Methodology U.S. News & World Report 2020-21 Best Hospitals: Specialty Rankings

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Executive Summary

U.S. News & World Report began publishing hospital rankings in 1990, as "America's Best Hospitals," to identify the medical centers in various specialties best suited to patients whose illnesses pose unusual challenges because of underlying conditions, procedure difficulty, advanced age or other medical issues that add risk.

The specialty rankings have appeared annually since 1990 and their focus on identifying hospitals that excel in treating particularly difficult patients has not changed. To address patients in relatively low-acuity procedures and conditions, a complementary set of ratings, "Best Hospitals: Procedures and Conditions" is available that covers abdominal aortic aneurysm repair, aortic valve surgery, transcatheter aortic valve replacement, coronary artery bypass surgery, colon cancer surgery, hip replacement, knee replacement, treatment of congestive heart failure, treatment of chronic obstructive pulmonary disease, and lung cancer surgery. Details of these ratings are available at http://health.usnews.com/health-care/best-hospitals/articles/faq-how-and-why-we-rank-and-rate-hospitals.

The Best Hospitals specialty rankings assess hospital performance in 16 specialties or specialty areas, from Cancer to Urology. In 12 of these, whether and how high a hospital is ranked is determined by an extensive data-driven analysis combining performance measures in three primary dimensions of healthcare: structure, process, and outcomes. In the four other specialties, ranking relies solely on expert opinion.

The 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. Additional resources include the National Cancer Institute's list of NIH-designated cancer centers and the American Nurses Credentialing Center's roster of Nurse Magnet hospitals.

Process is represented primarily by two factors. One is a hospital's ability to develop and sustain a system that delivers high-quality care, as determined by expert opinion surveys of board-certified physicians. The other, is an indicator of patient experience. The basis for this score is the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) patient satisfaction surveys. A hospital's linear mean overall score from HCAHPS was used to calculate the patient experience score. For the 11 cancer specialty hospitals exempt from the CMS Inpatient Prospective Payment System, analogous data from the PPS-exempt Cancer Hospital (PCH) HCAHPS dataset were used. A third factor, transparency, was used in two specialties.

Assessment of outcomes performance relies on patient survival (i.e., risk-adjusted mortality) and the rate at which hospitals discharge patients to home following inpatient care. The Standard Analytical Files (SAF) inpatient limited datasets (SAF data), maintained by the Centers for Medicare & Medicaid Services (CMS) and also referred to as the Medicare claims files, provide detailed claims data, including mortality and discharge disposition for beneficiaries in fee-for-service Medicare.

No application, data submission or other action is required for Best Hospitals consideration. All facilities in the AHA universe of community hospitals are automatically considered but must meet a series of eligibility requirements based on structural characteristics.

Ranking in a particular specialty requires a second eligibility requirement. Hospitals must meet a volume/discharge threshold that varies by specialty. 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, however, if it was nominated by at least 1% of those who responded to the most recent three years of national physician surveys.

Rankings in Ophthalmology, Psychiatry, Rehabilitation, and Rheumatology are based solely on expert opinion as determined by the physician survey cited above.

For the 2020-21 rankings, 134 of over 4,500 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. It was extensively revised in 2016-17 to reduce the effect of the expert opinion measure and to unify the rankings and ratings by incorporating 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 daunting but critical. Decision tools beyond a doctor's recommendation, however, were nonexistent until 1990, when U.S. News & World Report introduced "America's Best Hospitals." That initial assessment was modest, only short alphabetical lists of hospitals that were rated—not ranked—in 12 specialties. In 1991 and thereafter, hospitals were ordinally ranked.

The 2020-21 Best Hospitals rankings have been drawn from a universe of 4,554 facilities.* The defined universe was the American Hospital Association's (AHA's) Annual Survey of Hospitals, which also provided some data for the rankings analysis. In a small number of cases, two or more AHA hospitals were combined for ranking purposes 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 receive a composite score based on data from multiple sources. Information about unranked as well as ranked hospitals, accompanied by substantive data, are published online at www.usnews.com/besthospitals/rankings. A print edition publishes ranked hospitals, with somewhat less data displayed than online.

It is essential to use the Best Hospital rankings for their intended purpose—to help consumers determine, together in consultation with their physicians, which hospitals provide the best care for the *most serious or complicated* medical conditions and procedures, such as pancreatic cancer, 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 purview of a different analysis, Best Hospitals: Procedures and Conditions.[†]

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 (removed in 2019), for example, and measures for voluntary data transparency in Cardiology & Heart Surgery (added in 2016-17), and patient experience in all specialties (added in 2019). Large-scale enhancements are always under

^{*} 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 was launched in May 2015 and rates hospital performance in nine frequently encountered procedures and conditions.

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

consideration such as the change introduced in the 2019 rankings for outcomes where a new risk-adjusted mortality measure and a measure of the rate at which hospitals discharge patients to home following inpatient care were introduced.

