MCC	Include all	2	1.0166
606	M	Minor skin disorders w MCC	Include all	3	0.9937
607	M	Minor skin disorders w/o MCC	Include all	3	0.9936
614	S	Adrenal & pituitary procedures w CC/MCC	Include all	2	1.0027
615	S	Adrenal & pituitary procedures w/o CC/MCC	Include all	2	1.0981
616	S	Amputat of lower limb for endocrine,nutrit,& metabol dis w MCC	Include all	1	0.9899
617	S	Amputat of lower limb for endocrine,nutrit,& metabol dis w CC	Include all	2	1.0182
618	S	Amputat of lower limb for endocrine,nutrit,& metabol dis w/o CC/MCC	Include all	2	0.9872
619	S	O.R. procedures for obesity w MCC	Include all	1	0.9323
620	S	O.R. procedures for obesity w CC	Include all	2	1.0877
621	S	O.R. procedures for obesity w/o CC/MCC	Include all	2	1.0256
622	S	Skin grafts & wound debrid for endoc, nutrit & metab dis w MCC	Include all	1	0.9638
623	S	Skin grafts & wound debrid for endoc, nutrit & metab dis w CC	Include all	2	0.9974
624	S	Skin grafts & wound debrid for endoc, nutrit & metab dis w/o CC/MCC	Include all	2	1.1164
625	S	Thyroid, parathyroid & thyroglossal procedures w MCC	Include all	1	0.9814
626	S	Thyroid, parathyroid & thyroglossal procedures w CC	Include all	2	1.0045
627	S	Thyroid, parathyroid & thyroglossal procedures w/o CC/MCC	Include all	2	0.9933

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	1.0062
629	S	Other endocrine, nutrit & metab O.R. proc w CC	Include all	2	0.9954
630	S	Other endocrine, nutrit & metab O.R. proc w/o CC/MCC	Include all	2	0.9841
637	M	Diabetes w MCC	Include all	3	1.0074
638	M	Diabetes w CC	Include all	3	1.0110
639	M	Diabetes w/o CC/MCC	Include all	3	1.0253
640	M	Misc disorders of nutrition, metabolism, fluids/electrolyes w MCC	Include all	3	1.0013
641	M	Misc disorders of nutrition, metabolism, fluids/electrolyes w/o MCC	Include all	3	0.9977
642	M	Inborn and other disorders of metabolism	Include all	3	0.9847
643	M	Endocrine disorders w MCC	Include all	3	0.9934
644	M	Endocrine disorders w CC	Include all	3	0.9973
645	M	Endocrine disorders w/o CC/MCC	Include all	3	0.9562
652	S	Kidney transplant	Include all	1	1.0430
653	S	Major bladder procedures w MCC	Include all	1	0.9758
654	S	Major bladder procedures w CC	Include all	2	0.9953
655	S	Major bladder procedures w/o CC/MCC	Include all	2	1.0496
656	S	Kidney & ureter procedures for neoplasm w MCC	Include all	1	0.9882
657	S	Kidney & ureter procedures forneoplasm w CC	Include all	2	0.9951
658	S	Kidney & ureter procedures for neoplasm w/o CC/MCC	Include all	2	0.9914
659	S	Kidney & ureter procedures for non-neoplasm w MCC	Include all	2	0.9942
660	S	Kidney & ureter procedures for non-neoplasm w CC	Include all	2	1.0128
661	S	Kidney & ureter procedures for non-neoplasm w/o CC/MCC	Include all	3	1.0758
662	S	Minor bladder procedures w MCC	Include all	3	1.0186
663	S	Minor bladder procedures w CC	Include all	3	0.9893
664	S	Minor bladder procedures w/o CC/MCC	Include all	3	1.0359
665	S	Prostatectomy w MCC	Include all	3	1.0789
666	S	Prostatectomy w CC	Include all	3	1.0034
667	S	Prostatectomy w/o CC/MCC	Include all	3	0.9323
668	S	Transurethral procedures w MCC	Include all	3	0.9955
669	S	Transurethral procedures w CC	Include all	3	0.9817
670	S	Transurethral procedures w/o CC/MCC	Include all	3	1.0041
671	S	Urethral procedures w CC/MCC	Include all	3	0.9790
672	S	Urethral procedures w/o CC/MCC	Include all	3	1.1164
673	S	Other kidney & urinary tract procedures w MCC	Include all	3	1.0062
674	S	Other kidney & urinary tract procedures w CC	Include all	3	1.0017
675	S	Other kidney & urinary tract procedures w/o CC/MCC	Include all	3	1.0399
682	M	Renal failure w MCC	Include all	1	0.9963
683	M	Renal failure w CC	Include all	2	0.9927
684	M	Renal failure w/o CC/MCC	Include all	2	0.9992
685	M	Admit for renal dialysis	Include all	3	1.0595
686	M	Kidney & urinary tract neoplasms w MCC	Include all	2	1.0522
687	M	Kidney & urinary tract neoplasms w CC	Include all	2	1.0461
688	M	Kidney & urinary tract neoplasms w/o CC/MCC	Include all	3	0.9323
689	M	Kidney & urinary tract infections w MCC	Include all	3	0.9847
690	M	Kidney & urinary tract infections w/o MCC	Include all	3	0.9867
691	M	Urinary stones w esw lithotripsy w CC/MCC	Include all	3	1.0532
692	M	Urinary stones w esw lithotripsy w/o CC/MCC	Include all	3	0.9323
693	M	Urinary stones w/o esw lithotripsy w MCC	Include all	3	1.0153
694	M	Urinary stones w/o esw lithotripsy w/o MCC	Include all	3	0.9940
695	M	Kidney & urinary tract signs & symptoms w MCC	Include all	3	0.9952
696	M	Kidney & urinary tract signs & symptoms w/o MCC	Include all	3	0.9866
697	M	Urethral stricture	Include all	3	1.0758

MS-DRG	Medical/ Surgical	DRG Title	ICD-9-CM	Severity	Weight
698	M	Other kidney & urinary tract diagnoses w MCC	Include all	3	0.9893
699	M	Other kidney & urinary tract diagnoses w CC	Include all	3	0.9923
700	M	Other kidney & urinary tract diagnoses w/o CC/MCC	Include all	3	1.0144
707	S	Major male pelvic procedures w CC/MCC	Include all	2	1.0785
708	S	Major male pelvic procedures w/o CC/MCC	Include all	2	1.0399
709	S	Penis procedures w CC/MCC	Include all	3	0.9582
710	S	Penis procedures w/o CC/MCC	Include all	3	0.9323
711	S	Testes procedures w CC/MCC	Include all	2	1.0399
712	S	Testes procedures w/o CC/MCC	Include all	3	1.0000
713	S	Transurethral prostatectomy w CC/MCC	Include all	2	1.0055
714	S	Transurethral prostatectomy w/o CC/MCC	Include all	3	1.1164
715	S	Other male reproductive system O.R. proc for malignancy w CC/MCC	Include all	2	1.1060
716	S	Other male reproductive system O.R. proc for malignancy w/o CC/MCC	Include all	2	1.0014
717	S	Other male reproductive system O.R. proc exc malignancy w CC/MCC	Include all	3	1.0229
718	S	Other male reproductive system O.R. proc exc malignancy w/o CC/MCC	Include all	3	0.9323
722	M	Malignancy, male reproductive system w MCC	Include all	1	1.1164
723	M	Malignancy, male reproductive system w CC	Include all	2	1.0884
724	M	Malignancy, male reproductive system w/o CC/MCC	Include all	2	1.1164
725	M	Benign prostatic hypertrophy w MCC	Include all	3	1.0344
726	M	Benign prostatic hypertrophy w/o MCC	Include all	3	1.0272
727	M	Inflammation of the male reproductive system w MCC	Include all	3	0.9962
728	M	Inflammation of the male reproductive system w/o MCC	Include all	3	1.0157
729	M	Other male reproductive system diagnoses w CC/MCC	Include all	3	0.9762
730	M	Other male reproductive system diagnoses w/o CC/MCC	Include all	3	0.9323
734	S	Pelvic evisceration, rad hysterectomy & rad vulvectomy w CC/MCC	Include all	1	1.0238
735	S	Pelvic evisceration, rad hysterectomy & rad vulvectomy w/o CC/MCC	Include all	1	0.9973
736	S	Uterine & adnexa proc for ovarian or adnexal malignancy w MCC	Include all	1	0.9892
737	S	Uterine & adnexa proc for ovarian or adnexal malignancy w CC	Include all	2	0.9989
738	S	Uterine & adnexa proc for ovarian or adnexal malignancy w/o CC/MCC	Include all	2	0.9945
739	S	Uterine,adnexa proc for non-ovarian/adnexal malig w MCC	Include all	1	1.0123
740	S	Uterine,adnexa proc for non-ovarian/adnexal malig w CC	Include all	2	0.9804
741	S	Uterine,adnexa proc for non-ovarian/adnexal malig w/o CC/MCC	Include all	2	0.9836
742	S	Uterine & adnexa proc for non-malignancy w CC/MCC	Include all	2	0.9934
743	S	Uterine & adnexa proc for non-malignancy w/o CC/MCC	Include all	3	0.9323
744	S	D&C, conization, laparoscopy & tubal interruption w CC/MCC	Include all	2	1.0204
745	S	D&C, conization, laparoscopy & tubal interruption w/o CC/MCC	Include all	3	0.9323
746	S	Vagina, cervix & vulva procedures w CC/MCC	Include all	3	1.0359
747	S	Vagina, cervix & vulva procedures w/o CC/MCC	Include all	3	0.9323
748	S	Female reproductive system reconstructive procedures	Include all	3	0.9669
749	S	Other female reproductive system O.R. procedures w CC/MCC	Include all	2	1.0292
750	S	Other female reproductive system O.R. procedures w/o CC/MCC	Include all	2	0.9323
754	M	Malignancy, female reproductive system w MCC	Include all	1	1.0567
755	M	Malignancy, female reproductive system w CC	Include all	2	1.0746
756	M	Malignancy, female reproductive system w/o CC/MCC	Include all	2	1.1164
757	M	Infections, female reproductive system w MCC	Include all	3	0.9778
758	M	Infections, female reproductive system w CC	Include all	3	0.9819
759	M	Infections, female reproductive system w/o CC/MCC	Include all	3	1.0171

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	0.9689
761	M	Menstrual & other female reproductive system disorders w/o CC/MCC	Include all	3	0.9323
799	S	Splenectomy w MCC	Include all	1	1.0740
800	S	Splenectomy w CC	Include all	2	1.0540
801	S	Splenectomy w/o CC/MCC	Include all	2	1.0796
802	S	Other O.R. proc of the blood & blood forming organs w MCC	Include all	3	0.9669
803	S	Other O.R. proc of the blood & blood forming organs w CC	Include all	3	1.0392
804	S	Other O.R. proc of the blood & blood forming organs w/o CC/MCC	Include all	3	1.1164
808	M	Major hematol/immun diag exc sickle cell crisis & coagul w MCC	Include all	1	1.0031
809	M	Major hematol/immun diag exc sickle cell crisis & coagul w CC	Include all	2	1.0036
810	M	Major hematol/immun diag exc sickle cell crisis & coagul w/o CC/MCC	Include all	2	0.9901
811	M	Red blood cell disorders w MCC	Include all	3	0.9993
812	M	Red blood cell disorders w/o MCC	Include all	3	0.9992
813	M	Coagulation disorders	Include all	2	0.9934
814	M	Reticuloendothelial & immunity disorders w MCC	Include all	1	1.0091
815	M	Reticuloendothelial & immunity disorders w CC	Include all	2	1.0170
816	M	Reticuloendothelial & immunity disorders w/o CC/MCC	Include all	2	1.0395
820	S	Lymphoma & leukemia w major O.R. procedure w MCC	Include all	1	1.0771
821	S	Lymphoma & leukemia w major O.R. procedure w CC	Include all	2	0.9908
822	S	Lymphoma & leukemia w major O.R. procedure w/o CC/MCC	Include all	2	0.9983
823	S	Lymphoma & non-acute leukemia w other O.R. proc w MCC	Include all	1	0.9952
824	S	Lymphoma & non-acute leukemia w other O.R. proc w CC	Include all	2	1.0170
825	S	Lymphoma & non-acute leukemia w other O.R. proc w/o CC/MCC	Include all	2	1.0100
826	S	Myeloprolif disord or poorly diff neopl w maj O.R. proc w MCC	Include all	1	1.0278
827	S	Myeloprolif disord or poorly diff neopl w maj O.R. proc w CC	Include all	2	1.0248
828	S	Myeloprolif disord or poorly diff neopl w maj O.R. proc w/o CC/MCC	Include all	2	0.9723
829	S	Myeloprolif disord or poorly diff neopl w other O.R. proc w CC/MCC	Include all	2	0.9960
830	S	Myeloprolif disord or poorly diff neopl w other O.R. proc w/o CC/MCC	Include all	2	1.1164
834	M	Acute leukemia w/o major O.R. procedure w MCC	Include all	1	1.0136
835	M	Acute leukemia w/o major O.R. procedure w CC	Include all	2	1.0105
836	M	Acute leukemia w/o major O.R. procedure w/o CC/MCC	Include all	2	1.0291
837	M	Chemo w acute leukemia as sdx or w high dose chemo agent w MCC	Include all	1	1.0728
838	M	Chemo w acute leukemia as sdx w CC or high dose chemo agent	Include all	2	0.9767
839	M	Chemo w acute leukemia as sdx w/o CC/MCC	Include all	2	0.9956
840	M	Lymphoma & non-acute leukemia w MCC	Include all	1	1.0306
841	M	Lymphoma & non-acute leukemia w CC	Include all	2	1.0176
842	M	Lymphoma & non-acute leukemia w/o CC/MCC	Include all	2	1.0449
843	M	Other myeloprolif dis or poorly diff neopl diag w MCC	Include all	3	0.9934
844	M	Other myeloprolif dis or poorly diff neopl diag w CC	Include all	3	1.0395
845	M	Other myeloprolif dis or poorly diff neopl diag w/o CC/MCC	Include all	3	0.9945
846	M	Chemotherapy w/o acute leukemia as secondary diagnosis w MCC	Include all	3	1.0150
847	M	Chemotherapy w/o acute leukemia as secondary diagnosis w CC	Include all	3	1.0190
848	M	Chemotherapy w/o acute leukemia as secondary diagnosis w/o CC/MCC	Include all	3	0.9323
849	M	Radiotherapy	Include all	3	1.0815
853	S	Infectious & parasitic diseases w O.R. procedure w MCC	Include all	1	0.9993
854	S	Infectious & parasitic diseases w O.R. procedure w CC	Include all	2	1.0036
855	S	Infectious & parasitic diseases w O.R. procedure w/o CC/MCC	Include all	2	1.0041
856	S	Postoperative or post-traumatic infections w O.R. proc w MCC	Include all	1	0.9847

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	0.9952
858	S	Postoperative or post-traumatic infections w O.R. proc w/o CC/MCC	Include all	2	0.9747
862	M	Postoperative & post-traumatic infections w MCC	Include all	1	1.0143
863	M	Postoperative & post-traumatic infections w/o MCC	Include all	2	0.9967
864	M	Fever of unknown origin	Include all	2	0.9946
865	M	Fever	Include all	1	0.9866
866	M	Viral illness w/o MCC	Include all	2	0.9956
867	M	Other infectious & parasitic diseases diagnoses w MCC	Include all	1	0.9969
868	M	Other infectious & parasitic diseases diagnoses w CC	Include all	2	0.9915
869	M	Other infectious & parasitic diseases diagnoses w/o CC/MCC	Include all	2	1.0256
870	M	Septicemia or severe sepsis w MV 96+ hours	Include all	1	1.0115
871	M	Septicemia or severe sepsis w/o MV 96+ hours w MCC	Include all	1	1.0003
872	M	Septicemia or severe sepsis w/o MV 96+ hours w/o MCC	Include all	1	1.0003
876	S	O.R. procedure w principal diagnoses of mental illness	Include all	3	0.9723
880	M	Acute adjustment reaction & psychosocial dysfunction	Include all	3	0.9885
881	M	Depressive neuroses	Include all	3	1.0226
882	M	Neuroses except depressive	Include all	3	1.0171
883	M	Disorders of personality & impulse control	Include all	3	1.0256
884	M	Organic disturbances & mental retardation	Include all	3	1.0257
885	M	Psychoses	Include all	3	1.0095
886	M	Behavioral & developmental disorders	Include all	3	1.0796
887	M	Other mental disorder diagnoses	Include all	3	1.0877
894	M	Alcohol/drug abuse or dependence, left ama	Include all	3	0.9323
895	M	Alcohol/drug abuse or dependence w rehabilitation therapy	Include all	3	0.9323
896	M	Alcohol/drug abuse or dependence w/o rehabilitation therapy w MCC	Include all	3	1.0038
897	M	Alcohol/drug abuse or dependence w/o rehabilitation therapy w/o MCC	Include all	3	0.9881
901	S	Wound debridements for injuries w MCC	Include all	1	1.0326
902	S	Wound debridements for injuries w CC	Include all	2	0.9910
903	S	Wound debridements for injuries w/o CC/MCC	Include all	2	0.9956
904	S	Skin grafts for injuries w CC/MCC	Include all	2	1.0441
905	S	Skin grafts for injuries w/o CC/MCC	Include all	2	1.0546
906	S	Hand procedures for injuries	Include all	3	1.1164
907	S	Other O.R. procedures for injuries w MCC	Include all	1	0.9854
908	S	Other O.R. procedures for injuries w CC	Include all	2	0.9972
909	S	Other O.R. procedures for injuries w/o CC/MCC	Include all	2	0.9980
913	M	Traumatic injury w MCC	Include all	1	0.9887
914	M	Traumatic injury w/o MCC	Include all	2	1.0001
915	M	Allergic reactions w MCC	Include all	3	1.0229
916	M	Allergic reactions w/o MCC	Include all	3	0.9764
917	M	Poisoning & toxic effects of drugs w MCC	Include all	2	0.9935
918	M	Poisoning & toxic effects of drugs w/o MCC	Include all	3	1.0005
919	M	Complications of treatment w MCC	Include all	3	0.9972
920	M	Complications of treatment w CC	Include all	3	0.9882
921	M	Complications of treatment w/o CC/MCC	Include all	3	0.9645
922	M	Other injury, poisoning & toxic effect diag w MCC	Include all	3	1.0049
923	M	Other injury, poisoning & toxic effect diag w/o MCC	Include all	3	0.9957
927	S	Extensive burns or full thickness burns w MV 96+ hrs w skin graft	Include all	1	1.1019
928	S	Full thickness burn w skin graft or inhal inj w CC/MCC	Include all	1	1.0396
929	S	Full thickness burn w skin graft or inhal inj w/o CC/MCC	Include all	2	1.0758
933	M	Extensive burns or full thickness burns w MV 96+ hrs w/o skin graft	Include all	1	1.0655

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	0.9602
935	M	Non-extensive burns	Include all	2	1.0762
939	S	O.R. proc w diagnoses of other contact w health services w MCC	Include all	3	0.9839
940	S	O.R. proc w diagnoses of other contact w health services w CC	Include all	3	1.0012
941	S	O.R. proc w diagnoses of other contact w health services w/o CC/MCC	Include all	3	1.1164
945	M	Rehabilitation w CC/MCC	Include all	3	0.9833
946	M	Rehabilitation w/o CC/MCC	Include all	3	0.9952
947	M	Signs & symptoms w MCC	Include all	3	1.0032
948	M	Signs & symptoms w/o MCC	Include all	3	1.0148
949	M	Aftercare w CC/MCC	Include all	3	1.0025
950	M	Aftercare w/o CC/MCC	Include all	3	0.9323
951	M	Other factors influencing health status	Include all	3	1.1164
955	S	Craniotomy for multiple significant trauma	Include all	1	1.1164
956	S	Limb reattachment, hip & femur proc for multiple significant trauma	Include all	1	1.0166
957	S	Other O.R. procedures for multiple significant trauma w MCC	Include all	1	1.1164
958	S	Other O.R. procedures for multiple significant trauma w CC	Include all	2	1.1164
959	S	Other O.R. procedures for multiple significant trauma w/o CC/MCC	Include all	2	1.1164
963	M	Other multiple significant trauma w MCC	Include all	1	1.1164
964	M	Other multiple significant trauma w CC	Include all	2	1.1164
965	M	Other multiple significant trauma w/o CC/MCC	Include all	2	1.0865
969	S	HIV w extensive O.R. procedure w MCC	Include all	1	0.9323
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	1.1019
975	M	HIV w major related condition w CC	Include all	1	0.9959
976	M	HIV w major related condition w/o CC/MCC	Include all	1	1.0309
977	M	HIV w or w/o other related condition	Include all	2	1.1164
981	S	Extensive O.R. procedure unrelated to principal diagnosis w MCC	Include all	1	1.0010
982	S	Extensive O.R. procedure unrelated to principal diagnosis w CC	Include all	2	1.0035
983	S	Extensive O.R. procedure unrelated to principal diagnosis w/o CC/MCC	Include all	2	0.9954
984	S	Prostatic O.R. procedure unrelated to principal diagnosis w MCC	Include all	3	1.0368
985	S	Prostatic O.R. procedure unrelated to principal diagnosis w CC	Include all	3	1.0008
986	S	Prostatic O.R. procedure unrelated to principal diagnosis w/o CC/MCC	Include all	3	0.9323
987	S	Non-extensive O.R. proc unrelated to principal diagnosis w MCC	Include all	3	0.9991
988	S	Non-extensive O.R. proc unrelated to principal diagnosis w CC	Include all	3	1.0018
989	S	Non-extensive O.R. proc unrelated to principal diagnosis w/o CC/MCC	Include all	3	0.9323