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 most AIDS care had shifted to the outpatient setting. Pediatrics was moved out of the Best Hospitals universe in 2007 when separate Best Children's Hospitals rankings were created. Best Hospitals specialties were neither added nor removed for 2020-21.§

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 & Lung Surgery
- Psychiatry
- Rehabilitation
- Rheumatology
- Urology

A. Data-Driven Rankings

As in previous years, rankings in 12 of the 16 specialties are based largely on hard data. An overall score (i.e., the U.S. News score) is assigned to hospitals in all data-driven specialties (i.e., all specialties other than Ophthalmology, Psychiatry, Rehabilitation, and Rheumatology, in which rankings are determined solely through expert opinion).

A hospital's 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

[§] 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.

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 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. Because many direct measures of process have limited relevance to the types of highly complex specialty care that is the focus of this project, a measure of expert opinion is used as a proxy for process quality. Specifically, process is represented by the expert opinion of a hospital to develop and sustain a system that delivers high-quality care.

The most evident *outcomes* measure is death, 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). To address the role of socioeconomic factors in outcomes, the rankings include an adjustment to risk-adjusted mortality to take into account patients who are both Medicare- and Medicaid-eligible. Another outcome now included is discharging patients to home, which focuses on the rate at which patients go home directly after inpatient care rather than being transferred to another facility for continued care. This measures how effective inpatient care delivered by hospitals is at addressing patient medical needs.

Available metrics do not always neatly conform to a single dimension. Patient experience, for example, is an outcome that reflects both the patient's satisfaction with the care they received as well as how well the hospital addressed their medical needs. Although patient experience overlaps with both process and outcomes, we consider it a fourth component in the Best Hospitals methodology, evaluated separately from structure, process/expert opinion, and outcomes.

A fifth component, public transparency, was added to Cardiology & Heart Surgery for the 2016-17 rankings. 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 greater detail later in this report.

Structure

These elements represent volume (i.e., discharges), technology, and other features that characterize the hospital environment. Some elements such as nurse staffing, ICU specialists, 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 2020-21 rankings was the 2018 AHA Annual Survey, the most recent available.

The source of volume data was the Standard Analytical Files (SAF), maintained by the Centers for Medicare & Medicaid Services (CMS) and also referred to as the Medicare claims files, which provide detailed claims data, for all traditional (fee-for-service) Medicare beneficiaries who use hospital inpatient services. To account for Medicare Advantage patients, volume was calculated for hospitals in each specialty using an adjustment described below (see, Number of Patients on page 14). As a result, the volumes reported represent estimates rather than observed volumes of care at each hospital.

Process/expert opinion

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

A hospital's expert opinion score is based on the average number of nominations from the three most recent annual surveys of board-certified physicians conducted for the Best Hospitals rankings which, for the 2020-21 rankings, were conducted in 2018, 2019, and 2020.

The 2020 sample was drawn from the Doximity Masterfile. Similar to the AMA Physician Masterfile, which was used as the sampling frame prior to 2016, Doximity's comprehensive Physician Database includes nearly every practicing U.S. physician. More information on the sampling approach for the physician survey can be found in *Section II.D Process/Expert Opinion*.

The physician sample was stratified by census region—Northeast, Midwest, South and West (https://www2.census.gov/geo/pdfs/maps-data/maps/reference/us_regdiv.pdf)—and by specialty to ensure appropriate representation. The final aggregated sample included both 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, leaving aside issues of expense or location, that they consider best for patients with serious or difficult conditions. They could list as many as five hospitals. (The 2020-21 questionnaire are shown in *Appendix A*.)

Outcomes

The primary outcomes measure in the 12 data-driven rankings is 30-day patient survival (i.e., how many patients are alive at 30 days after inpatient hospital admission). Like the volume indicator, the mortality measure is derived from SAF data, so only patients receiving care under traditional Medicare and 65 years of age or older were included. As in previous years, Medicare Advantage patients are not included in the outcomes. For each hospital and specialty, U.S. News computed an adjusted mortality rate based on the Medicare Severity Diagnosis-Related Group (MS-DRGs) appearing in the SAF data for the group of DRGs that appear in *Appendix C* for each of the specialties. This method was applied to the three most recent calendar years (CY2016, CY2017, and CY2018) of Medicare claims submitted for reimbursement to CMS that appeared in the SAF data.

Starting with the 2019-20 rankings, a discharging patients to home measure was included. This measure reflects the risk-adjusted rate at which patients are discharged to home rather than another facility (e.g., skilled nursing facility, long-term acute care facility, another acute care hospital) for additional care.

Both of the claims-based outcomes described above were risk-adjusted using a hierarchical logistic regression model that controlled for potential confounders, with a random intercept for hospital identity. Details on the model specified for each cohort are described in *Section II.C Outcomes*. In all instances, continuous variables were treated as such in our composite modeling in order to make maximum use of the information contained in the variable, and to minimize the risk of measurement error due to categorization.

Patient Experience

Patient experience is used to assess the patient-reported outcomes of care at hospitals eligible for the rankings. This measure reflects the patient experience of care as reported on the HCAHPS survey of recently discharged patients or family members for patients who have died during hospitalization or since hospital discharge. The rankings utilize the linear mean score rather than the HCAHPS star rating for the ranking calculation because the former is a continuous measure and provides more information for analysis. However, the star ratings are shown in the ranking tables online and in the methodology report as they provide an accessible and easy way for

consumers to understand the score. The HCAHPS dataset used for analysis was dated January 1, 2018 through December 31, 2018.

Public Transparency (Cardiology & Heart Surgery and Neurology & Neurosurgery)

In the 2020 rankings, both the Cardiology & Heart Surgery and Neurology & Neurosurgery specialty rankings provide credit to hospitals that participate in and publicly report via key clinical registries. A brief description of the transparency measures is provided below.

In the Cardiology & Heart Surgery specialty, since in 2016-17, hospitals have received credit worth up to 3% of the overall score for participating 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). This year's rankings considered each hospital's public reporting status as of February 1, 2020. Support for the use of this measure consists of a demonstrated association between public reporting of evidence-based hospital performance metrics with better quality of care and improved hospital performance.

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Added for the 2020-21 rankings, a new transparency measure is worth 2% of the overall score for the Neurology & Neurosurgery specialty. Hospitals voluntarily reporting stroke care measures to the public through the Get With The Guidelines (GWTG)-Stroke quality improvement program of the American Heart Association (https://www.heart.org/en/professional/quality-improvement/get-with-the-guidelines/get-with-the-guidelines-stroke) as of December 9, 2019 received credit.

Weighting

For the 2020-21 rankings, the weight for each component remains the same as in 2019-20. Weights are shown in *Table 1*.

Table 1. 2020-21 Overall Weight by Component

Component	Cardiology & Heart Surgery Weights (%)	Neurology & Neurosurgery Weights (%)	Weights, All Other Specialties (%)			
Outcomes	37.5%	37.5%	37.5%			
Structure	30.0%	30.0%	30.0%			
Process/expert opinion	24.5%	25.5%	27.5%			
Patient experience	5.0%	5.0%	5.0%			
Public transparency	3.0%	2.0%	0.0%			

B. Expert Opinion-Based Rankings

In the four specialties—Ophthalmology, Psychiatry, Rehabilitation and Rheumatology—in which ranking reflects the results of the expert opinion survey alone, that is because many structural and outcomes measures are not applicable since 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 *expert opinion-based specialties* and the associated rankings as *expert opinion-based 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." ¹²)
- **Section III** describes the process used to develop the rankings for the four expert opinion-based specialties.
- Section IV describes the number of hospitals ranked in at least one specialty.
- **Section V** presents the Honor Roll, an additional classification that denotes excellence across a broad range of specialties, procedures and conditions.
- Section VI summarizes changes in the methodology for the current year.
- Section VII 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 2020-21 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 4,554 community hospitals included in the FY2018 AHA universe were automatically considered for ranking;** no request, application or other action was required. 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 FY2018 AHA Annual Survey of Hospitals, variable BDTOT)
- At least 100 hospital beds set up and staffed *and* availability of at least four of eight important key technologies (see *Advanced Technologies*).

Hospitals that met Stage 1 and responded to the AHA Annual Survey of Hospitals in 2016 and 2017 but not in 2018 remained eligible. For such hospitals, we used survey data from 2017. Nonresponders lacking data from the current survey and one of the previous two surveys were evaluated without AHA data. A total of 2,279 hospitals successfully passed the first stage of the eligibility process.

Stage 2. To be eligible for ranking in a specialty, a hospital had to have a specified number of discharges in a defined list of specialty-specific diagnoses submitted for CMS reimbursement in CY2016, CY2017, and CY2018 combined. Setting discharge minimums involving complex care ensures that ranking-eligible hospitals can demonstrate that they have treated adequate numbers of

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

challenging cases in a given specialty. Minimums for all specialties will be reviewed for future rankings and adjusted as needed.

Table 2 presents the minimum Medicare Advantage (MA)-adjusted discharge volumes (unless otherwise specified) required for eligibility and numbers of hospitals meeting the MA-adjusted volume criteria for the data-driven specialties. If a hospital did not meet the volume requirements, it was still considered eligible in a specialty if its expert opinion score was 1% or greater. The total number of hospitals in each specialty that became eligible due to their expert opinion score is also shown in Table 2.

A total of 1,888 hospitals met the volume criteria in at least one specialty, and one other hospital became eligible because they had a 1% or higher expert opinion score in at least one specialty. In all, 1,889 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*.