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	0.8713
735	S	Pelvic evisceration, rad hysterectomy & rad vulvectomy w/o CC/MCC	Include all	1	1.1832
736	S	Uterine & adnexa proc for ovarian or adnexal malignancy w MCC	Include all	1	0.5658
737	S	Uterine & adnexa proc for ovarian or adnexal malignancy w CC	Include all	2	0.7774
738	S	Uterine & adnexa proc for ovarian or adnexal malignancy w/o CC/MCC	Include all	2	1.1460
739	S	Uterine,adnexa proc for non-ovarian/adnexal malig w MCC	Include all	1	0.5555
740	S	Uterine,adnexa proc for non-ovarian/adnexal malig w CC	Include all	2	0.6963

741	S	Uterine,adnexa proc for non-ovarian/adnexal malig w/o CC/MCC	Include all	2	0.6852
742	S	Uterine & adnexa proc for non-malignancy w CC/MCC	Include all	2	1.4150
743	S	Uterine & adnexa proc for non-malignancy w/o CC/MCC	Include all	3	0.9651
746	S	Vagina, cervix & vulva procedures w CC/MCC	Include all	3	0.6157
747	S	Vagina, cervix & vulva procedures w/o CC/MCC	Include all	3	0.7065
749	S	Other female reproductive system O.R. procedures w CC/MCC	Include all	2	0.9047
750	S	Other female reproductive system O.R. procedures w/o CC/MCC	Include all	2	1.4150
754	M	Malignancy, female reproductive system w MCC	Include all	1	0.5829
755	M	Malignancy, female reproductive system w CC	Include all	2	0.6308
756	M	Malignancy, female reproductive system w/o CC/MCC	Include all	2	0.7495
757	M	Infections, female reproductive system w MCC	Include all	3	0.4506
758	M	Infections, female reproductive system w CC	Include all	3	0.5034
759	M	Infections, female reproductive system w/o CC/MCC	Include all	3	0.5590
760	M	Menstrual & other female reproductive system disorders w CC/MCC	Include all	3	0.7149
761	M	Menstrual & other female reproductive system disorders w/o CC/MCC	Include all	3	0.3841

Nephrology

MS-DRG	Medical/ Surgical	DRG Title	ICD-9-CM	Severity	Weight
008	S	Simultaneous pancreas/kidney transplant	Include all	1	1.1425
652	S	Kidney transplant	Include all	1	1.0727
653	S	Major bladder procedures w MCC	Include all	1	0.9921
654	S	Major bladder procedures w CC	Include all	2	1.1842
655	S	Major bladder procedures w/o CC/MCC	Include all	2	1.3511
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	1.0466
657	S	Kidney & ureter procedures forneoplasm w CC	See MS-DRG 656	2	1.3092
658	S	Kidney & ureter procedures for neoplasm w/o CC/MCC	See MS-DRG 656	2	1.4221
659	S	Kidney & ureter procedures for non-neoplasm w MCC	See MS-DRG 656	2	1.1411
660	S	Kidney & ureter procedures for non-neoplasm w CC	See MS-DRG 656	2	1.5392
661	S	Kidney & ureter procedures for non-neoplasm w/o CC/MCC	See MS-DRG 656	3	1.5416
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	1.0186
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	1.1172
675	S	Other kidney & urinary tract procedures w/o CC/MCC	See MS-DRG 674	3	1.1600
682	M	Renal failure w MCC	Include all	1	0.9245

MS-DRG	Medical/ Surgical	DRG Title	ICD-9-CM	Severity	Weight
683	M	Renal failure w CC	Include all	2	0.9654
684	M	Renal failure w/o CC/MCC	Include all	2	1.0519
686	M	Kidney & urinary tract neoplasms w MCC	Include diagnoses: 1890-1, 1980, 2230	2	1.2402
687	M	Kidney & urinary tract neoplasms w CC	See MS-DRG 686	2	1.3118
688	M	Kidney & urinary tract neoplasms w/o CC/MCC	See MS-DRG 686	3	0.8553
689	M	Kidney & urinary tract infections w MCC	Include diagnoses: 0160, 590, 0786, 0954, 5900-3, 5908-9, 59010-11, 59080-1	3	1.2615
695	M	Kidney & urinary tract signs & symptoms w MCC	Include all	3	0.8612
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	1.1445
699	M	Other kidney & urinary tract diagnoses w CC	See MS-DRG 698	3	1.3225
700	M	Other kidney & urinary tract diagnoses w/o CC/MCC	See MS-DRG 698	3	1.5889

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	2.1098
021	S	Intracranial vascular procedures w PDX hemorrhage w CC	Include all	1	2.9928
022	S	Intracranial vascular procedures w PDX hemorrhage w/o CC/MCC	Include all	1	3.0387
023	S	Cranio w major dev impl/acute complex CNS PDX w MCC or chemo implant	Include all	1	1.3242
024	S	Cranio w major dev impl/acute complex CNS PDX w/o MCC	Include all	1	1.3394
025	S	Craniotomy & endovascular intracranial procedures w MCC	Include all	1	1.4193
026	S	Craniotomy & endovascular intracranial procedures w CC	Include all	1	1.6771
027	S	Craniotomy & endovascular intracranial procedures w/o CC/MCC	Include all	1	1.9986
031	S	Ventricular shunt procedures w MCC	Include all	1	1.7707
032	S	Ventricular shunt procedures w CC	Include all	2	1.9061
033	S	Ventricular shunt procedures w/o CC/MCC	Include all	2	1.3845
034	S	Carotid artery stent procedure w MCC	Include all	1	0.8374
035	S	Carotid artery stent procedure w CC	Include all	2	0.7725
036	S	Carotid artery stent procedure w/o CC/MCC	Include all	2	0.8059
037	S	Extracranial procedures w MCC	Include all	1	0.7795

MS-DRG	Medical/ Surgical	DRG Title	ICD-9-CM	Severity	Weight
038	S	Extracranial procedures w CC	Include all	2	0.8041
039	S	Extracranial procedures w/o CC/MCC	Include all	2	0.7987
040	S	Periph & cranial nerve & other nerv syst proc w MCC	Include all	1	1.0650
041	S	Periph/cranial nerve & other nerv syst proc w CC or periph neurostim	Include all	2	1.2338
042	S	Periph & cranial nerve & other nerv syst proc w/o CC/MCC	Include all	2	1.3829
052	M	Spinal disorders & injuries w CC/MCC	Include all	2	1.2534
053	M	Spinal disorders & injuries w/o CC/MCC	Include all	2	1.7286
054	M	Nervous system neoplasms w MCC	Include all	1	1.1492
055	M	Nervous system neoplasms w/o MCC	Include all	2	1.2544
056	M	Degenerative nervous system disorders w MCC	Include all	1	0.7739
057	M	Degenerative nervous system disorders w/o MCC	Include all	2	0.7527
058	M	Multiple sclerosis & cerebellar ataxia w MCC	Include all	1	1.2802
059	M	Multiple sclerosis & cerebellar ataxia w CC	Include all	2	1.3368
060	M	Multiple sclerosis & cerebellar ataxia w/o CC/MCC	Include all	2	1.7279
061	M	Acute ischemic stroke w use of thrombolytic agent w MCC	Include all	1	0.8252
062	M	Acute ischemic stroke w use of thrombolytic agent w CC	Include all	2	0.9598
063	M	Acute ischemic stroke w use of thrombolytic agent w/o CC/MCC	Include all	2	1.0021
064	M	Intracranial hemorrhage or cerebral infarction w MCC	Include all	1	0.8346
065	M	Intracranial hemorrhage or cerebral infarction w CC	Include all	2	0.8826
066	M	Intracranial hemorrhage or cerebral infarction w/o CC/MCC	Include all	2	0.8990
067	M	Nonspecific cva & precerebral occlusion w/o infarct w MCC	Include all	1	0.7572
068	M	Nonspecific cva & precerebral occlusion w/o infarct w/o MCC	Include all	2	0.7921
069	M	Transient ischemia	Include all	3	0.7388
070	M	Nonspecific cerebrovascular disorders w MCC	Include all	2	0.8062
071	M	Nonspecific cerebrovascular disorders w CC	Include all	2	0.8110
073	M	Cranial & peripheral nerve disorders w MCC	Include all	1	0.9370
074	M	Cranial & peripheral nerve disorders w/o MCC	Include all	2	1.2553
075	M	Viral meningitis w CC/MCC	Include all	2	2.6995
076	M	Viral meningitis w/o CC/MCC	Include all	2	3.0387
077	M	Hypertensive encephalopathy w MCC	Include all	1	0.9111
078	M	Hypertensive encephalopathy w CC	Include all	2	0.8956
079	M	Hypertensive encephalopathy w/o CC/MCC	Include all	2	1.0164
080	M	Nontraumatic stupor & coma w MCC	Include all	1	0.8841
081	M	Nontraumatic stupor & coma w/o MCC	Include all	2	0.9388
082	M	Traumatic stupor & coma, coma >1 hr w MCC	Include all	1	1.3981
083	M	Traumatic stupor & coma, coma >1 hr w CC	Include all	1	1.3939
084	M	Traumatic stupor & coma, coma >1 hr w/o CC/MCC	Include all	1	2.3068
085	M	Traumatic stupor & coma, coma <1 hr w MCC	Include all	1	0.9114
086	M	Traumatic stupor & coma, coma <1 hr w CC	Include all	2	0.9021
087	M	Traumatic stupor & coma, coma <1 hr w/o CC/MCC	Include all	2	1.0779
091	M	Other disorders of nervous system w MCC	Include all	3	0.9451
092	M	Other disorders of nervous system w CC	Include all	3	0.8769
093	M	Other disorders of nervous system w/o CC/MCC	Include all	3	0.9421
094	M	Bacterial & tuberculous infections of nervous system w MCC	Include all	1	1.5186
095	M	Bacterial & tuberculous infections of nervous system w CC	Include all	2	1.8469
096	M	Bacterial & tuberculous infections of nervous system w/o CC/MCC	Include all	2	3.0387
097	M	Non-bacterial infect of nervous sys exc viral meningitis w MCC	Include all	1	1.3513
098	M	Non-bacterial infect of nervous sys exc viral meningitis w CC	Include all	2	1.8470
099	M	Non-bacterial infect of nervous sys exc viral meningitis w/o CC/MCC	Include all	2	3.0387
100	M	Seizures w MCC	Include all	2	1.2527
955	S	Craniotomy for multiple significant trauma	Include all	1	3.0387

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	1.6771
029	S	Spinal procedures w CC or spinal neurostimulators	See MS-DRG 028	2	1.7641
030	S	Spinal procedures w/o CC/MCC	See MS-DRG 028	2	2.1638
453	S	Combined anterior/posterior spinal fusion w MCC	Include all	1	1.1773
454	S	Combined anterior/posterior spinal fusion w CC	Include all	2	1.4562
455	S	Combined anterior/posterior spinal fusion w/o CC/MCC	Include all	2	1.8079
456	S	Spinal fus exc cerv w spinal curv/malig/infec or 9+ fus w MCC	Include all	1	1.4499
457	S	Spinal fus exc cerv w spinal curv/malig/infec or 9+ fus w CC	Include all	2	1.4433
458	S	Spinal fus exc cerv w spinal curv/malig/infec or 9+ fus w/o CC/MCC	Include all	2	1.6687
459	S	Spinal fusion except cervical w MCC	Include all	1	1.0257
460	S	Spinal fusion except cervical w/o MCC	Include all	2	1.2107
461	S	Bilateral or multiple major joint procs of lower extremity w MCC	Include all	1	1.0057
462	S	Bilateral or multiple major joint procs of lower extremity w/o MCC	Include all	2	1.3195
463	S	Wound Debridement and Skin Graft Except Hand, for Musculo-Connective Tissue Disease w MCC	Include procedures: 8005, 8006	1	0.8433
464	S	Wound Debridement and Skin Graft Except Hand, for Musculo-Connective Tissue Disease w CC	Include procedures: 8005, 8006	2	0.9425
465	S	Wound Debridement and Skin Graft Except Hand, for Musculo-Connective Tissue Disease w/o CC/MCC	Include procedures: 8005, 8006	2	1.0530
466	S	Revision of hip or knee replacement w MCC	Include all	3	0.7837
467	S	Revision of hip or knee replacement w CC	Include all	3	0.8936
468	S	Revision of hip or knee replacement w/o CC/MCC	Include all	3	1.1256
469	S	Major joint replacement or reattachment of lower extremity w MCC	Include all	1	0.7483
470	S	Major joint replacement or reattachment of lower extremity w/o MCC	Include all	2	1.0342
471	S	Cervical spinal fusion w MCC	Include all	1	1.1286
472	S	Cervical spinal fusion w CC	Include all	2	1.4713
473	S	Cervical spinal fusion w/o CC/MCC	Include all	2	1.5100
480	S	Hip & femur procedures except major joint w MCC	Include all	2	0.7551
481	S	Hip & femur procedures except major joint w CC	Include all	2	0.7683
482	S	Hip & femur procedures except major joint w/o CC/MCC	Include all	3	1.1510
483	S	Major joint & limb reattachment proc of upper extremity w CC/MCC	Include all	1	0.8294
484	S	Major joint & limb reattachment proc of upper extremity w/o CC/MCC	Include all	1	0.9141
485	S	Knee procedures w pdx of infection w MCC	Include all	1	0.9143
486	S	Knee procedures w pdx of infection w CC	Include all	2	1.1467
487	S	Knee procedures w pdx of infection w/o CC/MCC	Include all	2	1.2889
490	S	Back & neck proc exc spinal fusion w CC/MCC or disc device/neurostim	Include all	2	1.1346
491	S	Back & neck proc exc spinal fusion w/o CC/MCC	Include all	3	0.7414
492	S	Lower extrem & humer proc except hip,foot,femur w MCC	Include all	2	1.1080
493	S	Lower extrem & humer proc except hip,foot,femur w CC	Include all	2	1.3556
494	S	Lower extrem & humer proc except hip,foot,femur w/o CC/MCC	Include all	3	2.1638
495	S	Local excision & removal int fix devices exc hip & femur w MCC	Include all	2	1.1402
496	S	Local excision & removal int fix devices exc hip & femur w CC	Include all	2	1.5803
497	S	Local excision & removal int fix devices exc hip & femur w/o CC/MCC	Include all	3	2.1638

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	1.1009
499	S	Local excision & removal int fix devices of hip & femur w/o CC/MCC	Include all	3	0.6015
500	S	Soft tissue procedures w MCC	Include all	3	1.1987
501	S	Soft tissue procedures w CC	Include all	3	1.3599
503	S	Foot procedures w MCC	Include all	3	0.9735
504	S	Foot procedures w CC	Include all	3	1.2621
505	S	Foot procedures w/o CC/MCC	Include all	3	1.9521
506	S	Major thumb or joint procedures	Include all	3	1.2542
507	S	Major shoulder or elbow joint procedures w CC/MCC	Include all	2	1.2524
508	S	Major shoulder or elbow joint procedures w/o CC/MCC	Include all	2	1.8463
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	0.8594
516	S	Other musculoskelet sys & conn tiss O.R. proc w CC	See MS-DRG 515	3	0.8107
517	S	Other musculoskelet sys & conn tiss O.R. proc w/o CC/MCC	See MS-DRG 515	3	0.7754
533	M	Fractures of femur w MCC	Include all	1	0.7444
534	M	Fractures of femur w/o MCC	Include all	2	1.1177
535	M	Fractures of hip & pelvis w MCC	Include all	1	0.7058
536	M	Fractures of hip & pelvis w/o MCC	Include all	2	0.7356
539	M	Osteomyelitis w MCC	Include all	3	1.0195
540	M	Osteomyelitis w CC	Include all	3	1.0803
541	M	Osteomyelitis w/o CC/MCC	Include all	3	1.4035
542	M	Pathological fractures & musculoskelet & conn tiss malig w MCC	Include diagnoses: 7331, 73310-6, 73319, 73393-5	1	0.7281
543	M	Pathological fractures & musculoskelet & conn tiss malig w CC	See MS-DRG 542	2	0.7568
544	M	Pathological fractures & musculoskelet & conn tiss malig w/o CC/MCC	See MS-DRG 542	2	0.6776
956	S	Limb reattachment, hip & femur proc for multiple significant trauma	Include all	1	1.5609

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	1.5155
004	S	Trach w MV 96+ hrs or PDX exc face, mouth & neck w/o maj O.R.	Include all	1	1.1749
007	S	Lung transplant	Include all	1	1.5731
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	1.2649
164	S	Major chest procedures w CC	See MS-DRG 163	2	1.1995
165	S	Major chest procedures w/o CC/MCC	See MS-DRG 163	2	1.3317
166	S	Other resp system O.R. procedures w MCC	Include all	2	1.0360
167	S	Other resp system O.R. procedures w CC	Include all	2	1.1746
168	S	Other resp system O.R. procedures w/o CC/MCC	Include all	3	1.0038
175	M	Pulmonary embolism w MCC	Include all	1	1.1093
176	M	Pulmonary embolism w/o MCC	Include all	1	1.4250
177	M	Respiratory infections & inflammations w MCC	Exclude diagnoses: 7955, V712, 79551, 75952	1	0.8623
178	M	Respiratory infections & inflammations w CC	See MS-DRG 177	2	0.8964
179	M	Respiratory infections & inflammations w/o CC/MCC	See MS-DRG 177	2	1.0571
180	M	Respiratory neoplasms w MCC	Exclude diagnoses: 2122-5, 2128-9, 2133	1	1.0472
181	M	Respiratory neoplasms w CC	See MS-DRG 181	2	1.1180
182	M	Respiratory neoplasms w/o CC/MCC	See MS-DRG 181	2	1.1677
183	M	Major chest trauma w MCC	Include all	1	1.1880
184	M	Major chest trauma w CC	Include all	1	1.4642
185	M	Major chest trauma w/o CC/MCC	Include all	1	1.5048
186	M	Pleural effusion w MCC	Include all	3	0.9415
187	M	Pleural effusion w CC	Include all	3	0.9917
189	M	Pulmonary edema & respiratory failure	Include all	2	0.9669
190	M	Chronic obstructive pulmonary disease w MCC	Include all	3	0.8818
191	M	Chronic obstructive pulmonary disease w CC	Include all	3	0.8572
192	M	Chronic obstructive pulmonary disease w/o CC/MCC	Include all	3	0.8849
193	M	Simple pneumonia & pleurisy w MCC	Include all	3	0.8875
194	M	Simple pneumonia & pleurisy w CC	Include all	3	0.9117
196	M	Interstitial lung disease w MCC	Include all	3	0.9491
197	M	Interstitial lung disease w CC	Include all	3	0.9948
198	M	Interstitial lung disease w/o CC/MCC	Include all	3	1.2023
199	M	Pneumothorax w MCC	Exclude diagnoses: 5121	1	1.2514

MS-DRG	Medical/ Surgical	DRG Title	ICD-9-CM	Severity	Weight
200	M	Pneumothorax w CC	See MS-DRG 199	2	1.5731
202	M	Bronchitis & asthma w CC/MCC	Include all	3	1.4846
207	M	Respiratory system diagnosis w ventilator support 96+ hours	Include all	2	1.1117
208	M	Respiratory system diagnosis w ventilator support <96 hours	Include all	2	1.0821
870	M	Septicemia or severe sepsis w MV 96+ hours	Include all	1	1.0123
871	M	Septicemia or severe sepsis w/o MV 96+ hours w MCC	Include all	1	0.9264
872	M	Septicemia or severe sepsis w/o MV 96+ hours w/o MCC	Include all	1	1.1395