Table 2. Discharge Thresholds by Specialty

Specialty	Discharge Thresholds, Total (Surgical)	Number of Eligible Hospitals Based on Minimum Discharges	Additional Hospitals with ≥ 1% Expert Opinion Score	Final Eligible Total
Cancer	197 (37)	899	0	899
Cardiology & Heart Surgery ^a	1,817 (800)	594	0	594
Diabetes & Endocrinology ^b	210 (0)	687	3	690
Ear, Nose & Throat ^b	120 (7)	99	6	105
Gastroenterology & GI Surgery	480 (136)	1,568	0	1,568
Geriatrics ^c	2,828 (0)	1,529	0	1,529
Gynecology ^b	100 (8)	248	9	257
Nephrology	192 (0)	1,658	0	1,658
Neurology & Neurosurgery	275 (23)	1,241	0	1,241
Orthopedics	278 (247)	1,638	0	1,638
Pulmonology & Lung Surgery ^d	1,291 (0)	1,679	1	1,680
Urology	64 (29)	1,471	0	1,471
Total (unique hospitals) ^e	Not Applicable	1,888	18	1,889

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

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. No prior research, however, 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.

b Total discharge minimums for this specialty are based on the unadjusted volume.

^c In addition to discharge- or expert opinion-based eligibility, a hospital must offer at least one of the following services: 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.

d In addition to discharge- or expert opinion-based eligibility, a hospital must have a ratio of sepsis to all other cases in Pulmonology and Lung Surgery that is lower than 3 standard deviations above the mean to be eligible.

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

For the 2020-21 rankings, the source of most structural elements was the FY2018 AHA Annual Survey Database. 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), American Hospital Directory, and CMS.

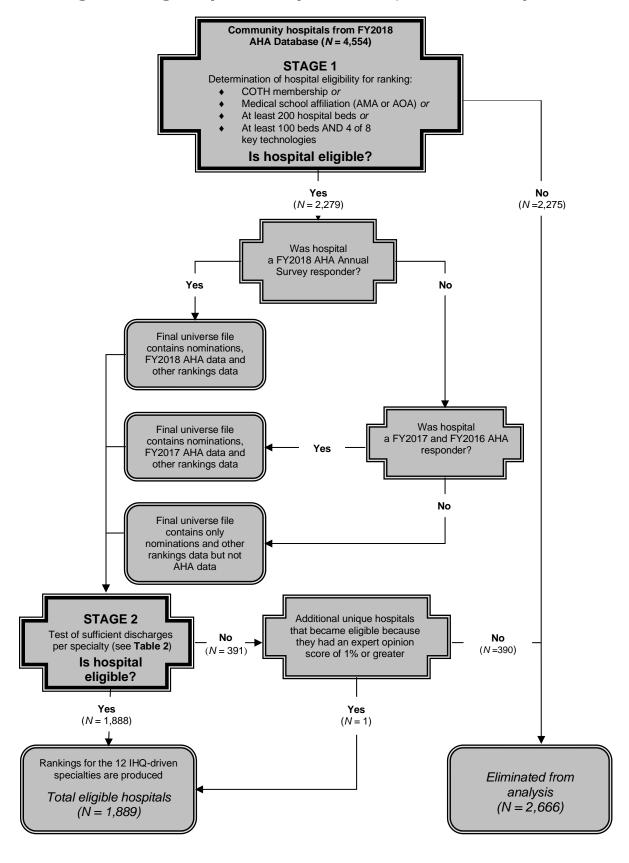
AHA Annual Survey

AHA has surveyed hospitals annually since 1946. The AHA Annual Survey of Hospitals is the most comprehensive and dependable database of information on institutional healthcare, ¹³ with an average annual response rate of 85%. The database contains hospital-specific data items for more than 6,200 hospitals and healthcare systems. More than 900 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 2018 AHA Annual Survey but responded to the 2017 survey were evaluated using their 2017 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.

Figure 1. Eligibility and Analysis Process, 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 2020-21 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 2020-21 index follow. The definitions are taken largely from the 2018 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 highresolution x-ray images to pinpoint tumor sites, adjusts patient positioning as necessary and completes treatment within the standard treatment time slot, allowing for more effective cancer treatments.
- **Intensity-modulated radiation therapy (IMRT).** A type of radiation therapy used to treat tumors. IMRT manipulates beams of radiation to the shape of the tumor. Beams of varying intensity can be used to radiate the tumor with precision. By using IMRT, physicians can focus on the tumor and avoid exposing healthy tissue to radiation, which causes a variety of negative treatment side effects.
- Multislice spiral computed tomography (CT). A procedure that uses x-rays and data processing to produce multiple narrow slices that can be recombined into detailed three-dimensional pictures of the internal anatomy.^{††}
- **PET/CT scanner.** A machine that combines positron emission tomography (PET) and CT capabilities in one device to provide metabolic functional information and images of physical structures in the body for diagnostics and monitoring chemotherapy, radiotherapy, and surgical planning.
- **Robotic surgery.** The use of computer-guided imaging and manipulative devices to perform surgery without the surgeon's direct intervention.
- **Shaped-beam radiation.** A noninvasive procedure that delivers a therapeutic dose of radiation to a defined area of a tumor to shrink or destroy cancerous cells.
- **Single-photon-emission CT.** A nuclear medicine imaging technology that combines radioactive material with CT imaging to highlight blood flow to tissues and organs.
- Stereotactic radiosurgery. A radiotherapy modality that delivers a high dosage of radiation to a discrete treatment area in as few as one treatment session. Variants include Gamma knife and Cyberknife.
- Transplant services. Includes Medicare-approved organ transplant programs in heart, liver, lung, or kidney transplant recognized by CMS. In addition, hospitals listed as bone marrow and tissue transplant centers by AHA are recognized. Transplant services are specific to the specialty. In the Cancer specialty, transplant services include bone marrow and other tissue transplants; Gastroenterology & GI Surgery includes liver transplant; Cardiology & Heart Surgery includes heart transplant and tissue transplant; Nephrology includes kidney transplant; Pulmonology & Lung Surgery includes lung transplant; Orthopedics includes tissue transplant.

^{††}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.

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 2020-21.

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 CY2016, CY2017, and CY2018 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, including transfers, that appeared in SAF data for the specified MS-DRGs listed in *Appendix C*.

Volume data, as described on Page 4, include Medicare fee-for-service patients who were 65 years of age or older; Medicare Advantage managed-care patients are not included in SAF data. Patient selection for outcomes analysis is the same, as described on Page 5. To account for Medicare Advantage patients, reported volumes received an adjustment based on the volume reported in the MedPAR datasets, which include both traditional Medicare and Medicare Advantage patients. An adjustment was calculated for each hospital based on the proportion of Medicare Advantage patients found in the MedPAR datasets for the three years of data were present in the SAF data. The total SAF volume of hospital care for each specialty was then adjusted by this factor. This MA-adjusted volume was then used for the volume measure in each specialty. MedPAR data were not available for a small number of eligible hospitals so, for these hospitals only, we estimated the MA-adjustment based on the location of the hospital—specifically the Medicare Advantage penetration rate for the county where the hospital is located. The numerator for this location-based calculation was the number of fee-for-service discharges meeting the criteria for inclusion in the specialty. The denominator was the proportion of Medicare beneficiaries enrolled in fee-for-service (as opposed to Medicare Advantage) in the county in which the hospital is located. The denominator was calculated by subtracting from 1.0 the CMS Medicare Advantage penetration estimates, expressed as a decimal less than 1.0, for July 2017, the approximate midpoint of the analysis time period.

As a result of the above methods, the volumes reported represent estimates rather than observed volumes of care at each hospital. Note that the new, MedPAR-based adjustment generally had a smaller impact on volume than the location-based method that was used for all hospitals last year. Since most hospitals received the MA-adjustment based on MedPAR for the 2020 rankings, MA-adjusted volumes for most hospitals are somewhat lower than in 2019. Because scoring of volume measures is relative, a decrease in a hospital's MA-adjusted volume from 2019 to 2020 does not necessarily indicate a decrease, and may result in an increase, in the hospital's performance on the measure.

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 & Lung Surgery	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 *outlier-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 MA-adjusted, outlier-unadjusted raw volume. *Table 4* provides the minimum MA-adjusted, outlier-unadjusted volume, the MA-adjusted, outlier-unadjusted 75th-percentile volume, and the maximum MA-adjusted, outlier-unadjusted 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 st -75 th percentile
Cancer	198	814	11,321	440
Cardiology & Heart Surgery	1,870	6,085	21,660	3,856
Diabetes & Endocrinology	217	554	2,853	381
Ear, Nose & Throat	21	360	780	224
Gastroenterology & GI Surgery	481	2,089	13,195	1,191
Geriatrics	2,831	11,929	75,786	6,661
Gynecology	15	278	696	189
Nephrology	192	771	5,166	445
Neurology & Neurosurgery	276	2,127	9,965	1,085
Orthopedics	278	1,497	8,854	767
Pulmonology & Lung Surgery	1,063	4,062	22,854	2,502
Urology	65	372	3,806	199

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 1.77 for 2020-21, is equal to a*b + (1-a)*c, where:

```
a = amount over the 75^{th} percentile (.01, .02.....25),
b = 1.27, the average nurse staffing volume for hospitals in the bottom 75^{th} percentile, and c = an individual hospital's raw nurse staffing value.
```

Figure 2 shows an example of nurse staffing values before and after adjustment.