Urology

MS-DRG	Medical/ Surgical	DRG Title	IC9-CM	Severity	Weight
653	S	Major bladder procedures w MCC	Include all	1	0.9716
654	S	Major bladder procedures w CC	Include all	2	1.1598
655	S	Major bladder procedures w/o CC/MCC	Include all	2	1.3232
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	1.0636
657	S	Kidney & ureter procedures forneoplasm w CC	See MS-DRG 656	2	0.9533
658	S	Kidney & ureter procedures for neoplasm w/o CC/MCC	See MS-DRG 656	2	0.9489
659	S	Kidney & ureter procedures for non-neoplasm w MCC	See MS-DRG 656	2	1.1240
660	S	Kidney & ureter procedures for non-neoplasm w CC	See MS-DRG 656	2	1.6488
661	S	Kidney & ureter procedures for non-neoplasm w/o CC/MCC	See MS-DRG 656	3	1.3390
662	S	Minor bladder procedures w MCC	Include all	3	0.9569
663	S	Minor bladder procedures w CC	Include all	3	1.0064
664	S	Minor bladder procedures w/o CC/MCC	Include all	3	1.0202
665	S	Prostatectomy w MCC	Include all	3	0.7992
666	S	Prostatectomy w CC	Include all	3	0.7977
668	S	Transurethral procedures w MCC	Include all	3	0.9306
669	S	Transurethral procedures w CC	Include all	3	0.9956
671	S	Urethral procedures w CC/MCC	Include all	3	1.0903
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	0.7324
674	S	Other kidney & urinary tract procedures w CC	See MS-DRG 673	3	0.8050
675	S	Other kidney & urinary tract procedures w/o CC/MCC	See MS-DRG 673	3	0.6597
686	M	Kidney & urinary tract neoplasms w MCC	Exclude diagnoses: 1890-1, 1980-1, 2230-1	2	0.9217
687	M	Kidney & urinary tract neoplasms w CC	See MS-DRG 686	2	0.9507
688	M	Kidney & urinary tract neoplasms w/o CC/MCC	See MS-DRG 686	3	0.6597

MS-DRG	Medical/ Surgical	DRG Title	IC9-CM	Severity	Weight
691	M	Urinary stones w esw lithotripsy w CC/MCC	Include all	3	1.3369
692	M	Urinary stones w esw lithotripsy w/o CC/MCC	Include all	3	1.2984
697	M	Urethral stricture	Include all	3	0.9840
698	M	Other kidney & urinary tract diagnoses w MCC	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	3	0.8477
699	M	Other kidney & urinary tract diagnoses w CC	See MS-DRG 698	3	0.9207
700	M	Other kidney & urinary tract diagnoses w/o CC/MCC	See MS-DRG 698	3	0.9547
707	S	Major male pelvic procedures w CC/MCC	Include all	2	1.5698
708	S	Major male pelvic procedures w/o CC/MCC	Include all	2	1.6488
709	S	Penis procedures w CC/MCC	Include all	3	1.1716
710	S	Penis procedures w/o CC/MCC	Include all	3	1.0820
711	S	Testes procedures w CC/MCC	Include all	2	1.6488
712	S	Testes procedures w/o CC/MCC	Include all	3	1.6488
713	S	Transurethral prostatectomy w CC/MCC	Include all	2	0.8112
715	S	Other male reproductive system O.R. proc for malignancy w CC/MCC	Include all	2	1.3300
716	S	Other male reproductive system O.R. proc for malignancy w/o CC/MCC	Include all	2	1.6488
717	S	Other male reproductive system O.R. proc exc malignancy w CC/MCC	Include all	3	0.9758
718	S	Other male reproductive system O.R. proc exc malignancy w/o CC/MCC	Include all	3	0.6597
722	M	Malignancy, male reproductive system w MCC	Include all	1	0.9984
723	M	Malignancy, male reproductive system w CC	Include all	2	1.0510
724	M	Malignancy, male reproductive system w/o CC/MCC	Include all	2	1.0749
727	M	Inflammation of the male reproductive system w MCC	Include all	3	1.0435
728	M	Inflammation of the male reproductive system w/o MCC	Include all	3	1.1081
729	M	Other male reproductive system diagnoses w CC/MCC	Exclude diagnoses: V252	3	1.1361
730	M	Other male reproductive system diagnoses w/o CC/MCC	See MS-DRG 729	3	0.8318
984	S	Prostatic O.R. procedure unrelated to principal diagnosis w MCC	Include all	3	0.7716
985	S	Prostatic O.R. procedure unrelated to principal diagnosis w CC	Include all	3	0.7760
986	S	Prostatic O.R. procedure unrelated to principal diagnosis w/o CC/MCC	Include all	3	0.7791

Appendix D

2016-17 Best Hospitals Rankings, Data-Driven Specialties

Best Hospitals 2016-17: Cancer

Rank	Hospital	U.S. News Specialty Score	Survival	Patient safety	Success in preventing deaths from treatable complications after surgery	Success in preventing collapsed lung during biopsies, catheter insertions 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	Number of patients	Nurse staffing	Nurse Magnet status	NCI-designated cancer center	FACT-Accreditation	Advanced technologies	Patient services	Intensivist on staff	Reputation with specialists	Current AHA responder
1	University of Texas MD Anderson Cancer Center, Houston	100.0	10	2	4	2	1	2	3	2	5,638	2.0	Yes	Yes	2	8	8	Yes	62.0	Yes
2	Memorial Sloan Kettering Cancer Center, New York	97.9	10	4	5	2	1	5	3	4	3,843	2.0	Yes	Yes	2	8	8	Yes	61.1	Yes
3	Mayo Clinic, Rochester, Minn.	91.0	10	5	5	4	4	5	1	5	3,206	2.7	Yes	Yes	2	8	8	Yes	26.3	Yes
4	Dana-Farber/Brigham and Women's Cancer Center, Boston	80.9	9	5	5	5	5	5	1	5	2,984	2.4	No	Yes	2	8	8	Yes	33.5	Yes
5	UCLA Medical Center, Los Angeles	75.2	10	4	4	5	4	4	1	5	1,646	3.1	Yes	Yes	2	8	8	Yes	6.8	Yes
6	Moffitt Cancer Center and Research Institute, Tampa	75.0	10	1	2	1	1	1	3	1	2,105	1.2	Yes	Yes	2	8	8	Yes	4.0	Yes
7	Seattle Cancer Care Alliance/Univ. of Washington Medical Center	74.9	10	3	2	2	3	5	1	5	1,046	2.1	Yes	Yes	2	8	8	Yes	10.8	Yes
8	Cleveland Clinic	73.8	10	5	4	4	4	4	1	4	2,449	2.1	Yes	Yes	2	8	8	Yes	8.5	Yes
9	Johns Hopkins Hospital, Baltimore	72.7	8	2	2	2	2	3	1	2	1,573	2.1	Yes	Yes	2	8	8	Yes	20.1	Yes
10	UCSF Medical Center, San Francisco	71.8	9	5	4	4	2	4	1	5	1,315	2.7	Yes	Yes	2	8	8	Yes	8.0	Yes
11	Massachusetts General Hospital, Boston	70.6	9	3	5	1	1	5	1	3	2,431	2.3	Yes	Yes	2	8	8	Yes	10.3	Yes
12	Hosps. of the Univ. of Pennsylvania-Penn Presbyterian, Philadelphia	69.4	9	5	4	4	4	5	1	4	2,330	2.5	Yes	Yes	2	8	8	Yes	7.7	Yes
13	Stanford Health Care-Stanford Hospital, Calif.	69.0	9	5	3	4	5	4	1	4	1,260	2.4	Yes	Yes	2	8	8	Yes	8.0	Yes
14	Northwestern Memorial Hospital, Chicago	68.6	10	4	5	4	2	4	2	4	1,722	1.6	Yes	Yes	2	8	8	Yes	1.6	Yes
15	Barnes-Jewish Hospital/Washington University, St. Louis	68.5	9	3	2	3	2	4	1	3	3,043	2.2	Yes	Yes	2	8	8	Yes	4.8	Yes
16	University of North Carolina Hospitals, Chapel Hill	67.0	10	2	2	1	2	2	1	4	1,365	1.8	Yes	Yes	2	8	8	Yes	2.5	Yes
17	New York-Presbyterian Univ. Hosp. of Columbia and Cornell, N.Y.	66.8	10	3	4	3	1	3	1	4	4,161	2.5	No	Yes	2	8	8	Yes	2.4	Yes
18	USC Norris Cancer Hospital-Keck Med. Center of USC, Los Angeles	66.7	10	1	1	1	5	1	1	2	877	3.8	No	Yes	2	8	8	Yes	1.1	Yes
19	Wake Forest Baptist Medical Center, Winston-Salem, N.C.	66.4	10	2	4	3	2	3	1	2	2,030	1.6	Yes	Yes	2	8	8	Yes	1.4	Yes
20	City of Hope, Duarte, Calif.	65.9	10	5	5	3	3	5	3	5	910	2.3	No	Yes	2	8	8	Yes	5.4	Yes
21	University of Maryland Medical Center, Baltimore	65.5	10	1	1	1	1	1	1	3	1,071	2.9	Yes	Yes	2	8	8	Yes	1.1	Yes
22	University of Colorado Hospital, Aurora	65.1	10	3	3	5	2	5	1	5	853	2.2	Yes	Yes	2	8	8	Yes	0.6	Yes
23	UPMC Presbyterian Shadyside, Pittsburgh	64.9	9	1	4	2	2	2	1	1	3,422	1.9	Yes	Yes	2	8	8	Yes	2.9	Yes
24	University of Michigan Hospitals and Health Centers, Ann Arbor	64.8	9	5	3	4	3	4	1	5	2,206	2.9	No	Yes	2	8	8	Yes	5.1	Yes
25	University of Kansas Hospital, Kansas City	64.4	10	2	3	2	4	1	1	3	1,353	1.9	Yes	Yes	2	8	8	Yes	0.7	Yes
26	Fox Chase Cancer Center, Philadelphia	64.3	9	2	4	2	1	4	1	4	1,187	2.1	Yes	Yes	2	8	8	Yes	3.5	Yes
26	Mayo Clinic, Phoenix	64.3	10	5	5	3	3	5	2	4	995	3.2	No	Yes	2	8	8	Yes	2.0	Yes
28	Seidman Cancer Center at UH Case Medical, Cleveland	63.6	9	2	4	1	1	5	1	4	1,525	2.3	Yes	Yes	2	8	8	Yes	3.0	Yes
29	Mayo Clinic Jacksonville, Fla.	63.5	10	5	4	2	4	4	2	5	816	2.1	Yes	Yes	2	8	8	Yes	1.9	Yes
29	Thomas Jefferson University Hospital, Philadelphia	63.5	9	4	3	2	2	4	2	4	1,770	2.2	Yes	Yes	2	8	8	Yes	1.6	Yes
31	University of Virginia Medical Center, Charlottesville	62.9	10	4	2	2	4	5	1	4	1,128	2.1	Yes	Yes	2	8	7	Yes	0.4	Yes
32	University of Chicago Medical Center	62.7	10	4	2	3	2	3	1	5	1,720	2.3	No	Yes	2	8	8	Yes	2.6	Yes
33	NYU Langone Medical Center, New York	62.6	9	4	4	2	3	5	1	4	1,182	2.6	Yes	Yes	1	8	8	Yes	1.3	Yes
34	University of Iowa Hospitals and Clinics, Iowa City	62.4	10	4	3	3	3	4	2	4	1,148	1.8	Yes	Yes	2	8	8	Yes	0.5	Yes
35	UC San Diego Medical Center - UC San Diego Health, Calif.	62.3	9	5	4	2	5	4	2	4	868	1.8	Yes	Yes	2	8	8	Yes	1.5	Yes
36	Oregon Health and Science University Hospital, Portland	61.6	10	2	4	1	3	3	1	1	1,126	2.1	Yes	Yes	2	8	8	Yes	0.5	Yes
37	Ohio State University James Cancer Hospital, Columbus	61.5	9	2	2	1	1	4	1	4	2,671	2.1	Yes	Yes	2	8	8	Yes	2.8	Yes
38	Mount Sinai Hospital, New York	61.4	9	4	2	3	5	3	2	4	1,953	2.0	Yes	Yes	2	8	8	Yes	1.5	Yes
38	Rush University Medical Center, Chicago	61.4	10	4	4	4	1	4	2	3	1,530	2.2	Yes	No	2	8	8	Yes	1.1	Yes
40	Duke University Hospital, Durham, N.C.	60.9	7	4	2	3	4	4	1	4	2,069	2.2	Yes	Yes	2	8	8	Yes	6.8	Yes
40	University of California, Davis Medical Center, Sacramento	60.9	9	4	4	3	3	5	1	3	809	2.7	Yes	Yes	2	8	8	Yes	0.8	Yes
42	Vanderbilt University Medical Center, Nashville	60.7	9	4	3	2	4	3	2	4	1,263	1.9	Yes	Yes	2	8	8	Yes	1.1	Yes
43	University of Wisconsin Hospital and Clinics, Madison	60.6	9	2	4	3	2	4	1	2	1,259	1.9	Yes	Yes	2	8	8	Yes	0.5	Yes
44	Houston Methodist Hospital	60.1	10	3	4	2	3	3	1	5	1,372	1.9	Yes	No	2	8	8	Yes	1.1	Yes
44	University of Minnesota Medical Center, Fairview	60.1	10	1	4	1	1	4	1	1	987	2.1	No	Yes	2	8	8	Yes	0.3	Yes
46	Emory University Hospital, Atlanta	58.7	8	5	4	5	4	2	1	5	1,474	2.0	Yes	Yes	2	8	8	Yes	2.6	Yes
47	Huntsman Cancer Institute at the University of Utah, Salt Lake City	58.5	10	4	4	3	3	4	1	3	860	2.4	No	Yes	2	8	8	Yes	0.5	Yes
47	Medical University of South Carolina Medical Center, Charleston	58.5	9	3	3	3	3	2	1	2	1,001	2.1	Yes	Yes	2	8	8	Yes	0.2	Yes
49	UF Health Shands Hospital, Gainesville, Fla.	57.9	9	3	2	2	2	4	2	4	1,381	2.0	Yes	No	2	8	8	Yes	0.9	Yes
50	Yale-New Haven Hospital, New Haven, Conn.	57.5	8	1	3	1	1	3	1	1	2,272	1.8	Yes	Yes	2	8	8	Yes	2.5	Yes

Best Hospitals 2016-17: Cardiology & Heart Surgery

Rank	Hospital	U.S. News Specialty Score	Survival	Patient safety	Success in preventing deaths from treatable complications after surgery	Success in preventing collapsed lung during biopsies, catheter insertions 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	Public transparency	STS transparency	ACC transparency	Number of patients	Nurse staffing	Nurse Magnet status	Advanced technologies	Patient services	Trauma center	Intensivist on staff	Reputation with specialists	Current AHA responder
1	Cleveland Clinic	100.0	10	5	4	4	4	4	1	4	3	Yes	Yes	13,183	2.1	Yes	6	7	No	Yes	52.8	Yes
2	Mayo Clinic, Rochester, Minn.	96.7	10	5	5	4	4	5	1	5	2	No	Yes	9,946	2.7	Yes	6	7	Yes	Yes	47.6	Yes
3	New York-Presbyterian Univ. Hosp. of Columbia and Cornell, N.Y.	83.2	10	3	4	3	1	3	1	4	2	No	Yes	16,921	2.5	No	6	7	Yes	Yes	16.7	Yes
4	Massachusetts General Hospital, Boston	78.2	9	3	5	1	1	5	1	3	3	Yes	Yes	7,510	2.3	Yes	6	7	Yes	Yes	18.6	Yes
5	Duke University Hospital, Durham, N.C.	75.7	10	4	2	3	4	4	1	4	2	Yes	No	6,161	2.2	Yes	6	7	Yes	Yes	13.8	Yes
6	Northwestern Memorial Hospital, Chicago	75.4	10	4	5	4	2	4	2	4	2	Yes	No	4,341	1.6	Yes	6	7	Yes	Yes	3.7	Yes
7	Brigham and Women's Hospital, Boston	75.2	10	5	5	5	5	5	1	5	3	Yes	Yes	6,215	2.4	No	6	7	Yes	Yes	17.3	Yes
8	Mount Sinai Hospital, New York	75.0	10	4	2	3	5	3	2	4	2	No	Yes	9,380	2.0	Yes	6	7	Yes	Yes	4.8	Yes
9	Johns Hopkins Hospital, Baltimore	72.7	9	2	2	2	2	3	1	2	3	Yes	Yes	3,795	2.1	Yes	6	7	Yes	Yes	15.6	Yes
10	Cedars-Sinai Medical Center, Los Angeles	72.5	9	3	4	1	2	4	1	4	2	Yes	No	6,857	2.6	Yes	6	7	Yes	Yes	6.3	Yes
10	NYU Langone Medical Center, New York	72.5	10	4	4	2	3	5	1	4	3	Yes	Yes	4,220	2.6	Yes	5	7	Yes	Yes	2.7	Yes
12	UCLA Medical Center, Los Angeles	70.4	9	4	4	5	4	4	1	5	3	Yes	Yes	4,028	3.1	Yes	6	7	Yes	Yes	3.3	Yes
13	Hosps. of the Univ. of Pennsylvania-Penn Presbyterian, Philadelphia	69.6	9	5	4	4	4	5	1	4	0	No	No	9,398	2.5	Yes	6	7	Yes	Yes	8.3	Yes
14	Barnes-Jewish Hospital/Washington University, St. Louis	69.0	10	3	2	3	2	4	1	3	2	No	Yes	6,784	2.2	Yes	6	7	Yes	Yes	3.8	Yes
15	Stanford Health Care-Stanford Hospital, Calif.	68.0	8	5	3	4	5	4	1	4	3	Yes	Yes	3,035	2.4	Yes	6	7	Yes	Yes	6.8	Yes
16	Emory University Hospital, Atlanta	67.3	9	5	4	5	4	2	1	5	3	Yes	Yes	3,966	2.0	Yes	6	7	No	Yes	6.5	Yes
16	St. Francis Hospital, Roslyn, N.Y.	67.3	10	2	2	4	2	2	1	3	2	No	Yes	9,309	1.9	Yes	5	7	Yes	Yes	1.1	Yes
18	The Heart Hospital Baylor Plano, Texas	65.8	10	4	4	3	5	4	1	1	3	Yes	Yes	3,886	2.3	Yes	4	5	No	Yes	2.1	Yes
19	UPMC Presbyterian Shadyside, Pittsburgh	65.3	9	1	4	2	2	2	1	1	3	Yes	Yes	10,381	1.9	Yes	6	7	Yes	Yes	1.9	Yes
20	St. Luke's Hospital, Kansas City, Mo.	65.2	10	5	3	5	5	5	2	5	2	No	Yes	4,311	1.6	Yes	6	7	Yes	Yes	1.5	Yes
21	Houston Methodist Hospital	65.0	9	3	4	2	3	3	1	5	2	No	Yes	6,473	1.9	Yes	6	7	No	Yes	3.6	Yes
22	University of Michigan Hospitals and Health Centers, Ann Arbor	64.6	9	5	3	4	3	4	1	5	3	Yes	Yes	5,507	2.9	No	6	7	Yes	Yes	5.0	Yes
23	Advocate Christ Medical Center, Oak Lawn, Ill.	64.2	9	4	2	3	3	4	2	4	3	Yes	Yes	6,920	2.4	Yes	5	7	Yes	Yes	0.6	Yes
24	Sentara Norfolk General Hospital-Sentara Heart Hospital, Norfolk, Va.	64.0	10	1	2	2	2	3	1	4	3	Yes	Yes	5,355	1.6	Yes	6	7	Yes	Yes	0.3	Yes
25	Beaumont Hospital-Royal Oak, Mich.	63.9	9	3	3	4	2	4	1	3	3	Yes	Yes	9,475	1.8	Yes	5	7	Yes	Yes	1.1	Yes
26	Ohio State University Wexner Medical Center, Columbus	63.4	9	2	2	1	1	4	1	4	3	Yes	Yes	6,050	2.1	Yes	6	7	Yes	Yes	1.1	Yes
27	Morristown Medical Center, Morristown, N.J.	63.1	9	4	3	4	1	4	2	4	3	Yes	Yes	7,428	1.9	Yes	5	7	Yes	Yes	0.2	Yes
28	Scripps La Jolla Hospitals and Clinics, La Jolla, Calif.	62.6	9	4	5	2	5	3	1	2	2	No	Yes	5,030	2.9	Y/N*	5	7	Yes	Yes	1.9	Yes
29	Vanderbilt University Medical Center, Nashville	62.4	9	4	3	2	4	3	2	4	2	No	Yes	4,785	1.9	Yes	6	7	Yes	Yes	2.2	Yes
30	Tampa General Hospital	62.3	10	1	3	1	1	1	1	1	2	Yes	No	4,200	2.2	Yes	6	7	Yes	Yes	0.1	Yes
31	Aurora St. Luke's Medical Center, Milwaukee	61.0	9	1	4	1	2	1	2	2	3	Yes	Yes	9,209	1.5	Yes	6	7	No	Yes	0.6	Yes
31	Minneapolis Heart Institute at Abbott Northwestern Hospital	61.0	8	5	4	4	4	5	2	3	3	Yes	Yes	6,742	2.1	Yes	6	7	No	Yes	1.2	Yes
31	UC San Diego Medical Center - UC San Diego Health, Calif.	61.0	9	5	4	2	5	4	2	4	2	No	Yes	2,215	1.8	Yes	6	6	Yes	Yes	0.7	Yes
34	University of California, Davis Medical Center, Sacramento	60.4	9	4	4	3	3	5	1	3	2	Yes	No	2,319	2.7	Yes	5	7	Yes	Yes	0.1	Yes
35	Lehigh Valley Hospital, Allentown, Pa.	60.2	8	4	4	3	2	4	2	3	3	Yes	Yes	7,518	1.8	Yes	5	7	Yes	Yes	0.3	Yes
36	Oregon Health and Science University Hospital, Portland	60.1	10	2	4	1	3	3	1	1	3	Yes	Yes	2,402	2.1	Yes	6	7	Yes	Yes	0.2	Yes
37	University of Alabama Hospital at Birmingham	60.0	9	4	1	2	4	4	1	5	2	No	Yes	4,401	1.8	Yes	6	6	Yes	Yes	0.8	Yes
38	Texas Heart Institute at Baylor St. Luke's Medical Center, Houston	59.9	8	1	2	1	3	2	1	4	0	No	No	6,301	1.8	Yes	5	6	No	Yes	10.5	Yes
38	University of Kansas Hospital, Kansas City	59.9	10	2	3	2	4	1	1	3	0	No	No	3,651	1.9	Yes	5	7	Yes	Yes	0.2	Yes
40	Mayo Clinic, Phoenix	59.6	10	5	5	3	3	5	2	4	2	No	Yes	2,246	3.2	No	6	7	No	Yes	1.7	Yes
41	Fairview Hospital, Cleveland	59.1	10	5	5	4	4	4	4	4	2	Yes	No	3,398	1.7	Yes	4	7	Yes	Yes	0.0	Yes
42	Hackensack University Medical Center, Hackensack, N.J.	58.8	8	4	4	4	2	3	2	3	2	No	Yes	5,693	2.4	Yes	5	7	Yes	Yes	0.1	Yes
42	University of Colorado Hospital, Aurora	58.8	8	3	3	5	2	5	1	5	3	Yes	Yes	2,195	2.2	Yes	6	7	Yes	Yes	0.6	Yes
44	IU Health Academic Health Center, Indianapolis	58.7	8	2	2	2	2	2	1	3	3	Yes	Yes	4,588	1.8	Yes	6	7	Yes	Yes	0.2	Yes
45	Memorial Hermann-Texas Medical Center, Houston	58.4	9	5	3	3	3	4	1	5	0	No	No	3,451	2.2	Yes	6	7	Yes	Yes	0.7	Yes
45	UCSF Medical Center, San Francisco	58.4	8	5	4	4	2	4	1	5	2	Yes	No	1,787	2.7	Yes	5	6	Yes	Yes	2.7	Yes
45	University of Washington Medical Center, Seattle	58.4	10	3	2	2	3	5	1	5	2	Yes	No	1,923	2.1	Yes	6	7	No	Yes	1.2	Yes
48	Kaiser Permanente San Francisco Medical Center	58.3	10	4	5	5	4	3	1	1	2	Yes	No	3,490	2.3	No	5	7	No	Yes	0.5	Yes
48	Keck Medical Center of USC, Los Angeles**	58.3	10	1	1	1	5	1	1	2	2	No	Yes	1,558	3.8	No	6	7	Yes	Yes	1.0	Yes
48	Munson Medical Center, Traverse City, Mich.	58.3	9	2	3	3	1	2	1	2	2	Yes	No	5,222	1.8	Yes	5	7	Yes	Yes	0.3	Yes
48	Thomas Jefferson University Hospital, Philadelphia	58.3	8	4	3	2	2	4	2	4	2	No	Yes	4,197	2.2	Yes	6	7	Yes	Yes	0.6	Yes

* Half credit was awarded because the primary hospital had Nurse Magnet recognition but the specialty or secondary hospital did not.

** This hospital was initially omitted from these specialty rankings due to a data processing error. Previous rankings for other hospitals have not been changed.

Best Hospitals 2016-17: Diabetes & Endocrinology

Rank	Hospital	U.S. News Specialty Score	Survival	Patient safety	Success in preventing deaths from treatable complications after surgery	Success in preventing collapsed lung during biopsies, catheter insertions 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	Number of patients	Nurse staffing	Nurse Magnet status	Advanced technologies	Patient services	Intensivist on staff	Reputation with specialists	Current AHA responder
1	Mayo Clinic, Rochester, Minn.	100.0	9	5	5	4	4	5	1	5	551	2.7	Yes	4	8	Yes	54.7	Yes
2	Massachusetts General Hospital, Boston	85.1	7	3	5	1	1	5	1	3	491	2.3	Yes	4	8	Yes	35.2	Yes
3	Cleveland Clinic	83.9	8	5	4	4	4	4	1	4	699	2.1	Yes	4	8	Yes	22.5	Yes
4	Johns Hopkins Hospital, Baltimore	80.8	8	2	2	2	2	3	1	2	308	2.1	Yes	4	8	Yes	25.3	Yes
5	New York-Presbyterian Univ. Hosp. of Columbia and Cornell, N.Y.	80.6	9	3	4	3	1	3	1	4	1,294	2.5	No	4	8	Yes	10.5	Yes
6	UCSF Medical Center, San Francisco	78.6	9	5	4	4	2	4	1	5	261	2.7	Yes	4	8	Yes	9.1	Yes
7	Stanford Health Care-Stanford Hospital, Calif.	73.7	9	5	3	4	5	4	1	4	242	2.4	Yes	4	8	Yes	1.8	Yes
8	Houston Methodist Hospital	71.5	9	3	4	2	3	3	1	5	472	1.9	Yes	4	8	Yes	2.6	Yes
9	Hosps. of the Univ. of Pennsylvania-Penn Presbyterian, Philadelphia	70.6	7	5	4	4	4	5	1	4	527	2.5	Yes	4	8	Yes	7.0	Yes
10	Beaumont Hospital-Royal Oak, Mich.	69.5	8	3	3	4	2	4	1	3	892	1.8	Yes	4	8	Yes	0.4	Yes
11	Mount Sinai Hospital, New York	69.4	7	4	2	3	5	3	2	4	722	2.0	Yes	4	8	Yes	5.7	Yes
11	Northwestern Memorial Hospital, Chicago	69.4	8	4	5	4	2	4	2	4	365	1.6	Yes	4	8	Yes	4.0	Yes
13	Harper University Hospital, Detroit	67.9	10	3	4	3	4	2	2	1	217	1.6	No	4	8	Yes	0.1	Yes
14	Cedars-Sinai Medical Center, Los Angeles	67.8	8	3	4	1	2	4	1	4	522	2.6	Yes	4	8	Yes	3.4	Yes
14	University of Colorado Hospital, Aurora	67.8	8	3	3	5	2	5	1	5	269	2.2	Yes	4	8	Yes	2.6	Yes
16	Yale-New Haven Hospital, New Haven, Conn.	67.5	7	1	3	1	1	3	1	1	829	1.8	Yes	4	8	Yes	7.2	Yes
17	Brigham and Women's Hospital, Boston	67.2	7	5	5	5	5	5	1	5	395	2.4	No	4	8	Yes	10.9	Yes
18	Christiana Care Christiana Hospital, Newark, Del.	66.9	8	4	2	3	4	4	1	4	787	2.0	Yes	4	8	Yes	0.1	Yes
18	Duke University Hospital, Durham, N.C.	66.9	8	4	2	3	4	4	1	4	293	2.2	Yes	4	8	Yes	3.3	Yes
20	NYU Langone Medical Center, New York	66.7	8	4	4	2	3	5	1	4	299	2.6	Yes	4	8	Yes	1.8	Yes
20	Queen's Medical Center, Honolulu	66.7	9	3	2	2	2	4	2	4	348	1.8	Yes	4	8	Yes	0.0	Yes
22	Montefiore Medical Center, New York	66.4	8	1	4	2	1	2	1	2	1,043	2.2	No	4	8	Yes	1.8	Yes
23	University of North Carolina Hospitals, Chapel Hill	66.3	8	2	2	1	2	2	1	4	274	1.8	Yes	4	8	Yes	2.7	Yes
24	Scripps La Jolla Hospitals and Clinics, La Jolla, Calif.	66.2	9	4	5	2	5	3	1	2	275	2.9	Y/N*	4	8	Yes	0.2	Yes
24	Sentara Norfolk General Hospital, Norfolk, Va.	66.2	9	1	2	2	2	3	1	4	290	1.6	Yes	4	8	Yes	0.7	Yes
26	Baylor St. Luke's Medical Center, Houston	66.1	9	1	2	1	3	2	1	4	323	1.8	Yes	4	7	Yes	2.1	Yes
27	Tampa General Hospital	65.9	9	1	3	1	1	1	1	1	325	2.2	Yes	4	8	Yes	0.0	Yes
27	UCLA Medical Center, Los Angeles	65.9	7	4	4	5	4	4	1	5	379	3.1	Yes	4	8	Yes	6.4	Yes
29	Barnes-Jewish Hospital/Washington University, St. Louis	65.8	7	3	2	3	2	4	1	3	527	2.2	Yes	4	8	Yes	4.9	Yes
30	University of Alabama Hospital at Birmingham	65.7	9	4	1	2	4	4	1	5	401	1.8	Yes	4	7	Yes	0.5	Yes
31	Baylor University Medical Center, Dallas	65.3	8	4	3	5	3	4	1	2	537	1.7	Yes	4	8	Yes	1.1	Yes
32	UPMC Presbyterian Shadyside, Pittsburgh	65.2	7	1	4	2	2	2	1	1	774	1.9	Yes	4	8	Yes	3.7	Yes
33	University of Kansas Hospital, Kansas City	64.8	9	2	3	2	4	1	1	3	255	1.9	Yes	4	8	Yes	0.2	Yes
34	Thomas Jefferson University Hospital, Philadelphia	64.7	8	4	3	2	2	4	2	4	529	2.2	Yes	4	8	Yes	0.9	Yes
35	Oregon Health and Science University Hospital, Portland	64.5	8	2	4	1	3	3	1	1	186	2.1	Yes	4	8	Yes	3.0	Yes
36	Ohio State University Wexner Medical Center, Columbus	64.4	8	2	2	1	1	4	1	4	458	2.1	Yes	4	8	Yes	1.5	Yes
36	Wake Forest Baptist Medical Center, Winston-Salem, N.C.	64.4	8	2	4	3	2	3	1	2	365	1.6	Yes	4	8	Yes	0.7	Yes
38	UR Medicine Strong Memorial Hospital, Rochester, N.Y.	64.3	8	2	1	1	4	4	2	4	364	1.7	Yes	4	8	Yes	0.1	Yes
39	Huntington Hospital, Huntington, N.Y.	64.1	9	4	4	4	3	1	4	4	197	1.8	Yes	4	8	Yes	0.0	Yes
40	Baystate Medical Center, Springfield, Mass.	63.7	8	3	2	4	2	4	1	4	421	1.5	Yes	4	8	Yes	0.0	Yes
40	University of Maryland Medical Center, Baltimore	63.7	8	1	1	1	1	1	1	3	149	2.9	Yes	4	8	Yes	1.0	Yes
42	Vanderbilt University Medical Center, Nashville	63.4	8	4	3	2	4	3	2	4	315	1.9	Yes	4	8	Yes	2.2	Yes
43	Flagstaff Medical Center, Flagstaff, Ariz.	63.2	10	3	3	4	2	2	2	2	147	2.8	No	4	7	Yes	0.0	Yes
44	MetroHealth Medical Center, Cleveland	63.1	10	1	3	3	1	1	3	1	133	1.0	Yes	4	8	Yes	0.0	Yes
45	Beth Israel Deaconess Medical Center, Boston	63.0	8	2	3	1	1	4	1	2	363	1.7	No	4	8	Yes	4.5	Yes
46	Bon Secours Memorial Regional Medical Center, Mechanicsville, Va.	62.7	9	2	4	5	2	1	3	2	192	1.4	Yes	4	6	Yes	0.0	Yes
46	Rush University Medical Center, Chicago	62.7	8	4	4	4	1	4	2	3	336	2.2	Yes	4	8	Yes	0.7	Yes
48	MedStar Georgetown University Hospital, Washington, D.C.	62.3	9	1	3	1	3	3	1	2	116	1.4	Yes	4	8	Yes	1.1	Yes
48	UF Health Shands Hospital, Gainesville, Fla.	62.3	8	3	2	2	2	4	2	4	288	2.0	Yes	4	8	Yes	0.2	Yes
50	Clear Lake Regional Medical Center, Webster, Texas	62.2	9	4	4	3	3	2	4	5	364	1.8	No	4	6	Yes	0.0	Yes
50	Emory University Hospital, Atlanta	62.2	7	5	4	5	4	2	1	5	318	2.0	Yes	4	8	Yes	2.8	Yes
50	Mayo Clinic, Phoenix	62.2	9	5	5	3	3	5	2	4	188	3.2	No	4	8	Yes	0.5	Yes
50	Tufts Medical Center, Boston	62.2	10	2	3	2	1	4	1	1	170	1.6	No	4	8	Yes	0.8	Yes

* Half credit was awarded because the primary hospital had Nurse Magnet recognition but the specialty or secondary hospital did not.

Best Hospitals 2016-17:
Ear, Nose & Throat

Rank	Hospital	U.S. News Specialty Score	Survival	Patient safety	Success in preventing deaths from treatable complications after surgery	Success in preventing collapsed lung during biopsies, catheter insertions 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	Number of patients	Nurse staffing	Nurse Magnet status	Advanced technologies	Patient services	Trauma center	Intensivist on staff	Reputation with specialists	Current AHA responder
1	Mass. Eye and Ear Infirmary, Mass. General Hospital, Boston	100.0	10	3	5	1	1	5	1	3	395	2.3	N/Y*	1	8	Yes	Yes	27.2	Yes
2	Mayo Clinic, Rochester, Minn.	96.5	10	5	5	4	4	5	1	5	299	2.7	Yes	1	8	Yes	Yes	15.0	Yes
3	Johns Hopkins Hospital, Baltimore	95.7	9	2	2	2	2	3	1	2	157	2.1	Yes	1	8	Yes	Yes	34.1	Yes
4	UCLA Medical Center, Los Angeles	88.7	10	4	4	5	4	4	1	5	304	3.1	Yes	1	8	Yes	Yes	6.5	Yes
5	University of Iowa Hospitals and Clinics, Iowa City	88.1	9	4	3	3	3	4	2	4	151	1.8	Yes	1	8	Yes	Yes	17.7	Yes
6	UPMC Presbyterian Shadyside, Pittsburgh	87.7	8	1	4	2	2	2	1	1	381	1.9	Yes	1	8	Yes	Yes	13.1	Yes
7	Ohio State University Wexner Medical Center, Columbus	86.3	10	2	2	1	1	4	1	4	399	2.1	Yes	1	8	Yes	Yes	6.2	Yes
8	University of Michigan Hospitals and Health Centers, Ann Arbor	86.1	8	5	3	4	3	4	1	5	322	2.9	No	1	8	Yes	Yes	14.6	Yes
9	University of Texas MD Anderson Cancer Center, Houston	85.7	8	2	4	2	1	2	3	2	439	2.0	Yes	1	8	No	Yes	11.3	Yes
10	Hosps. of the Univ. of Pennsylvania-Penn Presbyterian, Philadelphia	85.6	6	5	4	4	4	5	1	4	320	2.5	Yes	1	8	Yes	Yes	12.8	Yes
11	UCSF Medical Center, San Francisco	85.0	10	5	4	4	2	4	1	5	140	2.7	Yes	1	8	Yes	Yes	7.4	Yes
12	Cleveland Clinic	84.8	8	5	4	4	4	4	1	4	250	2.1	Yes	1	8	No	Yes	13.0	Yes
13	Stanford Health Care-Stanford Hospital, Calif.	83.4	7	5	3	4	5	4	1	4	216	2.4	Yes	1	8	Yes	Yes	10.2	Yes
14	Medical University of South Carolina Medical Center, Charleston	81.9	9	3	3	3	3	2	1	2	196	2.1	Yes	1	8	Yes	Yes	6.4	Yes
15	Barnes-Jewish Hospital/Washington University, St. Louis	80.9	7	3	2	3	2	4	1	3	269	2.2	Yes	1	8	Yes	Yes	8.0	Yes
16	University of Washington Medical Center, Seattle	79.4	9	3	2	2	3	5	1	5	136	2.1	Yes	1	8	No	Yes	8.3	Yes
17	University of North Carolina Hospitals, Chapel Hill	78.1	10	2	2	1	2	2	1	4	205	1.8	Yes	1	8	Yes	Yes	3.8	Yes
18	Oregon Health and Science University Hospital, Portland	77.2	10	2	4	1	3	3	1	1	183	2.1	Yes	1	8	Yes	Yes	2.9	Yes
18	Thomas Jefferson University Hospital, Philadelphia	77.2	8	4	3	2	2	4	2	4	319	2.2	Yes	1	8	Yes	Yes	1.9	Yes
20	Mount Sinai Hospital, New York	77.1	6	4	2	3	5	3	2	4	299	2.0	Yes	1	8	Yes	Yes	5.7	Yes
21	Memorial Sloan Kettering Cancer Center, New York	76.4	9	4	5	2	1	5	3	4	212	2.0	Yes	1	8	No	Yes	4.5	Yes
22	University of Cincinnati Medical Center	75.7	10	1	4	1	2	2	2	1	221	1.8	No	1	8	Yes	Yes	5.4	Yes
23	Vanderbilt University Medical Center, Nashville	75.0	3	4	3	2	4	3	2	4	264	1.9	Yes	1	8	Yes	Yes	11.5	Yes
24	University of California, Davis Medical Center, Sacramento	74.9	9	4	4	3	3	5	1	3	111	2.7	Yes	1	8	Yes	Yes	1.9	Yes
25	Rush University Medical Center, Chicago	74.4	10	4	4	4	1	4	2	3	99	2.2	Yes	1	8	Yes	Yes	1.0	Yes
26	Baylor University Medical Center, Dallas	74.0	10	4	3	5	3	4	1	2	163	1.7	Yes	1	8	Yes	Yes	0.5	Yes
27	Queen's Medical Center, Honolulu	73.6	10	3	2	2	2	4	2	4	86	1.8	Yes	1	8	Yes	Yes	0.0	Yes
28	Mayo Clinic, Phoenix	73.5	10	5	5	3	3	5	2	4	182	3.2	No	1	8	No	Yes	1.4	Yes
29	Mayo Clinic Jacksonville, Fla.	73.0	10	5	4	2	4	4	2	5	77	2.1	Yes	1	8	No	Yes	0.5	Yes
29	University of Alabama Hospital at Birmingham	73.0	7	4	1	2	4	4	1	5	294	1.8	Yes	1	7	Yes	Yes	1.9	Yes
31	University of Kansas Hospital, Kansas City	72.7	8	2	3	2	4	1	1	3	228	1.9	Yes	1	8	Yes	Yes	1.2	Yes
32	Carolinas Medical Center, Charlotte, N.C.	72.6	10	3	2	2	3	3	2	5	154	1.7	Yes	1	8	Yes	Yes	0.0	Yes
33	Yale-New Haven Hospital, New Haven, Conn.	72.4	8	1	3	1	1	3	1	1	335	1.8	Yes	1	8	Yes	Yes	0.6	Yes
34	Cedars-Sinai Medical Center, Los Angeles	72.3	9	3	4	1	2	4	1	4	85	2.6	Yes	1	8	Yes	Yes	0.8	Yes
35	University Hospitals Case Medical Center, Cleveland	71.4	6	2	4	1	1	5	1	4	261	2.3	Yes	1	8	Yes	Yes	2.9	Yes
35	Wake Forest Baptist Medical Center, Winston-Salem, N.C.	71.4	8	2	4	3	2	3	1	2	277	1.6	Yes	1	8	Yes	Yes	0.7	Yes
37	NYU Langone Medical Center, New York	70.9	8	4	4	2	3	5	1	4	60	2.6	Yes	1	8	Yes	Yes	2.5	Yes
38	New York-Presbyterian Univ. Hosp. of Columbia and Cornell, N.Y.	70.7	8	3	4	3	1	3	1	4	253	2.5	No	1	8	Yes	Yes	2.7	Yes
39	Fox Chase Cancer Center, Philadelphia	70.5	10	2	4	2	1	4	1	4	83	2.1	Yes	1	8	No	Yes	0.1	Yes
40	Porter Adventist Hospital, Denver	70.2	10	2	3	1	2	2	1	3	127	1.7	Yes	1	8	No	Yes	0.0	Yes
41	University of California, Irvine Medical Center, Orange	70.0	8	2	2	2	2	2	1	4	102	2.6	Yes	1	7	Yes	Yes	1.2	Yes
42	Ochsner Medical Center, New Orleans	69.9	8	3	1	3	2	3	2	3	136	1.9	Yes	1	8	Yes	Yes	0.5	Yes
42	University of Chicago Medical Center	69.9	9	4	2	3	2	3	1	5	143	2.3	No	1	8	Yes	Yes	2.9	Yes
44	Northwestern Memorial Hospital, Chicago	69.8	8	4	5	4	2	4	2	4	90	1.6	Yes	1	8	Yes	Yes	1.9	Yes
45	University of Maryland Medical Center, Baltimore	69.5	8	1	1	1	1	1	1	3	197	2.9	Yes	1	8	Yes	Yes	0.6	Yes
46	St. Vincent Hospital and Health Center, Indianapolis	69.4	9	3	4	3	4	2	2	3	162	1.6	Yes	1	8	Yes	Yes	0.0	Yes
47	Hackensack University Medical Center, Hackensack, N.J.	69.3	8	4	4	4	2	3	2	3	99	2.4	Yes	1	8	Yes	Yes	0.0	Yes
48	Froedtert Hospital and the Medical College of Wisconsin, Milwaukee	69.2	7	4	3	4	3	4	2	3	111	1.8	Yes	1	8	Yes	Yes	1.6	Yes
48	Penn State Milton S. Hershey Medical Center, Hershey	69.2	10	1	4	1	2	3	1	2	79	1.6	Yes	1	8	Yes	Yes	0.4	Yes
50	Abington Memorial Hospital, Abington, Pa.	69.1	10	2	2	3	1	2	3	4	43	1.5	Yes	1	8	Yes	Yes	0.2	Yes
50	University of Illinois Hospital, Chicago	69.1	10	3	4	1	3	3	2	4	36	1.7	No	1	8	No	Yes	1.3	Yes

* Half credit was awarded because the primary hospital had Nurse Magnet recognition but the specialty or secondary hospital did not.