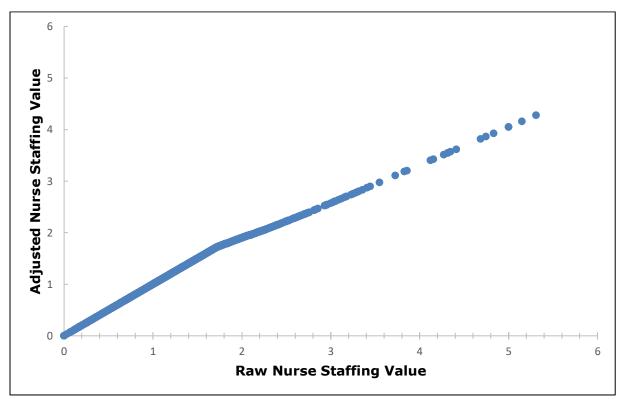


Figure 2. Nurse Staffing Values Before and After Adjustment

The calculation includes a correction for hospitals that provide skilled nursing onsite and report a total that combines both inpatient and skilled nursing. The nursing FTEs associated with the skilled nursing were removed from the numerator and a corrected adjusted average daily census was used for the denominator. The corrected adjusted average daily census values for hospitals affected by this change were calculated by the AHA and provided directly to the project.

To address problems with missing values in the AHA dataset for several hospitals for the FTEN variable, which is the principal nursing FTE variable, the rankings impute missing FTEN values. The project selects hospitals that do not have extreme nurse staffing ratios (i.e., are not outliers) and imputes the value of FTEN using the current values of the following variables in the reference population: FTEN (Full time equivalent registered nurses reported), FTERN (Full time equivalent registered nurses estimated), ADJADC (Adjusted Average Daily Census) and BDTOT (total hospital beds set up and staffed).

To address volatility in the nurse staffing measure for hospitals with relatively low patient volumes, we adjust the nurse staffing values for hospitals in the lowest quartile of adjusted average daily patient census. The nurse staffing ratio is adjusted using the formula 2a*b + (1-2a)*c, where

```
a = amount under the 25th percentile on ADJADC (.01, .02, .....25),
```

b = average adjusted nurse staffing

c = an individual hospital's nurse staffing.

The formula creates a blended rate that incorporates both the observed rate and the average adjusted nurse staffing rate for eligible hospitals.

Trauma Center

In a past 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 analyses showing a strong relationship with other quality factors supported inclusion of a trauma measure in Ear, Nose & Throat, Gastroenterology & GI Surgery, Cardiology & Heart Surgery, Nephrology, Neurology & Neurosurgery, Orthopedics, Pulmonology & Lung Surgery, 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." 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."

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 2020-21 index follow. The definitions are taken from the AHA Annual Survey of Hospitals (and expanded as necessary).

- Alzheimer's center. A facility that cares for individuals with Alzheimer's disease and the patients' families through an integrated program of clinical services, research and education. As with all items in this survey, each hospital determines whether the service is offered, based on the AHA description. This index differs from designation as an NIA Alzheimer's center, 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.

§§ The highest 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 certify trauma centers.

- **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 specially trained physicians and other clinicians to relieve 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. 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 the local community, or (3) by another institution in the local community through formal arrangement or joint venture. *Table 5* displays 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 & Lung Surgery	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.

ICU Specialists

ICU specialists 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 ICU specialists. The 2020-21 rankings award 1 point to hospitals with at least one ICU specialist FTE, whether on staff or through another arrangement as long as at least one ICU specialist serves in an adult-focused intensive care unit setting within the hospital. Previously hospitals had to have at least one FTE on staff ICU specialist. Credit was determined from the FY2018 AHA Annual Survey.

External Organizations

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

NCI-Designated Cancer Center

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.¹²

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.¹⁶

Hospitals designated as NCI clinical or comprehensive cancer centers as of March 1, 2020, were awarded 1 point. Hospitals designated "cancer centers" did not receive credit. NCI updates the list throughout the year. The current list is at http://cancercenters.cancer.gov/Center/CCList.

Nurse Magnet Status

The Nurse Magnet measure 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 ANCC updates the list of Magnet-recognized facilities throughout the year as organizations apply for designation and re-designation status. U.S. News bases credit for this measure on Magnet Recognition as of January 2, 2020. The current list of Magnet-recognized organizations is shown at https://www.nursingworld.org/organizational-programs/magnet/find-a-magnet-facility/.

Hospitals received 1 point for being recognized as a Nurse Magnet hospital. For hospitals that are part of a special merger*** or a multiplex healthcare system, the primary hospital (the larger of two general acute-care hospitals) is required to have Magnet Recognition status for the

*** In a special merger, two separate hospitals operate as one and their data are combined for analysis. Brigham and Women's Hospital and Dana-Farber Cancer Center are an example in Cancer. Specialty or secondary hospitals that are combined with the primary hospital are noted on the U.S. News website for that hospital.

combination hospital to receive 1 point. If there is no defined primary hospital, then if either hospital in the special merger has Magnet Recognition status, both receive credit.

NAEC-Designated Epilepsy Center

One point was awarded to hospitals designated by NAEC as Level 4 epilepsy centers as of March 1, 2020. 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. NAEC updates its list of hospitals throughout the year. The current list is shown at http://www.naec-epilepsy.org/find.htm.