Best Hospitals 2016-17: Gastroenterology & GI Surgery

Rank	Hospital	U.S. News Specialty Score	Survival	Patient safety	Success in preventing deaths from treatable complications after surgery	Success in preventing collapsed lung during biopsies, catheter insertions 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	Number of patients	Nurse staffing	Nurse Magnet status	Advanced technologies	Patient services	Trauma center	Intensivist on staff	Reputation with specialists	Current AHA responder
1	Mayo Clinic, Rochester, Minn.	100.0	9	5	5	4	4	5	1	5	6,119	2.7	Yes	7	8	Yes	Yes	52.6	Yes
2	Cleveland Clinic	89.1	10	5	4	4	4	4	1	4	5,392	2.1	Yes	7	8	No	Yes	36.0	Yes
3	Johns Hopkins Hospital, Baltimore	77.1	7	2	2	2	2	3	1	2	2,645	2.1	Yes	7	8	Yes	Yes	23.5	Yes
4	Massachusetts General Hospital, Boston	77.0	7	3	5	1	1	5	1	3	4,343	2.3	Yes	7	8	Yes	Yes	18.6	Yes
5	UCLA Medical Center, Los Angeles	74.3	8	4	4	5	4	4	1	5	3,080	3.1	Yes	7	8	Yes	Yes	8.6	Yes
6	UPMC Presbyterian Shadyside, Pittsburgh	73.6	8	1	4	2	2	2	1	1	6,898	1.9	Yes	7	8	Yes	Yes	9.2	Yes
7	Mount Sinai Hospital, New York	72.7	7	4	2	3	5	3	2	4	5,040	2.0	Yes	7	8	Yes	Yes	11.8	Yes
8	Mayo Clinic, Phoenix	72.4	10	5	5	3	3	5	2	4	2,011	3.2	No	7	8	No	Yes	4.2	Yes
9	Cedars-Sinai Medical Center, Los Angeles	70.8	7	3	4	1	2	4	1	4	4,463	2.6	Yes	7	8	Yes	Yes	6.9	Yes
10	Mayo Clinic Jacksonville, Fla.	70.5	10	5	4	2	4	4	2	5	1,935	2.1	Yes	7	8	No	Yes	3.8	Yes
11	Houston Methodist Hospital	70.4	10	3	4	2	3	3	1	5	3,812	1.9	Yes	7	8	No	Yes	2.0	Yes
12	Hosps. of the Univ. of Pennsylvania-Penn Presbyterian, Philadelphia	70.3	7	5	4	4	4	5	1	4	3,299	2.5	Yes	7	8	Yes	Yes	9.3	Yes
13	NYU Langone Medical Center, New York	69.0	9	4	4	2	3	5	1	4	2,161	2.6	Yes	7	8	Yes	Yes	2.4	Yes
14	New York-Presbyterian Univ. Hosp. of Columbia and Cornell, N.Y.	68.9	8	3	4	3	1	3	1	4	7,389	2.5	No	7	8	Yes	Yes	5.7	Yes
15	UCSF Medical Center, San Francisco	68.1	7	5	4	4	2	4	1	5	1,725	2.7	Yes	7	8	Yes	Yes	8.2	Yes
16	Baylor University Medical Center, Dallas	68.0	8	4	3	5	3	4	1	2	3,462	1.7	Yes	7	8	Yes	Yes	3.4	Yes
16	Northwestern Memorial Hospital, Chicago	68.0	8	4	5	4	2	4	2	4	2,702	1.6	Yes	7	8	Yes	Yes	5.7	Yes
18	Beaumont Hospital-Royal Oak, Mich.	67.5	8	3	3	4	2	4	1	3	5,594	1.8	Yes	7	8	Yes	Yes	0.9	Yes
19	St. Francis Hospital, Roslyn, N.Y.	66.5	10	2	2	4	2	2	1	3	2,243	1.9	Yes	6	8	Yes	Yes	0.1	Yes
19	Thomas Jefferson University Hospital, Philadelphia	66.5	8	4	3	2	2	4	2	4	3,921	2.2	Yes	7	8	Yes	Yes	2.9	Yes
21	Stanford Health Care-Stanford Hospital, Calif.	66.4	7	5	3	4	5	4	1	4	2,389	2.4	Yes	7	8	Yes	Yes	3.5	Yes
22	University of Colorado Hospital, Aurora	66.2	9	3	3	5	2	5	1	5	1,429	2.2	Yes	7	8	Yes	Yes	2.3	Yes
23	University of Michigan Hospitals and Health Centers, Ann Arbor	66.1	8	5	3	4	3	4	1	5	3,572	2.9	No	7	8	Yes	Yes	6.5	Yes
23	Yale-New Haven Hospital, New Haven, Conn.	66.1	8	1	3	1	1	3	1	1	5,514	1.8	Yes	7	8	Yes	Yes	2.6	Yes
25	IU Health Academic Health Center, Indianapolis	65.9	8	2	2	2	2	2	1	3	3,864	1.8	Yes	7	8	Yes	Yes	3.0	Yes
26	Tampa General Hospital	65.4	9	1	3	1	1	1	1	1	2,500	2.2	Yes	7	8	Yes	Yes	1.9	Yes
27	Ochsner Medical Center, New Orleans	65.3	8	3	1	3	2	3	2	3	3,662	1.9	Yes	7	8	Yes	Yes	1.6	Yes
27	University Hospitals Case Medical Center, Cleveland	65.3	8	2	4	1	1	5	1	4	2,670	2.3	Yes	7	8	Yes	Yes	2.3	Yes
29	Barnes-Jewish Hospital/Washington University, St. Louis	64.7	6	3	2	3	2	4	1	3	4,533	2.2	Yes	7	8	Yes	Yes	4.6	Yes
30	University of Wisconsin Hospital and Clinics, Madison	64.6	9	2	4	3	2	4	1	2	2,322	1.9	Yes	7	8	Yes	Yes	0.5	Yes
31	University of Washington Medical Center, Seattle	64.4	9	3	2	2	3	5	1	5	1,264	2.1	Yes	7	8	No	Yes	2.4	Yes
32	Fairview Hospital, Cleveland	64.2	9	5	5	4	4	4	4	4	1,738	1.7	Yes	6	8	Yes	Yes	0.0	Yes
32	Sanford USD Medical Center, Sioux Falls, S.D.	64.2	9	2	4	4	4	3	1	1	2,051	2.6	Yes	6	8	Yes	Yes	0.0	Yes
34	Hoag Memorial Hospital Presbyterian, Newport Beach, Calif.	64.0	10	3	4	2	3	1	2	5	2,922	2.2	Yes	6	8	No	Yes	0.0	Yes
35	University of Kansas Hospital, Kansas City	63.9	9	2	3	2	4	1	1	3	2,056	1.9	Yes	7	8	Yes	Yes	0.6	Yes
36	University of Chicago Medical Center	63.4	7	4	2	3	2	3	1	5	2,057	2.3	No	7	8	Yes	Yes	9.9	Yes
37	Lancaster General Hospital, Lancaster, Pa.	63.3	8	4	4	4	2	4	2	2	3,175	1.7	Yes	6	8	Yes	Yes	0.3	Yes
38	Duke University Hospital, Durham, N.C.	63.2	6	4	2	3	4	4	1	4	2,863	2.2	Yes	7	8	Yes	Yes	5.4	Yes
38	Lehigh Valley Hospital, Allentown, Pa.	63.2	8	4	4	3	2	4	2	3	3,914	1.8	Yes	6	8	Yes	Yes	0.1	Yes
40	Memorial Hermann-Texas Medical Center, Houston	62.9	8	5	3	3	3	4	1	5	1,110	2.2	Yes	7	8	Yes	Yes	0.7	Yes
41	University of North Carolina Hospitals, Chapel Hill	62.8	7	2	2	1	2	2	1	4	2,436	1.8	Yes	7	8	Yes	Yes	4.2	Yes
42	Advocate Lutheran General Hospital, Park Ridge, Ill.	62.7	8	5	5	4	5	5	2	5	2,420	1.6	Yes	6	8	Yes	Yes	0.0	Yes
42	Christ Hospital, Cincinnati	62.7	9	2	4	2	2	4	1	1	2,027	1.8	Yes	6	8	No	Yes	1.4	Yes
44	Harper University Hospital, Detroit	62.5	10	3	4	3	4	2	2	1	1,050	1.6	No	6	8	Yes	Yes	0.0	Yes
45	Aurora St. Luke's Medical Center, Milwaukee	62.4	9	1	4	1	2	1	2	2	3,869	1.5	Yes	7	8	No	Yes	0.2	Yes
45	Brigham and Women's Hospital, Boston	62.4	7	5	5	5	5	5	1	5	3,635	2.4	No	6	8	Yes	Yes	5.0	Yes
45	Christiana Care Christiana Hospital, Newark, Del.	62.4	7	4	2	3	4	4	1	4	4,981	2.0	Yes	6	8	Yes	Yes	0.1	Yes
45	Scripps La Jolla Hospitals and Clinics, La Jolla, Calif.	62.4	8	4	5	2	5	3	1	2	2,404	2.9	Y/N*	7	8	Yes	Yes	0.6	Yes
49	Cleveland Clinic Florida, Weston	61.7	10	4	4	3	1	3	2	5	1,247	1.9	No	5	8	No	Yes	4.0	Yes
50	St. Luke's Hospital, Kansas City, Mo.	61.5	8	5	3	5	5	5	2	5	1,494	1.6	Yes	7	8	Yes	Yes	0.1	Yes

* Half credit was awarded because the primary hospital had Nurse Magnet recognition but the specialty or secondary hospital did not.

Best Hospitals 2016-17: Geriatrics

Rank	Hospital	U.S. News Specialty Score	Survival	Patient safety	Success in preventing deaths from treatable complications after surgery	Success in preventing collapsed lung during biopsies, catheter insertions 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	Number of patients	Nurse staffing	Nurse Magnet status	NIA-designated Alzheimer's center	Patient services	Intensivist on staff	Reputation with specialists	Current AHA responder
1	Mayo Clinic, Rochester, Minn.	100.0	9	5	5	4	4	5	1	5	26,018	2.7	Yes	Yes	9	Yes	15.3	Yes
2	UCLA Medical Center, Los Angeles	95.8	8	4	4	5	4	4	1	5	15,380	3.1	Yes	Yes	9	Yes	21.7	Yes
3	Mount Sinai Hospital, New York	94.3	8	4	2	3	5	3	2	4	23,226	2.0	Yes	Yes	9	Yes	23.6	Yes
4	Johns Hopkins Hospital, Baltimore	92.2	9	2	2	2	2	3	1	2	7,883	2.1	Yes	Yes	9	Yes	23.0	Yes
5	NYU Langone Medical Center, New York	88.4	10	4	4	2	3	5	1	4	12,927	2.6	Yes	Yes	9	Yes	3.5	Yes
6	Massachusetts General Hospital, Boston	87.5	8	3	5	1	1	5	1	3	20,279	2.3	Yes	Yes	9	Yes	12.6	Yes
7	New York-Presbyterian Univ. Hosp. of Columbia and Cornell, N.Y.	87.4	9	3	4	3	1	3	1	4	41,087	2.5	No	Yes	9	Yes	7.6	Yes
8	Cleveland Clinic	86.7	10	5	4	4	4	4	1	4	20,573	2.1	Yes	No	9	Yes	10.8	Yes
9	Northwestern Memorial Hospital, Chicago	82.5	10	4	5	4	2	4	2	4	11,232	1.6	Yes	Yes	9	Yes	1.8	Yes
10	Yale-New Haven Hospital, New Haven, Conn.	81.2	7	1	3	1	1	3	1	1	30,759	1.8	Yes	Yes	9	Yes	6.9	Yes
11	Rush University Medical Center, Chicago	80.8	10	4	4	4	1	4	2	3	8,625	2.2	Yes	Yes	9	Yes	1.8	Yes
12	UPMC Presbyterian Shadyside, Pittsburgh	78.9	7	1	4	2	2	2	1	1	28,504	1.9	Yes	Yes	9	Yes	5.4	Yes
13	University of Kansas Hospital, Kansas City	77.8	9	2	3	2	4	1	1	3	8,409	1.9	Yes	Yes	9	Yes	1.0	Yes
14	Hosps. of the Univ. of Pennsylvania-Penn Presbyterian, Philadelphia	77.5	8	5	4	4	4	5	1	4	15,918	2.5	Yes	Yes	9	Yes	2.2	Yes
15	UCSF Medical Center, San Francisco	76.6	7	5	4	4	2	4	1	5	6,827	2.7	Yes	Yes	9	Yes	7.0	Yes
16	Mayo Clinic, Phoenix	76.0	9	5	5	3	3	5	2	4	8,464	3.2	No	Yes	9	Yes	0.6	Yes
17	University of California, Davis Medical Center, Sacramento	75.4	9	4	4	3	3	5	1	3	6,568	2.7	Yes	Yes	9	Yes	0.2	Yes
18	Barnes-Jewish Hospital/Washington University, St. Louis	75.1	8	3	2	3	2	4	1	3	15,997	2.2	Yes	Yes	9	Yes	1.0	Yes
19	Houston Methodist Hospital	74.7	10	3	4	2	3	3	1	5	16,635	1.9	Yes	No	9	Yes	2.9	Yes
20	University of Washington Medical Center, Seattle	73.9	9	3	2	2	3	5	1	5	3,676	2.1	Yes	Yes	8	Yes	1.5	Yes
21	Keck Medical Center of USC, Los Angeles	73.6	10	1	1	1	5	1	1	2	3,748	3.8	No	Yes	9	Yes	2.0	Yes
22	Stanford Health Care-Stanford Hospital, Calif.	73.1	7	5	3	4	5	4	1	4	10,324	2.4	Yes	Yes	9	Yes	1.9	Yes
23	IU Health Academic Health Center, Indianapolis	72.7	8	2	2	2	2	2	1	3	12,660	1.8	Yes	Yes	9	Yes	2.0	Yes
24	Brigham and Women's Hospital, Boston	72.4	8	5	5	5	5	5	1	5	14,395	2.4	No	Yes	9	Yes	1.6	Yes
24	Cedars-Sinai Medical Center, Los Angeles	72.4	8	3	4	1	2	4	1	4	21,822	2.6	Yes	No	8	Yes	3.4	Yes
26	Beaumont Hospital-Royal Oak, Mich.	72.3	8	3	3	4	2	4	1	3	33,380	1.8	Yes	No	9	Yes	1.4	Yes
27	Emory University Hospital at Wesley Woods, Atlanta	72.1	7	5	4	5	4	2	1	5	9,729	2.0	Yes	Yes	8	Yes	1.7	Yes
28	UC San Diego Medical Center - UC San Diego Health, Calif.	72.0	8	5	4	2	5	4	2	4	6,415	1.8	Yes	Yes	9	Yes	1.3	Yes
29	Mayo Clinic Jacksonville, Fla.	71.3	8	5	4	2	4	4	2	5	7,735	2.1	Yes	Yes	8	Yes	1.5	Yes
30	University of Wisconsin Hospital and Clinics, Madison	70.3	7	2	4	3	2	4	1	2	8,337	1.9	Yes	Yes	9	Yes	2.0	Yes
31	UT Southwestern Medical Center, Dallas	69.8	8	5	3	4	4	4	2	5	5,753	2.0	No	Yes	9	Yes	1.7	Yes
32	Banner University Medical Center Phoenix	69.5	8	2	4	2	4	3	1	3	8,832	2.1	Yes	Yes	9	Yes	0.2	Yes
33	UF Health Shands Hospital, Gainesville, Fla.	68.9	7	3	2	2	2	4	2	4	10,863	2.0	Yes	Yes	9	Yes	0.1	Yes
34	St. Francis Hospital, Roslyn, N.Y.	68.2	9	2	2	4	2	2	1	3	14,870	1.9	Yes	No	8	Yes	0.1	Yes
35	Duke University Hospital, Durham, N.C.	67.9	7	4	2	3	4	4	1	4	11,654	2.2	Yes	No	9	Yes	7.1	Yes
36	University of Colorado Hospital, Aurora	67.7	9	3	3	5	2	5	1	5	5,445	2.2	Yes	No	9	Yes	1.4	Yes
37	Aurora St. Luke's Medical Center, Milwaukee	66.7	9	1	4	1	2	1	2	2	23,950	1.5	Yes	No	8	Yes	0.3	Yes
38	Oregon Health and Science University Hospital, Portland	66.6	7	2	4	1	3	3	1	1	5,683	2.1	Yes	Yes	9	Yes	0.0	Yes
38	Thomas Jefferson University Hospital, Philadelphia	66.6	8	4	3	2	2	4	2	4	16,195	2.2	Yes	No	9	Yes	2.5	Yes
40	Lehigh Valley Hospital, Allentown, Pa.	66.4	8	4	4	3	2	4	2	3	23,516	1.8	Yes	No	8	Yes	0.8	Yes
41	Abbott Northwestern Hospital, Minneapolis	66.1	8	5	4	4	4	5	2	3	15,280	2.1	Yes	No	9	Yes	0.0	Yes
41	Fairview Hospital, Cleveland	66.1	9	5	5	4	4	4	4	4	9,760	1.7	Yes	No	9	Yes	0.0	Yes
41	University Hospitals Case Medical Center, Cleveland	66.1	8	2	4	1	1	5	1	4	11,685	2.3	Yes	No	9	Yes	2.3	Yes
44	Ohio State University Wexner Medical Center, Columbus	65.6	9	2	2	1	1	4	1	4	13,396	2.1	Yes	No	9	Yes	0.8	Yes
45	University of Kentucky Albert B. Chandler Hospital, Lexington	65.2	7	2	2	2	2	2	1	5	7,320	1.8	Yes	Yes	9	Yes	0.0	Yes
46	Banner University Medical Center Tucson, Ariz.	65.1	7	2	4	2	3	4	2	1	6,353	1.6	Yes	Yes	7	Yes	0.3	Yes
47	University of Michigan Hospitals and Health Centers, Ann Arbor	64.9	8	5	3	4	3	4	1	5	11,790	2.9	No	No	9	Yes	5.4	Yes
48	Scripps La Jolla Hospitals and Clinics, La Jolla, Calif.	64.8	8	4	5	2	5	3	1	2	14,754	2.9	Y/N*	No	8	Yes	0.5	Yes
49	Winthrop-University Hospital, Mineola, N.Y.	63.8	8	2	2	2	1	3	1	4	15,592	1.7	Yes	No	9	Yes	0.6	Yes
50	Huntington Memorial Hospital, Pasadena, Calif.	63.7	7	4	5	4	3	4	3	2	11,487	2.5	Yes	No	9	Yes	0.5	Yes

* Half credit was awarded because the primary hospital had Nurse Magnet recognition but the specialty or secondary hospital did not.

Best Hospitals 2016-17: Gynecology

Rank	Hospital	U.S. News Specialty Score	Survival	Patient safety	Success in preventing deaths from treatable complications after surgery	Success in preventing collapsed lung during biopsies, catheter insertions 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	Number of patients	Nurse staffing	Nurse Magnet status	Advanced technologies	Patient services	Intensivist on staff	Reputation with specialists	Current AHA responder
1	Mayo Clinic, Rochester, Minn.	100.0	10	5	5	4	4	5	1	5	463	2.7	Yes	5	9	Yes	15.3	Yes
2	Memorial Sloan Kettering Cancer Center, New York	92.3	10	4	5	2	1	5	3	4	466	2.0	Yes	5	8	Yes	7.2	Yes
3	Cleveland Clinic	91.0	9	5	4	4	4	4	1	4	255	2.1	Yes	5	9	Yes	13.9	Yes
4	UCSF Medical Center, San Francisco	90.3	10	5	4	4	2	4	1	5	124	2.7	Yes	5	9	Yes	8.7	Yes
5	Massachusetts General Hospital, Boston	88.5	10	3	5	1	1	5	1	3	326	2.3	Yes	5	9	Yes	6.9	Yes
6	Brigham and Women's Hospital, Boston	88.3	10	5	5	5	5	5	1	5	346	2.4	No	5	9	Yes	11.7	Yes
7	Johns Hopkins Hospital, Baltimore	87.4	10	2	2	2	2	3	1	2	123	2.1	Yes	5	9	Yes	11.5	Yes
8	Stanford Health Care-Stanford Hospital, Calif.	85.7	10	5	3	4	5	4	1	4	132	2.4	Yes	5	9	Yes	5.0	Yes
9	University of Texas MD Anderson Cancer Center, Houston	85.2	9	2	4	2	1	2	3	2	321	2.0	Yes	5	9	Yes	9.0	Yes
10	UCLA Medical Center, Los Angeles	84.7	10	4	4	5	4	4	1	5	136	3.1	Yes	5	9	Yes	4.9	Yes
11	University of North Carolina Hospitals, Chapel Hill	82.6	10	2	2	1	2	2	1	4	254	1.8	Yes	5	9	Yes	5.4	Yes
12	Magee-Womens Hospital of UPMC, Pittsburgh	81.8	9	1	1	1	1	3	4	1	500	1.4	No	5	9	Yes	9.2	Yes
13	University of Wisconsin Hospital and Clinics, Madison	81.7	10	2	4	3	2	4	1	2	357	1.9	Yes	5	9	Yes	1.8	Yes
14	University of Michigan Hospitals and Health Centers, Ann Arbor	81.4	10	5	3	4	3	4	1	5	202	2.9	No	5	9	Yes	2.2	Yes
15	Cedars-Sinai Medical Center, Los Angeles	81.3	9	3	4	1	2	4	1	4	227	2.6	Yes	5	9	Yes	3.8	Yes
16	Abbott Northwestern Hospital, Minneapolis	80.4	9	5	4	4	4	5	2	3	269	2.1	Yes	5	9	Yes	1.0	Yes
16	University of Alabama Hospital at Birmingham	80.4	9	4	1	2	4	4	1	5	360	1.8	Yes	5	8	Yes	3.2	Yes
18	Vanderbilt University Medical Center, Nashville	80.2	10	4	3	2	4	3	2	4	128	1.9	Yes	5	9	Yes	1.2	Yes
19	St. Luke's Hospital, Kansas City, Mo.	80.0	10	5	3	5	5	5	2	5	209	1.6	Yes	5	8	Yes	0.7	Yes
20	Barnes-Jewish Hospital/Washington University, St. Louis	79.7	8	3	2	3	2	4	1	3	428	2.2	Yes	5	9	Yes	2.3	Yes
21	Rush University Medical Center, Chicago	79.5	9	4	4	4	1	4	2	3	334	2.2	Yes	5	9	Yes	0.3	Yes
21	Scripps La Jolla Hospitals and Clinics, La Jolla, Calif.	79.5	10	4	5	2	5	3	1	2	132	2.9	Y/N*	5	8	Yes	1.0	Yes
23	Duke University Hospital, Durham, N.C.	79.3	8	4	2	3	4	4	1	4	168	2.2	Yes	5	9	Yes	5.7	Yes
23	Queen's Medical Center, Honolulu	79.3	10	3	2	2	2	4	2	4	146	1.8	Yes	5	8	Yes	0.0	Yes
25	John Muir Medical Center, Walnut Creek, Calif.	79.2	10	2	4	2	4	2	2	1	178	2.5	Yes	5	8	Yes	0.9	Yes
25	New York-Presbyterian Univ. Hosp. of Columbia and Cornell, N.Y.	79.2	9	3	4	3	1	3	1	4	318	2.5	No	5	9	Yes	7.6	Yes
27	Good Samaritan Hospital, Cincinnati	79.1	10	3	4	3	2	3	2	2	111	1.7	Yes	5	9	Yes	0.9	Yes
28	Memorial Hermann-Texas Medical Center, Houston	78.5	10	5	3	3	3	4	1	5	55	2.2	Yes	5	8	Yes	0.4	Yes
29	UF Health Shands Hospital, Gainesville, Fla.	78.4	10	3	2	2	2	4	2	4	165	2.0	Yes	5	9	Yes	0.8	Yes
30	University Hospitals Case Medical Center, Cleveland	78.2	10	2	4	1	1	5	1	4	277	2.3	Yes	5	9	Yes	0.5	Yes
31	Northwestern Memorial Hospital, Chicago	77.9	9	4	5	4	2	4	2	4	117	1.6	Yes	5	9	Yes	4.5	Yes
32	University of Colorado Hospital, Aurora	77.8	10	3	3	5	2	5	1	5	180	2.2	Yes	5	9	Yes	0.3	Yes
33	Advocate Christ Medical Center, Oak Lawn, Ill.	77.6	9	4	2	3	3	4	2	4	212	2.4	Yes	5	9	Yes	0.7	Yes
34	Advocate Lutheran General Hospital, Park Ridge, Ill.	77.5	10	5	5	4	5	5	2	5	129	1.6	Yes	5	8	Yes	0.8	Yes
35	Mayo Clinic Jacksonville, Fla.	77.1	9	5	4	2	4	4	2	5	143	2.1	Yes	5	8	Yes	2.1	Yes
35	University Hospital, San Antonio	77.1	10	2	2	4	1	4	2	2	78	1.6	Yes	5	9	Yes	1.6	Yes
35	Yale-New Haven Hospital, New Haven, Conn.	77.1	8	1	3	1	1	3	1	1	424	1.8	Yes	5	9	Yes	1.1	Yes
38	University of Kansas Hospital, Kansas City	77.0	9	2	3	2	4	1	1	3	280	1.9	Yes	5	9	Yes	0.2	Yes
39	Huntington Memorial Hospital, Pasadena, Calif.	76.9	10	4	5	4	3	4	3	2	153	2.5	Yes	4	9	Yes	0.7	Yes
39	Medical University of South Carolina Medical Center, Charleston	76.9	9	3	3	3	3	2	1	2	235	2.1	Yes	5	9	Yes	0.7	Yes
39	Sharp Memorial Hospital, San Diego	76.9	10	3	1	5	3	1	2	5	150	2.4	Yes	5	7	Yes	0.5	Yes
39	University of California, Davis Medical Center, Sacramento	76.9	9	4	4	3	3	5	1	3	161	2.7	Yes	5	9	Yes	1.9	Yes
43	University of Washington Medical Center, Seattle	76.2	9	3	2	2	3	5	1	5	230	2.1	Yes	5	9	Yes	1.5	Yes
44	Christ Hospital, Cincinnati	76.0	10	2	4	2	2	4	1	1	104	1.8	Yes	5	8	Yes	1.5	Yes
44	Medical City Dallas Hospital	76.0	10	1	3	1	3	2	1	2	167	2.0	Yes	4	8	Yes	0.4	Yes
44	University of Texas Medical Branch Hospitals, Galveston	76.0	10	1	3	4	1	2	1	2	50	1.5	Yes	5	8	Yes	1.1	Yes
47	Long Island Jewish Medical Center, New Hyde Park, N.Y.	75.9	10	2	3	2	1	2	3	3	187	1.6	Yes	5	9	Yes	0.4	Yes
47	Providence Portland Medical Center, Portland, Ore.	75.9	10	3	4	5	1	2	2	1	122	1.6	Yes	4	7	Yes	0.0	Yes
49	University of Iowa Hospitals and Clinics, Iowa City	75.8	8	4	3	3	3	4	2	4	224	1.8	Yes	5	9	Yes	3.7	Yes
50	Banner Desert Medical Center, Mesa, Ariz.	75.7	10	4	5	3	3	1	2	4	84	2.1	No	5	9	Yes	0.0	Yes
50	Baptist Medical Center, Jacksonville, Fla.	75.7	9	3	3	2	4	2	3	4	106	1.8	Yes	5	9	Yes	1.2	Yes
50	West Penn Hospital, Pittsburgh	75.7	10	4	3	5	3	2	2	3	118	1.2	Yes	5	9	Yes	0.4	Yes

* Half credit was awarded because the primary hospital had Nurse Magnet recognition but the specialty or secondary hospital did not.

Best Hospitals 2016-17: Nephrology

Rank	Hospital	U.S. News Specialty Score	Survival	Patient safety	Success in preventing deaths from treatable complications after surgery	Success in preventing collapsed lung during biopsies, catheter insertions 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	Number of patients	Nurse staffing	Nurse Magnet status	Advanced technologies	Patient services	Trauma center	Intensivist on staff	Reputation with specialists	Current AHA responder
1	Mayo Clinic, Rochester, Minn.	100.0	9	5	5	4	4	5	1	5	1,720	2.7	Yes	7	8	Yes	Yes	29.6	Yes
2	Cleveland Clinic	96.6	10	5	4	4	4	4	1	4	2,086	2.1	Yes	7	8	No	Yes	26.8	Yes
3	UCSF Medical Center, San Francisco	91.4	10	5	4	4	2	4	1	5	793	2.7	Yes	7	8	Yes	Yes	10.8	Yes
4	New York-Presbyterian Univ. Hosp. of Columbia and Cornell, N.Y.	90.6	9	3	4	3	1	3	1	4	3,286	2.5	No	7	8	Yes	Yes	21.0	Yes
5	Johns Hopkins Hospital, Baltimore	89.3	9	2	2	2	2	3	1	2	969	2.1	Yes	7	8	Yes	Yes	19.7	Yes
6	Massachusetts General Hospital, Boston	83.0	8	3	5	1	1	5	1	3	1,319	2.3	Yes	7	8	Yes	Yes	14.3	Yes
7	UCLA Medical Center, Los Angeles	82.7	9	4	4	5	4	4	1	5	1,132	3.1	Yes	7	8	Yes	Yes	6.3	Yes
8	Barnes-Jewish Hospital/Washington University, St. Louis	82.2	8	3	2	3	2	4	1	3	1,846	2.2	Yes	7	8	Yes	Yes	7.7	Yes
8	Vanderbilt University Medical Center, Nashville	82.2	8	4	3	2	4	3	2	4	1,161	1.9	Yes	7	8	Yes	Yes	10.9	Yes
10	University of California, Davis Medical Center, Sacramento	80.9	10	4	4	3	3	5	1	3	721	2.7	Yes	7	8	Yes	Yes	2.4	Yes
11	Mount Sinai Hospital, New York	79.6	8	4	2	3	5	3	2	4	1,593	2.0	Yes	7	8	Yes	Yes	6.9	Yes
11	UF Health Shands Hospital, Gainesville, Fla.	79.6	9	3	2	2	2	4	2	4	1,179	2.0	Yes	7	8	Yes	Yes	5.0	Yes
13	Cedars-Sinai Medical Center, Los Angeles	79.5	9	3	4	1	2	4	1	4	1,422	2.6	Yes	7	8	Yes	Yes	3.6	Yes
14	Northwestern Memorial Hospital, Chicago	79.1	10	4	5	4	2	4	2	4	1,172	1.6	Yes	7	8	Yes	Yes	2.4	Yes
15	University of Colorado Hospital, Aurora	78.9	10	3	3	5	2	5	1	5	502	2.2	Yes	7	8	Yes	Yes	2.6	Yes
16	IU Health Academic Health Center, Indianapolis	78.4	10	2	2	2	2	2	1	3	1,486	1.8	Yes	7	8	Yes	Yes	2.7	Yes
17	Hosps. of the Univ. of Pennsylvania-Penn Presbyterian, Philadelphia	78.3	8	5	4	4	4	5	1	4	1,142	2.5	Yes	7	8	Yes	Yes	6.2	Yes
18	Tampa General Hospital	78.0	10	1	3	1	1	1	1	1	1,128	2.2	Yes	7	8	Yes	Yes	0.9	Yes
19	Rush University Medical Center, Chicago	77.4	8	4	4	4	1	4	2	3	741	2.2	Yes	7	8	Yes	Yes	4.9	Yes
20	University of Alabama Hospital at Birmingham	76.7	9	4	1	2	4	4	1	5	1,065	1.8	Yes	7	7	Yes	Yes	3.8	Yes
21	Brigham and Women's Hospital, Boston	76.6	6	5	5	5	5	5	1	5	960	2.4	No	7	8	Yes	Yes	16.6	Yes
21	University of North Carolina Hospitals, Chapel Hill	76.6	9	2	2	1	2	2	1	4	936	1.8	Yes	7	8	Yes	Yes	4.8	Yes
23	University of Michigan Hospitals and Health Centers, Ann Arbor	75.9	9	5	3	4	3	4	1	5	1,253	2.9	No	7	8	Yes	Yes	5.4	Yes
24	UC San Diego Medical Center - UC San Diego Health, Calif.	75.6	10	5	4	2	5	4	2	4	504	1.8	Yes	7	8	Yes	Yes	1.0	Yes
25	Ohio State University Wexner Medical Center, Columbus	75.5	9	2	2	1	1	4	1	4	1,419	2.1	Yes	7	8	Yes	Yes	2.5	Yes
25	Wake Forest Baptist Medical Center, Winston-Salem, N.C.	75.5	8	2	4	3	2	3	1	2	1,795	1.6	Yes	7	8	Yes	Yes	3.9	Yes
27	University of Washington Medical Center, Seattle	75.2	9	3	2	2	3	5	1	5	474	2.1	Yes	7	8	No	Yes	4.6	Yes
28	Duke University Hospital, Durham, N.C.	75.1	7	4	2	3	4	4	1	4	979	2.2	Yes	7	8	Yes	Yes	5.4	Yes
28	Mayo Clinic, Phoenix	75.1	10	5	5	3	3	5	2	4	745	3.2	No	7	8	No	Yes	1.7	Yes
28	University of Wisconsin Hospital and Clinics, Madison	75.1	10	2	4	3	2	4	1	2	750	1.9	Yes	7	8	Yes	Yes	1.9	Yes
31	Beaumont Hospital-Royal Oak, Mich.	74.6	9	3	3	4	2	4	1	3	2,087	1.8	Yes	7	8	Yes	Yes	0.4	Yes
32	University Hospital, San Antonio	74.5	10	2	2	4	1	4	2	2	226	1.6	Yes	7	8	Yes	Yes	0.1	Yes
33	UPMC Presbyterian Shadyside, Pittsburgh	74.4	8	1	4	2	2	2	1	1	2,201	1.9	Yes	7	8	Yes	Yes	3.0	Yes
34	Yale-New Haven Hospital, New Haven, Conn.	74.3	6	1	3	1	1	3	1	1	2,322	1.8	Yes	7	8	Yes	Yes	8.1	Yes
35	Banner University Medical Center Phoenix	73.7	9	2	4	2	4	3	1	3	668	2.1	Yes	7	8	Yes	Yes	0.7	Yes
36	Stanford Health Care-Stanford Hospital, Calif.	73.2	6	5	3	4	5	4	1	4	753	2.4	Yes	7	8	Yes	Yes	6.7	Yes
37	Keck Medical Center of USC, Los Angeles*	73.0	10	1	1	1	5	1	1	2	886	3.8	No	7	8	Yes	Yes	0.8	Yes
37	Oregon Health and Science University Hospital, Portland	72.9	9	2	4	1	3	3	1	1	503	2.1	Yes	7	8	Yes	Yes	1.0	Yes
38	Houston Methodist Hospital	72.7	9	3	4	2	3	3	1	5	1,410	1.9	Yes	7	8	No	Yes	1.4	Yes
39	Banner University Medical Center Tucson, Ariz.	72.2	10	2	4	2	3	4	2	1	457	1.6	Yes	7	7	Yes	Yes	0.7	Yes
40	Queen's Medical Center, Honolulu	71.8	9	3	2	2	2	4	2	4	773	1.8	Yes	7	8	Yes	Yes	0.0	Yes
41	University of Chicago Medical Center	71.7	9	4	2	3	2	3	1	5	824	2.3	No	7	8	Yes	Yes	1.5	Yes
42	Christiana Care Christiana Hospital, Newark, Del.	71.6	8	4	2	3	4	4	1	4	1,985	2.0	Yes	7	8	Yes	Yes	0.1	Yes
43	Medical University of South Carolina Medical Center, Charleston	71.0	8	3	3	3	3	2	1	2	803	2.1	Yes	7	8	Yes	Yes	1.0	Yes
43	Memorial Hermann-Texas Medical Center, Houston	71.0	8	5	3	3	3	4	1	5	481	2.2	Yes	7	8	Yes	Yes	0.2	Yes
45	Froedtert Hospital and the Medical College of Wisconsin, Milwaukee	70.9	8	4	3	4	3	4	2	3	742	1.8	Yes	7	8	Yes	Yes	1.2	Yes
46	University of Virginia Medical Center, Charlottesville	70.7	8	4	2	2	4	5	1	4	713	2.1	Yes	7	7	Yes	Yes	0.8	Yes
46	Virginia Commonwealth University Medical Center, Richmond	70.7	9	3	2	4	2	3	1	2	492	2.2	Yes	7	7	Yes	Yes	0.2	Yes
48	Loyola University Medical Center, Maywood, Ill.	70.5	8	4	3	2	3	4	1	5	843	1.6	Yes	7	8	Yes	Yes	0.4	Yes
49	Thomas Jefferson University Hospital, Philadelphia	70.2	8	4	3	2	2	4	2	4	1,196	2.2	Yes	7	8	Yes	Yes	0.3	Yes

* This hospital's original ranking and score were incorrect due to a data processing error. They have been corrected. Previous rankings for other hospitals have not been changed.