NIA-Designated Alzheimer's Center

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 5, 2020, received 1 point. Hospitals listed as affiliated centers did not receive credit. The current list of NIA Alzheimer's centers can be accessed at https://www.nia.nih.gov/health/alzheimers-disease-research-centers.

FACT Accreditation

This designation indicates that as of March 1, 2020, 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

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:

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 Number of Patients and Nurse Staffing, the lowest *possible* value is 0 even when the lowest *observed* value is greater than 0. For Number of Patients and Nurse Staffing, the lowest possible value was made equal to the lowest observed value and the highest possible value was made equal to the highest 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 weight for each of the measures that make up the structural component of the rankings, by specialty. These weighted scores are used in the calculation of the overall raw score in *Section II.G Calculation of the Overall Score for the Data-Driven Specialties*. 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 & Lung Surgery	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											
ICU specialists	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 self-evident and supported by the literature. We calculated specialty-specific, risk-adjusted mortality rates and a measure of discharge to home for each hospital as an outcomes measure, taking a variety of patient mix and risk factors into account. Outcomes are worth 37.5% of the overall score.

When comparing outcomes such as mortality between hospitals, adjusting for differences in the patients treated at each hospital is critical. These adjustments need to take into account not only the principal condition for which the patient is being treated but also other comorbidities and characteristics that may affect outcomes. For instance, a hospital with a 35% death rate might be

superior to a hospital with a 10% death rate, if most of the patients at the first hospital are of high risk (i.e., expected to die) and most of the patients at the second hospital are of fairly low risk.

To address the differences in risk, we used multilevel logistic regression models to adjust for differences in case mix between hospitals. Multilevel models are a form of regression that allocates variance between variables on two or more levels. We used the empirical Bayes estimate of the hospital intercept as an estimate of each hospital's value for a given outcome. Multilevel modeling accounts for clustering of patient observations within hospitals and allows for more precise evaluation of hospitals with lower patient volume and fewer outcomes.

We selected covariates for inclusion in risk-adjustment models based on the literature, discussions with clinicians in relevant specialties and experience gained from the Best Hospitals for Procedures & Conditions project where these models have been previously tested. The model indicates that an unbiased estimate of the effect of treatment at a given hospital as compared to a hospital selected at random from among those eligible for ranking with a specialty, requires adjustment for age, sex, Elixhauser comorbidities, 33 socioeconomic status (SES), and year of admission. We have controlled for severity of index condition via restriction of cases consistent with the subset of DRGs used by the project as described at the end of this section and *Appendix C*.

For the analyses we used pooled SAF data from CY2016, CY2017, and CY2018, the latest available for analysis. SAF data are derived from reimbursement claims submitted by hospitals to Medicare. The SAF data files contain information on all fee-for-service Medicare patients' diagnoses, procedures, length of stay in the hospital and discharge status. Only patients 65 years of age or older at the time of care were included in the analyses.

The SAF data include the CMS DRG assigned to each case for Medicare payment. Each SAF data record contains information on the patient's diagnosis, surgery (or other medical procedure), age, sex, and discharge destination.³⁴ DRGs classify the *International Classification of Diseases, Tenth Revision* (ICD-10) diagnosis codes into more meaningful patient groups based on clinical and cost similarity.³⁶ For the 2020-21 rankings, SAF data from all three calendar years (2016-2018) were presented in ICD-10 code format.

Because MS-DRGs are 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 outcome and volume measures (see *Appendix C* for the MS-DRGs used for 2020-21). MS-DRGs that represent challenging and/or critical procedures were preferentially included. For example, most inguinal hernia repairs pose relatively low risk and demand modest expertise, so these cases would be

excluded in our analyses in favor of focusing on diagnoses and procedures that represent a higher level of severity. 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. 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.
- 7. A final evaluation for clinical consistency was performed.

Outcome 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 (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 outcomes analysis only patients who are at least 75 years of age are included. The basic outcomes analyses of the data for this group followed the same procedures as for the other data-driven specialties.

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

- 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 to tertiary care hospitals. Research has shown that because of their location, some tertiary care hospitals are particularly vulnerable to "dumping." 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 SAF data 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. In 2017, the rankings added a new rule for excluding implicit transfers. That is, patients who are discharged and then admitted within the same day are excluded from analyses along with those who have explicit transfer indicators in the datasets.
- 3. 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.³⁸ 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."³⁹

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 post admission) 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.##

4. Adjustment for socioeconomic status and risk. Starting in the 2017-18 rankings, a new adjustment was included at the patient level for Medicare and Medicaid dual eligibility. The dual-eligible flag is set to either 0 (not present) or 1 (present) for each case entering the risk-adjusted mortality equation. This was done to address known differences in morbidity and mortality with hospital patients associated with lower socioeconomic status (SES); dual-eligibility, or more specifically eligibility for Medicaid, is being used in this case to represent lower SES. The impact of the change was small and results in scores that better represent patient survival in the hospitals evaluated.