Best Hospitals 2016-17: Neurology & Neurosurgery

Rank	Hospital	U.S. News Specialty Score	Survival	Patient safety	Success in preventing deaths from treatable complications after surgery	Success in preventing collapsed lung during biopsies, catheter insertions 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	Number of patients	Nurse staffing	Nurse Magnet status	NAEC-designated epilepsy center	NIA-designated Alzheimer's center	Advanced technologies	Patient services	Trauma center	Intensivist on staff	Reputation with specialists	Current AHA responder
1	Mayo Clinic, Rochester, Minn.	100.0	8	5	5	4	4	5	1	5	4,160	2.7	Yes	Yes	Yes	5	9	Yes	Yes	35.7	Yes
2	Johns Hopkins Hospital, Baltimore	92.2	8	2	2	2	2	3	1	2	2,087	2.1	Yes	Yes	Yes	5	9	Yes	Yes	32.9	Yes
3	New York-Presbyterian Univ. Hosp. of Columbia and Cornell, N.Y.	87.0	8	3	4	3	1	3	1	4	6,136	2.5	No	Yes	Yes	5	9	Yes	Yes	19.1	Yes
4	Massachusetts General Hospital, Boston	86.2	6	3	5	1	1	5	1	3	4,375	2.3	Yes	Yes	Yes	5	9	Yes	Yes	27.4	Yes
5	UCSF Medical Center, San Francisco	85.1	7	5	4	4	2	4	1	5	1,908	2.7	Yes	Yes	Yes	4	9	Yes	Yes	23.4	Yes
6	Cleveland Clinic	84.2	9	5	4	4	4	4	1	4	3,738	2.1	Yes	Yes	No	5	9	No	Yes	19.9	Yes
7	NYU Langone Medical Center, New York	82.3	9	4	4	2	3	5	1	4	1,536	2.6	Yes	Yes	Yes	5	9	Yes	Yes	6.0	Yes
8	UCLA Medical Center, Los Angeles	79.8	7	4	4	5	4	4	1	5	2,571	3.1	Yes	Yes	Yes	5	9	Yes	Yes	10.5	Yes
9	Northwestern Memorial Hospital, Chicago	77.2	9	4	5	4	2	4	2	4	1,942	1.6	Yes	Yes	Yes	5	9	Yes	Yes	2.5	Yes
10	Barnes-Jewish Hospital/Washington University, St. Louis	77.1	7	3	2	3	2	4	1	3	3,950	2.2	Yes	Yes	Yes	5	9	Yes	Yes	8.0	Yes
11	Brigham and Women's Hospital, Boston	76.3	7	5	5	5	5	5	1	5	2,976	2.4	No	Yes	Yes	5	9	Yes	Yes	9.6	Yes
12	Mount Sinai Hospital, New York	75.7	8	4	2	3	5	3	2	4	2,723	2.0	Yes	Yes	Yes	5	9	Yes	Yes	4.5	Yes
13	Rush University Medical Center, Chicago	74.8	9	4	4	4	1	4	2	3	2,311	2.2	Yes	Yes	Yes	5	9	Yes	Yes	3.4	Yes
14	Hosps. of the Univ. of Pennsylvania-Penn Presbyterian, Philadelphia	74.2	6	5	4	4	4	5	1	4	2,479	2.5	Yes	Yes	Yes	5	9	Yes	Yes	8.4	Yes
15	Emory University Hospital, Atlanta	72.4	7	5	4	5	4	2	1	5	2,677	2.0	Yes	Yes	Yes	5	9	No	Yes	5.2	Yes
16	St. Joseph's Hospital and Medical Center, Phoenix	71.5	7	2	5	2	1	2	1	2	3,989	1.8	No	Yes	Yes	5	9	Yes	Yes	8.5	Yes
17	Houston Methodist Hospital	70.0	9	3	4	2	3	3	1	5	3,307	1.9	Yes	Yes	No	5	9	No	Yes	2.5	Yes
18	Cedars-Sinai Medical Center, Los Angeles	69.5	8	3	4	1	2	4	1	4	2,878	2.6	Yes	Yes	No	5	9	Yes	Yes	2.4	Yes
19	Stanford Health Care-Stanford Hospital, Calif.	68.7	6	5	3	4	5	4	1	4	1,786	2.4	Yes	Yes	Yes	5	9	Yes	Yes	4.8	Yes
19	UPMC Presbyterian Shadyside, Pittsburgh	68.7	6	1	4	2	2	2	1	1	7,024	1.9	Yes	Yes	Yes	5	9	Yes	Yes	2.4	Yes
21	UF Health Shands Hospital, Gainesville, Fla.	67.3	6	3	2	2	2	4	2	4	3,221	2.0	Yes	Yes	Yes	5	9	Yes	Yes	4.0	Yes
22	University of Kansas Hospital, Kansas City	66.8	7	2	3	2	4	1	1	3	1,727	1.9	Yes	Yes	Yes	5	9	Yes	Yes	1.7	Yes
23	Ochsner Medical Center, New Orleans	65.9	8	3	1	3	2	3	2	3	2,547	1.9	Yes	Yes	No	5	9	Yes	Yes	0.3	Yes
24	Thomas Jefferson University Hospital, Philadelphia	65.6	7	4	3	2	2	4	2	4	4,332	2.2	Yes	Yes	No	5	9	Yes	Yes	2.6	Yes
25	University of Alabama Hospital at Birmingham	65.5	7	4	1	2	4	4	1	5	3,147	1.8	Yes	Yes	No	5	8	Yes	Yes	2.7	Yes
25	Yale-New Haven Hospital, New Haven, Conn.	65.5	6	1	3	1	1	3	1	1	4,005	1.8	Yes	Yes	Yes	5	9	Yes	Yes	2.3	Yes
27	Harper University Hospital, Detroit	65.4	10	3	4	3	4	2	2	1	813	1.6	No	Yes	No	5	9	Yes	Yes	0.4	Yes
28	Beaumont Hospital-Royal Oak, Mich.	65.1	8	3	3	4	2	4	1	3	4,502	1.8	Yes	Yes	No	5	9	Yes	Yes	0.1	Yes
29	IU Health Academic Health Center, Indianapolis	65.0	7	2	2	2	2	2	1	3	3,045	1.8	Yes	Yes	Yes	5	9	Yes	Yes	1.4	Yes
30	Ohio State University Wexner Medical Center, Columbus	64.7	8	2	2	1	1	4	1	4	2,930	2.1	Yes	Yes	No	5	9	Yes	Yes	1.2	Yes
31	Mayo Clinic Jacksonville, Fla.	64.3	6	5	4	2	4	4	2	5	1,541	2.1	Yes	Yes	Yes	5	9	No	Yes	2.4	Yes
32	University of Michigan Hospitals and Health Centers, Ann Arbor	63.1	7	5	3	4	3	4	1	5	2,095	2.9	No	Yes	No	5	9	Yes	Yes	5.1	Yes
33	Duke University Hospital, Durham, N.C.	63.0	5	4	2	3	4	4	1	4	2,354	2.2	Yes	Yes	No	5	9	Yes	Yes	5.9	Yes
34	UR Medicine Strong Memorial Hospital, Rochester, N.Y.	62.9	7	2	1	1	4	4	2	4	2,892	1.7	Yes	Yes	No	5	9	Yes	Yes	2.5	Yes
34	University of California, Davis Medical Center, Sacramento	62.9	6	4	4	3	3	5	1	3	1,156	2.7	Yes	Yes	Yes	5	9	Yes	Yes	0.2	Yes
36	Sinai Hospital of Baltimore	62.4	8	1	1	2	2	2	3	2	1,924	1.7	Yes	Yes	No	5	9	Yes	Yes	1.5	Yes
37	UC San Diego Medical Center - UC San Diego Health, Calif.	61.9	6	5	4	2	5	4	2	4	1,221	1.8	Yes	Yes	Yes	5	9	Yes	Yes	0.6	Yes
38	Baylor University Medical Center, Dallas	61.8	7	4	3	5	3	4	1	2	3,296	1.7	Yes	Yes	No	5	9	Yes	Yes	0.5	Yes
38	MedStar Southern Maryland Hospital Center, Clinton, Md.	61.8	10	3	1	4	3	2	5	3	3,347	1.6	No	No	No	5	9	Yes	Yes	0.0	Yes
40	University of Wisconsin Hospital and Clinics, Madison	61.7	6	2	4	3	2	4	1	2	2,005	1.9	Yes	Yes	Yes	5	9	Yes	Yes	1.5	Yes
41	Memorial Hermann-Texas Medical Center, Houston	61.5	6	5	3	3	3	4	1	5	3,938	2.2	Yes	Yes	No	5	9	Yes	Yes	1.7	Yes
42	UT Southwestern Medical Center, Dallas	61.0	8	5	3	4	4	4	2	5	1,384	2.0	No	No	Yes	5	9	No	Yes	1.8	Yes
43	University of Colorado Hospital, Aurora	60.8	7	3	3	5	2	5	1	5	1,087	2.2	Yes	Yes	No	5	9	Yes	Yes	1.4	Yes
43	Vanderbilt University Medical Center, Nashville	60.8	6	4	3	2	4	3	2	4	2,699	1.9	Yes	Yes	No	5	9	Yes	Yes	3.4	Yes
45	Mayo Clinic, Phoenix	60.7	6	5	5	3	3	5	2	4	1,346	3.2	No	Yes	Yes	5	9	No	Yes	2.9	Yes
46	Wake Forest Baptist Medical Center, Winston-Salem, N.C.	60.4	7	2	4	3	2	3	1	2	3,064	1.6	Yes	Yes	No	5	9	Yes	Yes	1.0	Yes
47	Abbott Northwestern Hospital, Minneapolis	60.0	7	5	4	4	4	5	2	3	2,402	2.1	Yes	Yes	No	5	9	No	Yes	0.0	Yes
47	Huntington Memorial Hospital, Pasadena, Calif.	60.0	7	4	5	4	3	4	3	2	1,552	2.5	Yes	Yes	No	5	9	Yes	Yes	0.1	Yes
47	OhioHealth Riverside Hospital, Columbus	60.0	6	2	2	2	3	3	1	2	5,645	2.0	Yes	Yes	No	5	9	Yes	Yes	0.4	Yes
47	University Hospitals Case Medical Center, Cleveland	60.0	7	2	4	1	1	5	1	4	2,898	2.3	Yes	Yes	No	5	9	Yes	Yes	1.0	Yes
47	University of Iowa Hospitals and Clinics, Iowa City	60.0	7	4	3	3	3	4	2	4	3,056	1.8	Yes	Yes	No	5	9	Yes	Yes	1.4	Yes

Best Hospitals 2016-17: Orthopedics

Rank	Hospital	U.S. News Specialty Score	Survival	Patient safety	Success in preventing deaths from treatable complications after surgery	Success in preventing collapsed lung during biopsies, catheter insertions 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	Number of patients	Nurse staffing	Nurse Magnet status	Advanced technologies	Patient services	Trauma center	Intensivist on staff	Reputation with specialists	Current AHA responder
1	Hospital for Special Surgery, New York	100.0	10	5	5	5	5	5	1	5	9,954	3.2	Yes	2	7	Yes	Yes	36.7	Yes
2	Mayo Clinic, Rochester, Minn.	86.9	9	5	5	4	4	5	1	5	6,587	2.7	Yes	2	7	Yes	Yes	32.1	Yes
3	Cleveland Clinic	76.7	10	5	4	4	4	4	1	4	3,046	2.1	Yes	2	7	No	Yes	17.8	Yes
4	Rush University Medical Center, Chicago	73.6	10	4	4	4	1	4	2	3	2,462	2.2	Yes	2	7	Yes	Yes	11.3	Yes
5	Hospital for Joint Diseases, NYU Langone Medical Center, New York	72.1	10	4	4	2	3	5	1	4	3,818	2.6	Yes	2	7	Yes	Yes	5.8	Yes
6	Northwestern Memorial Hospital, Chicago	69.1	10	4	5	4	2	4	2	4	2,839	1.6	Yes	2	7	Yes	Yes	3.3	Yes
7	Rothman Institute at Thomas Jefferson University Hosp., Philadelphia	68.9	9	4	3	2	2	4	2	4	4,186	2.2	Yes	2	7	Yes	Yes	6.6	Yes
8	Massachusetts General Hospital, Boston	68.4	9	3	5	1	1	5	1	3	3,113	2.3	Yes	2	7	Yes	Yes	10.6	Yes
9	Johns Hopkins Hospital, Baltimore	65.7	9	2	2	2	2	3	1	2	1,006	2.1	Yes	2	7	Yes	Yes	9.7	Yes
10	UCSF Medical Center, San Francisco	65.3	10	5	4	4	2	4	1	5	1,973	2.7	Yes	2	7	Yes	Yes	2.8	Yes
11	Cedars-Sinai Medical Center, Los Angeles	64.7	10	3	4	1	2	4	1	4	3,785	2.6	Yes	2	7	Yes	Yes	2.3	Yes
11	UPMC Presbyterian Shadyside, Pittsburgh	64.7	9	1	4	2	2	2	1	1	5,032	1.9	Yes	2	7	Yes	Yes	6.8	Yes
13	Barnes-Jewish Hospital/Washington University, St. Louis	64.6	8	3	2	3	2	4	1	3	3,149	2.2	Yes	2	7	Yes	Yes	6.8	Yes
14	Abbott Northwestern Hospital, Minneapolis	63.6	10	5	4	4	4	5	2	3	4,118	2.1	Yes	2	7	No	Yes	0.9	Yes
15	Duke University Hospital, Durham, N.C.	63.2	7	4	2	3	4	4	1	4	2,571	2.2	Yes	2	7	Yes	Yes	7.6	Yes
16	University of Iowa Hospitals and Clinics, Iowa City	63.0	9	4	3	3	3	4	2	4	1,771	1.8	Yes	2	7	Yes	Yes	4.9	Yes
17	Stanford Health Care-Stanford Hospital, Calif.	62.9	9	5	3	4	5	4	1	4	2,870	2.4	Yes	2	7	Yes	Yes	1.9	Yes
18	UCLA Medical Center, Los Angeles	62.6	8	4	4	5	4	4	1	5	1,941	3.1	Yes	2	7	Yes	Yes	3.7	Yes
19	Patewood Memorial Hospital, Greenville, S.C.	62.5	10	5	5	5	5	5	1	5	683	4.8	No	2	7	No	Yes	0.1	Yes
20	University of California, Davis Medical Center, Sacramento	62.3	9	4	4	3	3	5	1	3	1,266	2.7	Yes	2	7	Yes	Yes	2.1	Yes
21	Hosps. of the Univ. of Pennsylvania-Penn Presbyterian, Philadelphia	62.2	9	5	4	4	4	5	1	4	1,864	2.5	Yes	2	7	Yes	Yes	2.9	Yes
22	Keck Medical Center of USC, Los Angeles**	61.3	10	1	1	1	5	1	1	2	1,306	3.8	No	2	7	Yes	Yes	2.3	Yes
22	Beaumont Hospital-Royal Oak, Mich.	61.0	8	3	3	4	2	4	1	3	6,358	1.8	Yes	2	7	Yes	Yes	1.0	Yes
23	Houston Methodist Hospital	60.9	9	3	4	2	3	3	1	5	3,401	1.9	Yes	2	7	No	Yes	2.3	Yes
24	University Hospitals Case Medical Center, Cleveland	60.7	9	2	4	1	1	5	1	4	1,623	2.3	Yes	2	7	Yes	Yes	3.5	Yes
25	Northwestern Medicine Central DuPage Hospital, Winfield, Ill.	60.1	10	4	4	4	3	3	2	2	2,644	1.9	Yes	2	6	Yes	Yes	0.1	Yes
26	Brigham and Women's Hospital, Boston	59.8	8	5	5	5	5	5	1	5	2,380	2.4	No	2	7	Yes	Yes	6.7	Yes
26	Emory University Hospital, Atlanta	59.8	10	5	4	5	4	2	1	5	2,140	2.0	Yes	2	6	No	Yes	0.8	Yes
28	UC San Diego Medical Center - UC San Diego Health, Calif.	59.6	9	5	4	2	5	4	2	4	1,246	1.8	Yes	2	7	Yes	Yes	1.1	Yes
29	University of Washington Medical Center, Seattle	59.1	10	3	2	2	3	5	1	5	755	2.1	Yes	1	7	No	Yes	3.4	Yes
30	Mayo Clinic Jacksonville, Fla.	58.9	10	5	4	2	4	4	2	5	2,121	2.1	Yes	2	7	No	Yes	1.0	Yes
32	Magee-Womens Hospital of UPMC, Pittsburgh	58.5	10	1	1	1	1	3	4	1	1,195	1.4	No	2	7	Yes	Yes	0.0	Yes
32	St. Cloud Hospital, St. Cloud, Minn.	58.5	10	3	4	3	4	4	1	2	2,572	2.2	Yes	2	6	Yes	Yes	0.0	Yes
34	Scripps La Jolla Hospitals and Clinics, La Jolla, Calif.	58.3	8	4	5	2	5	3	1	2	3,046	2.9	Y/N*	2	7	Yes	Yes	1.3	Yes
35	University of Kansas Hospital, Kansas City	58.2	9	2	3	2	4	1	1	3	1,565	1.9	Yes	2	7	Yes	Yes	0.1	Yes
36	Virginia Commonwealth University Medical Center, Richmond	58.1	10	3	2	4	2	3	1	2	1,277	2.2	Yes	2	6	Yes	Yes	0.7	Yes
37	New England Baptist Hospital, Boston	57.7	10	5	5	5	5	4	1	5	3,904	2.0	No	2	5	No	No	1.5	Yes
38	Morristown Medical Center, Morristown, N.J.	57.6	8	4	3	4	1	4	2	4	3,616	1.9	Yes	2	7	Yes	Yes	0.1	Yes
39	Lehigh Valley Hospital, Allentown, Pa.	57.5	8	4	4	3	2	4	2	3	3,934	1.8	Yes	2	6	Yes	Yes	0.4	Yes
40	University of California, Irvine Medical Center, Orange	56.9	10	2	2	2	2	2	1	4	657	2.6	Yes	2	6	Yes	Yes	0.1	Yes
41	Good Samaritan Hospital, Cincinnati	56.7	9	3	4	3	2	3	2	2	2,252	1.7	Yes	2	7	No	Yes	0.0	Yes
42	Mount Sinai Hospital, New York	56.6	8	4	2	3	5	3	2	4	2,494	2.0	Yes	2	7	Yes	Yes	0.4	Yes
42	University of Colorado Hospital, Aurora	56.6	8	3	3	5	2	5	1	5	1,080	2.2	Yes	2	7	Yes	Yes	1.0	Yes
44	Nebraska Orthopaedic Hospital, Omaha	56.5	10	5	5	5	5	5	1	5	1,043	3.0	No	2	4	No	No	0.6	Yes
44	New York-Presbyterian Univ. Hosp. of Columbia and Cornell, N.Y.	56.5	8	3	4	3	1	3	1	4	2,911	2.5	No	2	7	Yes	Yes	3.9	Yes
46	Mayo Clinic, Phoenix	56.4	9	5	5	3	3	5	2	4	1,976	3.2	No	2	7	No	Yes	1.3	Yes
47	IU Health Academic Health Center, Indianapolis	56.3	9	2	2	2	2	2	1	3	1,968	1.8	Yes	2	7	Yes	Yes	0.5	Yes
47	Mercy Medical Center, Baltimore	56.3	10	4	2	5	1	4	2	3	2,122	1.4	Yes	2	6	No	Yes	0.0	Yes
49	Hackensack University Medical Center, Hackensack, N.J.	56.2	8	4	4	4	2	3	2	3	2,396	2.4	Yes	2	7	Yes	Yes	0.1	Yes
49	Pennsylvania Hospital, Philadelphia***	56.2	10	4	4	4	2	4	2	3	1,592	1.6	Yes	2	7	No	Yes	0.5	Yes
50	University of Wisconsin Hospital and Clinics, Madison	55.9	9	2	4	3	2	4	1	2	1,670	1.9	Yes	2	7	Yes	Yes	0.7	Yes

* Half credit was awarded because the primary hospital had Nurse Magnet recognition but the specialty or secondary hospital did not.

** This hospital's original ranking and score were incorrect due to a data processing error. They have been corrected. Previous rankings for other hospitals have not been changed.

*** This hospital was initially omitted from these specialty rankings due to a data processing error. Previous rankings for other hospitals have not been changed.

Best Hospitals 2016-17: Pulmonology

Rank	Hospital	U.S. News Specialty Score	Survival	Patient safety	Success in preventing deaths from treatable complications after surgery	Success in preventing collapsed lung during biopsies, catheter insertions 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	Number of patients	Nurse staffing	Nurse Magnet status	Advanced technologies	Patient services	Trauma center	Intensivist on staff	Reputation with specialists	Current AHA responder
1	Mayo Clinic, Rochester, Minn.	100.0	9	5	5	4	4	5	1	5	6,470	2.7	Yes	6	8	Yes	Yes	34.1	Yes
2	National Jewish Health, Denver-University of Colorado Hosp., Aurora	94.4	9	3	3	5	2	5	1	5	2,168	2.2	N/Y*	6	8	Yes	Yes	50.3	Yes
3	Cleveland Clinic	87.8	8	5	4	4	4	4	1	4	4,803	2.1	Yes	6	8	No	Yes	25.8	Yes
4	Massachusetts General Hospital, Boston	82.4	8	3	5	1	1	5	1	3	5,380	2.3	Yes	6	8	Yes	Yes	12.5	Yes
5	Duke University Hospital, Durham, N.C.	77.3	6	4	2	3	4	4	1	4	4,390	2.2	Yes	6	8	Yes	Yes	12.2	Yes
5	Hosps. of the Univ. of Pennsylvania-Penn Presbyterian, Philadelphia	77.3	6	5	4	4	4	5	1	4	4,880	2.5	Yes	6	8	Yes	Yes	11.5	Yes
7	UPMC Presbyterian Shadyside, Pittsburgh	76.8	6	1	4	2	2	2	1	1	7,608	1.9	Yes	6	8	Yes	Yes	11.5	Yes
8	New York-Presbyterian Univ. Hosp. of Columbia and Cornell, N.Y.	76.1	7	3	4	3	1	3	1	4	10,274	2.5	No	6	8	Yes	Yes	8.5	Yes
9	UCLA Medical Center, Los Angeles	76.0	7	4	4	5	4	4	1	5	4,860	3.1	Yes	6	8	Yes	Yes	4.6	Yes
10	Barnes-Jewish Hospital/Washington University, St. Louis	75.7	7	3	2	3	2	4	1	3	4,429	2.2	Yes	6	8	Yes	Yes	9.2	Yes
11	UC San Diego Medical Center - UC San Diego Health, Calif.	75.2	7	5	4	2	5	4	2	4	2,244	1.8	Yes	6	8	Yes	Yes	7.9	Yes
12	Yale-New Haven Hospital, New Haven, Conn.	74.2	8	1	3	1	1	3	1	1	9,988	1.8	Yes	5	8	Yes	Yes	2.4	Yes
13	Johns Hopkins Hospital, Baltimore	73.9	5	2	2	2	2	3	1	2	2,104	2.1	Yes	6	8	Yes	Yes	19.2	Yes
14	NYU Langone Medical Center, New York	73.7	9	4	4	2	3	5	1	4	2,946	2.6	Yes	5	8	Yes	Yes	2.1	Yes
15	Brigham and Women's Hospital, Boston	73.3	7	5	5	5	5	5	1	5	4,501	2.4	No	6	8	Yes	Yes	7.7	Yes
16	University of Michigan Hospitals and Health Centers, Ann Arbor	73.2	7	5	3	4	3	4	1	5	3,606	2.9	No	6	8	Yes	Yes	8.5	Yes
17	Houston Methodist Hospital	72.9	9	3	4	2	3	3	1	5	4,625	1.9	Yes	6	8	No	Yes	1.4	Yes
17	Northwestern Memorial Hospital, Chicago	72.9	9	4	5	4	2	4	2	4	3,235	1.6	Yes	5	8	Yes	Yes	2.2	Yes
19	UCSF Medical Center, San Francisco	72.6	5	5	4	4	2	4	1	5	2,193	2.7	Yes	6	8	Yes	Yes	12.0	Yes
20	University of California, Davis Medical Center, Sacramento	72.1	9	4	4	3	3	5	1	3	2,757	2.7	Yes	5	8	Yes	Yes	0.3	Yes
21	Banner Estrella Medical Center, Phoenix	71.8	10	4	5	2	2	2	3	3	2,448	2.1	Yes	5	8	No	Yes	0.0	Yes
22	Beaumont Hospital-Royal Oak, Mich.	71.7	8	3	3	4	2	4	1	3	8,667	1.8	Yes	5	8	Yes	Yes	0.1	Yes
23	IU Health Academic Health Center, Indianapolis	71.5	9	2	2	2	2	2	1	3	4,790	1.8	Yes	6	8	Yes	Yes	0.4	Yes
23	Miami Valley Hospital, Dayton, Ohio	71.5	9	2	4	3	2	2	1	3	5,860	2.1	Yes	5	8	Yes	Yes	0.0	Yes
25	UF Health Shands Hospital, Gainesville, Fla.	71.4	8	3	2	2	2	4	2	4	3,599	2.0	Yes	6	8	Yes	Yes	2.4	Yes
26	Fairview Hospital, Cleveland	71.3	9	5	5	4	4	4	4	4	3,077	1.7	Yes	5	8	Yes	Yes	0.0	Yes
27	University of North Carolina Hospitals, Chapel Hill	70.7	8	2	2	1	2	2	1	4	2,854	1.8	Yes	6	8	Yes	Yes	3.2	Yes
28	University of Kansas Hospital, Kansas City	70.5	9	2	3	2	4	1	1	3	2,972	1.9	Yes	5	8	Yes	Yes	0.9	Yes
29	University of Alabama Hospital at Birmingham	70.4	8	4	1	2	4	4	1	5	4,280	1.8	Yes	6	7	Yes	Yes	1.6	Yes
30	Mayo Clinic, Phoenix	70.3	10	5	5	3	3	5	2	4	2,899	3.2	No	5	8	No	Yes	1.2	Yes
31	University of Washington Medical Center, Seattle	69.7	7	3	2	2	3	5	1	5	1,311	2.1	Yes	6	8	No	Yes	8.0	Yes
32	Scripps La Jolla Hospitals and Clinics, La Jolla, Calif.	69.6	9	4	5	2	5	3	1	2	4,028	2.9	Y/N*	5	8	Yes	Yes	0.1	Yes
33	Ohio State University Wexner Medical Center, Columbus	69.3	8	2	2	1	1	4	1	4	4,685	2.1	Yes	6	8	Yes	Yes	0.6	Yes
33	University of Wisconsin Hospital and Clinics, Madison	69.3	8	2	4	3	2	4	1	2	2,643	1.9	Yes	6	8	Yes	Yes	1.5	Yes
35	Loyola University Medical Center, Maywood, Ill.	69.1	8	4	3	2	3	4	1	5	2,351	1.6	Yes	6	8	Yes	Yes	0.9	Yes
36	Cedars-Sinai Medical Center, Los Angeles	69.0	6	3	4	1	2	4	1	4	5,977	2.6	Yes	6	8	Yes	Yes	1.8	Yes
36	Lehigh Valley Hospital, Allentown, Pa.	69.0	8	4	4	3	2	4	2	3	5,852	1.8	Yes	5	8	Yes	Yes	0.2	Yes
38	St. Luke's Hospital, Kansas City, Mo.	68.7	9	5	3	5	5	5	2	5	2,433	1.6	Yes	5	8	Yes	Yes	0.0	Yes
39	Spectrum Health Hosps. Butterworth-Blodgett, Grand Rapids, Mich.	68.4	7	2	4	2	2	3	1	1	7,973	1.7	Yes	6	8	Yes	Yes	0.1	Yes
39	University of Tennessee Medical Center, Knoxville	68.4	9	3	3	5	3	3	1	3	4,626	1.5	Yes	5	8	Yes	Yes	0.3	Yes
41	Lancaster General Hospital, Lancaster, Pa.	68.3	8	4	4	4	2	4	2	2	5,387	1.7	Yes	5	8	Yes	Yes	0.0	Yes
42	Cleveland Clinic Akron General Medical Center, Ohio	68.1	9	2	5	2	2	1	4	2	4,606	1.2	Yes	5	8	Yes	Yes	0.0	Yes
42	Froedtert Hospital and the Medical College of Wisconsin, Milwaukee	68.1	7	4	3	4	3	4	2	3	3,177	1.8	Yes	6	8	Yes	Yes	0.4	Yes
42	Vanderbilt University Medical Center, Nashville	68.1	7	4	3	2	4	3	2	4	3,113	1.9	Yes	6	8	Yes	Yes	3.8	Yes
45	Christiana Care Christiana Hospital, Newark, Del.	68.0	7	4	2	3	4	4	1	4	7,659	2.0	Yes	5	8	Yes	Yes	0.1	Yes
45	Mount Sinai Hospital, New York	68.0	6	4	2	3	5	3	2	4	6,391	2.0	Yes	5	8	Yes	Yes	2.9	Yes
45	St. Luke's Regional Medical Center, Boise, Idaho	68.0	9	3	5	1	3	4	1	4	4,171	2.5	Yes	5	6	No	Yes	0.0	Yes
48	Tampa General Hospital	67.9	8	1	3	1	1	1	1	1	2,837	2.2	Yes	6	8	Yes	Yes	1.1	Yes
49	Mayo Clinic Jacksonville, Fla.	67.8	8	5	4	2	4	4	2	5	2,514	2.1	Yes	6	8	No	Yes	1.3	Yes
49	Reading Hospital and Medical Center, West Reading, Pa.	67.8	9	2	4	2	4	1	3	1	7,140	1.7	No	5	7	Yes	Yes	1.3	Yes

* Half credit was awarded because the primary hospital had Nurse Magnet recognition but the specialty or secondary hospital did not.

Best Hospitals 2016-17: Urology

Rank	Hospital	U.S. News Specialty Score	Survival	Patient safety	Success in preventing deaths from treatable complications after surgery	Success in preventing collapsed lung during biopsies, catheter insertions 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	Number of patients	Nurse staffing	Nurse Magnet status	Advanced technologies	Patient services	Trauma center	Intensivist on staff	Reputation with specialists	Current AHA responder
1	Mayo Clinic, Rochester, Minn.	100.0	10	5	5	4	4	5	1	5	970	2.7	Yes	6	9	Yes	Yes	25.0	Yes
2	Cleveland Clinic	99.2	9	5	4	4	4	4	1	4	818	2.1	Yes	6	9	No	Yes	48.9	Yes
3	UCLA Medical Center, Los Angeles	89.2	8	4	4	5	4	4	1	5	532	3.1	Yes	6	9	Yes	Yes	17.7	Yes
4	Johns Hopkins Hospital, Baltimore	87.8	6	2	2	2	2	3	1	2	488	2.1	Yes	6	9	Yes	Yes	38.9	Yes
5	Memorial Sloan Kettering Cancer Center, New York	87.7	10	4	5	2	1	5	3	4	834	2.0	Yes	6	8	No	Yes	14.0	Yes
6	New York-Presbyterian Univ. Hosp. of Columbia and Cornell, N.Y.	83.7	9	3	4	3	1	3	1	4	1,311	2.5	No	6	9	Yes	Yes	10.0	Yes
7	UCSF Medical Center, San Francisco	82.1	7	5	4	4	2	4	1	5	440	2.7	Yes	6	9	Yes	Yes	13.2	Yes
8	Vanderbilt University Medical Center, Nashville	81.9	8	4	3	2	4	3	2	4	601	1.9	Yes	6	9	Yes	Yes	13.5	Yes
9	Duke University Hospital, Durham, N.C.	80.9	7	4	2	3	4	4	1	4	437	2.2	Yes	6	9	Yes	Yes	13.8	Yes
10	NYU Langone Medical Center, New York	80.4	9	4	4	2	3	5	1	4	308	2.6	Yes	6	9	Yes	Yes	7.1	Yes
11	Northwestern Memorial Hospital, Chicago	79.9	10	4	5	4	2	4	2	4	352	1.6	Yes	6	9	Yes	Yes	4.7	Yes
12	University of Michigan Hospitals and Health Centers, Ann Arbor	79.2	9	5	3	4	3	4	1	5	719	2.9	No	6	9	Yes	Yes	7.2	Yes
13	Stanford Health Care-Stanford Hospital, Calif.	76.3	8	5	3	4	5	4	1	4	373	2.4	Yes	6	9	Yes	Yes	4.1	Yes
14	Barnes-Jewish Hospital/Washington University, St. Louis	76.0	8	3	2	3	2	4	1	3	625	2.2	Yes	6	9	Yes	Yes	5.8	Yes
15	Hosps. of the Univ. of Pennsylvania-Penn Presbyterian, Philadelphia	75.3	8	5	4	4	4	5	1	4	552	2.5	Yes	6	9	Yes	Yes	2.6	Yes
15	Keck Medical Center of USC, Los Angeles*	75.3	8	1	1	1	5	1	1	2	662	3.8	No	6	9	Yes	Yes	8.4	Yes
16	University of North Carolina Hospitals, Chapel Hill	75.0	10	2	2	1	2	2	1	4	484	1.8	Yes	6	9	Yes	Yes	1.5	Yes
17	University of Kansas Hospital, Kansas City	73.8	9	2	3	2	4	1	1	3	437	1.9	Yes	6	9	Yes	Yes	2.5	Yes
18	Tampa General Hospital	73.5	10	1	3	1	1	1	1	1	474	2.2	Yes	6	9	Yes	Yes	0.7	Yes
19	UPMC Presbyterian Shadyside, Pittsburgh	73.4	8	1	4	2	2	2	1	1	772	1.9	Yes	6	9	Yes	Yes	2.6	Yes
20	University of California, Davis Medical Center, Sacramento	73.3	9	4	4	3	3	5	1	3	313	2.7	Yes	6	9	Yes	Yes	1.1	Yes
21	University of Wisconsin Hospital and Clinics, Madison	73.1	10	2	4	3	2	4	1	2	401	1.9	Yes	6	9	Yes	Yes	1.1	Yes
22	Beaumont Hospital-Royal Oak, Mich.	73.0	8	3	3	4	2	4	1	3	679	1.8	Yes	6	9	Yes	Yes	1.5	Yes
22	Thomas Jefferson University Hospital, Philadelphia	73.0	8	4	3	2	2	4	2	4	474	2.2	Yes	6	9	Yes	Yes	1.8	Yes
24	Oregon Health and Science University Hospital, Portland	72.9	10	2	4	1	3	3	1	1	250	2.1	Yes	6	9	Yes	Yes	1.1	Yes
25	Cedars-Sinai Medical Center, Los Angeles	72.6	8	3	4	1	2	4	1	4	668	2.6	Yes	6	9	Yes	Yes	1.2	Yes
26	Massachusetts General Hospital, Boston	72.5	6	3	5	1	1	5	1	3	556	2.3	Yes	6	9	Yes	Yes	5.5	Yes
28	Brigham and Women's Hospital, Boston	72.3	7	5	5	5	5	5	1	5	428	2.4	No	6	9	Yes	Yes	6.3	Yes
29	Mercy Health Hospital, Janesville, Wis.	72.2	10	1	4	4	2	2	1	2	71	1.7	Yes	5	9	Yes	Yes	0.0	Yes
29	Mount Sinai Hospital, New York	72.2	7	4	2	3	5	3	2	4	613	2.0	Yes	6	9	Yes	Yes	2.8	Yes
29	Yale-New Haven Hospital, New Haven, Conn.	72.2	8	1	3	1	1	3	1	1	747	1.8	Yes	6	9	Yes	Yes	1.8	Yes
32	Houston Methodist Hospital	71.8	9	3	4	2	3	3	1	5	477	1.9	Yes	6	8	No	Yes	3.7	Yes
33	University of Maryland Medical Center, Baltimore	71.6	10	1	1	1	1	1	1	3	292	2.9	Yes	6	9	Yes	Yes	0.2	Yes
34	University of Iowa Hospitals and Clinics, Iowa City	71.4	8	4	3	3	3	4	2	4	300	1.8	Yes	6	9	Yes	Yes	2.5	Yes
35	IU Health Academic Health Center, Indianapolis	71.2	7	2	2	2	2	2	1	3	674	1.8	Yes	6	9	Yes	Yes	3.7	Yes
36	UT Southwestern Medical Center, Dallas	71.1	10	5	3	4	4	4	2	5	466	2.0	No	6	9	No	Yes	3.7	Yes
36	University of Texas MD Anderson Cancer Center, Houston	71.1	5	2	4	2	1	2	3	2	680	2.0	Yes	6	9	No	Yes	9.7	Yes
38	Rush University Medical Center, Chicago	70.1	9	4	4	4	1	4	2	3	315	2.2	Yes	6	9	Yes	Yes	0.1	Yes
39	University Hospitals Case Medical Center, Cleveland	69.8	9	2	4	1	1	5	1	4	323	2.3	Yes	6	9	Yes	Yes	0.5	Yes
40	City of Hope, Duarte, Calif.	69.7	10	5	5	3	3	5	3	5	336	2.3	No	6	8	No	Yes	0.8	Yes
40	Memorial Hermann-Texas Medical Center, Houston	69.7	9	5	3	3	3	4	1	5	134	2.2	Yes	6	8	Yes	Yes	1.4	Yes
42	UF Health Shands Hospital, Gainesville, Fla.	69.6	8	3	2	2	2	4	2	4	444	2.0	Yes	6	9	Yes	Yes	0.6	Yes
43	Queen's Medical Center, Honolulu	69.5	9	3	2	2	2	4	2	4	339	1.8	Yes	6	8	Yes	Yes	0.0	Yes
43	University of Virginia Medical Center, Charlottesville	69.5	8	4	2	2	4	5	1	4	251	2.1	Yes	6	8	Yes	Yes	1.8	Yes
45	Medical University of South Carolina Medical Center, Charleston	69.3	8	3	3	3	3	2	1	2	276	2.1	Yes	6	9	Yes	Yes	0.5	Yes
46	Sanford USD Medical Center, Sioux Falls, S.D.	69.2	9	2	4	4	4	3	1	1	199	2.6	Yes	6	9	Yes	Yes	0.0	Yes
46	University of Cincinnati Medical Center	69.2	10	1	4	1	2	2	2	1	128	1.8	No	6	9	Yes	Yes	1.2	Yes
48	Moffitt Cancer Center and Research Institute, Tampa	69.1	10	1	2	1	1	1	3	1	344	1.2	Yes	6	9	No	Yes	1.5	Yes
49	Froedtert Hospital and the Medical College of Wisconsin, Milwaukee	69.0	8	4	3	4	3	4	2	3	402	1.8	Yes	6	9	Yes	Yes	1.0	Yes
49	Hackensack University Medical Center, Hackensack, N.J.	69.0	7	4	4	4	2	3	2	3	484	2.4	Yes	6	9	Yes	Yes	0.9	Yes
49	UC San Diego Medical Center - UC San Diego Health, Calif.	69.0	8	5	4	2	5	4	2	4	234	1.8	Yes	6	9	Yes	Yes	0.7	Yes
49	University of Alabama Hospital at Birmingham	69.0	8	4	1	2	4	4	1	5	308	1.8	Yes	6	8	Yes	Yes	0.7	Yes
49	University of Washington Medical Center, Seattle	69.0	7	3	2	2	3	5	1	5	291	2.1	Yes	6	9	No	Yes	4.8	Yes

* This hospital's original ranking and score were incorrect due to a data processing error. They have been corrected. Previous rankings for other hospitals have not been changed.

Appendix E

2016-17 Best Hospitals Rankings, Reputation-Only Specialties

Best Hospitals 2016-17: Ophthalmology

Rank	Hospital	Reputation (%)
1	Bascom Palmer Eye Institute-Anne Bates Leach Eye Hospital, Miami	62.8
2	Wills Eye Hospital, Thomas Jefferson University Hospital, Philadelphia	51.8
3	Wilmer Eye Institute, Johns Hopkins Hospital, Baltimore	50.1
4	Massachusetts Eye and Ear Infirmary, Massachusetts General Hospital, Boston	33.2
5	Stein and Doheny Eye Institutes, UCLA Medical Center, Los Angeles	26.8
6	Duke University Hospital, Durham, N.C.	13.5
7	University of Iowa Hospitals and Clinics, Iowa City	11.7
8	Cleveland Clinic	8.8
9	W.K. Kellogg Eye Center, University of Michigan, Ann Arbor	8.3
10	New York Eye and Ear Infirmary, N.Y.	6.7
11	USC Eye Institute-Keck Medical Center of USC, Los Angeles	6.3
12	UCSF Medical Center, San Francisco	5.3

Best Hospitals 2016-17: Psychiatry

Rank	Hospital	Reputation (%)
1	Massachusetts General Hospital, Boston	22.7
2	McLean Hospital, Belmont, Mass.	22.6
3	New York-Presbyterian University Hospital of Columbia and Cornell, N.Y.	20.4
4	Johns Hopkins Hospital, Baltimore	19.4
5	Menninger Clinic, Houston	17.5
6	Sheppard and Enoch Pratt Hospital, Baltimore	14.0
7	Resnick Neuropsychiatric Hospital at UCLA, Los Angeles	13.6
8	Mayo Clinic, Rochester, Minn.	8.8
9	Austen Riggs Center, Stockbridge, Mass.	8.2
10	Yale-New Haven Hospital, New Haven, Conn.	7.1
11	UPMC Presbyterian Shadyside, Pittsburgh	6.3
12	UCSF Medical Center, San Francisco	5.2

Best Hospitals 2016-17: Rehabilitation

Rank	Hospital	Reputation (%)
1	Rehabilitation Institute of Chicago	47.3
2	TIRR Memorial Hermann, Houston	26.1
3	Kessler Institute for Rehabilitation, West Orange, N.J.	22.0
4	University of Washington Medical Center, Seattle	21.4
5	Spaulding Rehabilitation Hospital, Massachusetts General Hospital, Boston	19.5
6	Mayo Clinic, Rochester, Minn.	18.6
7	Craig Hospital, Englewood, Colo.	15.0
8	Shepherd Center, Atlanta	11.6
9	Rusk Rehabilitation at NYU Langone Medical Center, New York	9.4
10	MossRehab, Elkins Park, Pa.	8.9
11	UPMC Presbyterian Shadyside, Pittsburgh	7.7
12	New York-Presbyterian University Hospital of Columbia and Cornell, N.Y.	5.9

Best Hospitals 2016-17: Rheumatology

Rank	Hospital	Reputation (%)
1	Johns Hopkins Hospital, Baltimore	45.4
2	Hospital for Special Surgery, New York-Presbyterian University Hospital of Columbia and Cornell, N.Y	40.9
3	Cleveland Clinic	39.8
4	Mayo Clinic, Rochester, Minn.	36.4
5	Brigham and Women's Hospital, Boston	23.3
6	UCLA Medical Center, Los Angeles	20.1
7	Massachusetts General Hospital, Boston	16.5
8	Hospital for Joint Diseases, NYU Langone Medical Center, New York	15.8
9	UPMC Presbyterian Shadyside, Pittsburgh	12.8
10	UCSF Medical Center, San Francisco	12.5
11	University of Alabama Hospital at Birmingham	9.1
12	Stanford Health Care-Stanford Hospital, Calif.	7.6
13	Duke University Hospital, Durham, N.C.	7.5
14	University of Michigan Hospitals and Health Centers, Ann Arbor	6.0
15	Northwestern Memorial Hospital, Chicago	5.9

Appendix F

2016-17 Best Hospitals Honor Roll

2016-17 Best Hospitals Honor Roll

Rank	Hospital	Points
1	Mayo Clinic, Rochester, Minn.	418
2	Cleveland Clinic	378
3	Massachusetts General Hospital, Boston	371
4	Johns Hopkins Hospital, Baltimore	349
5	UCLA Medical Center, Los Angeles	331
6	New York-Presbyterian University Hospital of Columbia and Cornell, N.Y.	296
7	UCSF Medical Center, San Francisco	273
8	Northwestern Memorial Hospital, Chicago	266
9	Hospitals of the University of Pennsylvania-Penn Presbyterian, Philadelphia	252
10	NYU Langone Medical Center, New York	247
11	Barnes-Jewish Hospital/Washington University, St. Louis	241
12	UPMC Presbyterian Shadyside, Pittsburgh	236
13	Brigham and Women's Hospital, Boston	235
14	Stanford Health Care-Stanford Hospital, Stanford, Calif.	227
15	Mount Sinai Hospital, New York	226
16	Duke University Hospital, Durham, N.C.	222
17	Cedars-Sinai Medical Center, Los Angeles	220
18	University of Michigan Hospitals and Health Centers, Ann Arbor	195
19	Houston Methodist Hospital	191
20	University of Colorado Hospital, Aurora	190