5. Update to the calculation of outcomes. Starting with the 2019-20 rankings, the project adopted a new risk-adjustment approach that moves away from the observed to expected ratios (OER) to RE models that have been used for the Best Hospitals for Procedures & Conditions for a number of years. RE stands for 'random effect' and can be thought of as a hospital level off-set. They represent the risk difference between a hospital and all hospitals in a given specialty, discounted by the reliability of that difference. The reliability is based on the volume of cases in a hospital, which means that if a hospital has 500 cases and 0 deaths, they would have a better RE, and thus better mortality score, than a hospital with 50 cases and 0 deaths; previously, these hospitals would have had the same OER of 0. The rationale for this is that in hospitals where there are more observations, there is higher certainty that the observed results are real and not due to statistical noise. The inclusion of information on certainty is the most important difference between the OER and the RE. A list and brief description of the covariates used in the risk-adjustment model is located in *Table 7*.

For the 2020-21 rankings, all covariates are the same as was used in the 2019-20 rankings with the exception of the removal of the ICD version. All years of data incorporated in the 2020-21 rankings used ICD-10 codes, so this covariate was no longer needed in the model.

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^{****} 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 rely on the MS-DRG system to account for patient severity and risk of mortality in the SAF data rather than removing these cases from analyses.

Table 7. Covariates used for Risk-Adjustment of RE Models

Risk-adjustment variables	Description
Patient age at admission	Patient age as a linear variable
DRG roll-up	Rolled up DRG groups that includes the variations w MCC, w CC, and w/o CC/MCC for medical and surgical treatment covered by the project (as shown in the tables in Appendix C).
Sex	Male or female
Year of hospital admission	Quality of care tends to improve over time. This means the risk of adverse outcomes is less year to year. For that reason, year of admission is included as a risk factor.
Elixhauser comorbidities	We controlled for the comorbidities identified by Elixhauser et al as being predictive of mortality.
Medicare status code	The reason or reasons why the patient is eligible for Medicare: age, or age plus end-stage renal failure. This is a proxy for comorbidities.
Socioeconomic status	Patients with lower incomes are typically sicker when they arrive at the hospital and may face more challenges in obtaining or managing their care after they are discharged. This can affect their risk of death, readmission and complications. When hospitals differ by the socioeconomic status of their patients, this can create bias in comparing outcomes. Our risk models include "dual eligibility" as a measure of socioeconomic background. Patients who are eligible for both Medicare and Medicaid are treated as a separate risk group.
Source of admission.	In the discharge to home outcome measure, we controlled for whether a patient came from a skilled nursing facility.

The accuracy of risk-adjustment models is measured by two statistics, the C-statistic and the Hosmer-Lemeshow goodness of fit statistic. The C-statistic estimates the probability that if one subject who experienced an outcome (death, for example) and another who did not are drawn randomly from the data, the model will assign a higher probability of death to the person who died. When interpreting the results of a C-statistic calculation, a value of .50 indicates the model has no better than random chance at predicting the outcome. A C-statistic in the .60-.69 range indicates limited discrimination, .70-.79 indicates acceptable discrimination and above .80 indicates good discrimination.

As shown in *Table 8*, the C-statistic for mortality models implemented using clinical data range from approximately .75-.92. The new model for some of the outcome measures—Survival and Discharge to Home—were generally of similar predictive quality as those based on clinical data. The Hosmer-Lemeshow test assesses model goodness of fit within subgroups of the data and is generally not considered informative for samples over 25,000. We used a procedure designed to evaluate Hosmer-Lemeshow fit in large samples, in which multiple Hosmer-Lemeshow tests are conducted on small samples of the data. A Hosmer-Lemeshow test results in a p-value, which below 0.05

indicates a bad fit; the closer to 1 the mean p-value is across all of the sample Hosmer-Lemeshow tests, the better fit. Overall, the results of the analyses show that the models have acceptable to good discrimination for all of the specialties.

Table 8. Predictive Accuracy of Risk-adjustment Models

		Survival	Dis	Discharge to home		
Specialty	C-statistic	Mean (min, max) of Large-sample Hosmer- Lemeshow Tests	Mean (min, max) Large-sample Hosr C-statistic Lemeshow Test			
Cancer	0.787	0.47 (0.01,0.97)	0.770	0.38 (0.01,0.94)		
Cardiology & Heart Surgery	0.773	0.58 (0.08,0.92)	0.757	0.45 (0.01,0.96)		
Diabetes & Endocrinology	0.795	0.43 (0.05,0.89)	0.751	0.46 (0.03,0.97)		
Ear, Nose & Throat	0.832	0.56 (0.18,0.95)	0.806	0.33 (0.00,0.93)		
Gastroenterology & GI Surgery	0.813	0.36 (0.07,0.84)	0.779	0.34 (0.00,0.86)		
Geriatrics	0.779	0.13 (0.00,0.67)	0.772	0.34 (0.00,0.97)		
Gynecology	0.917	0.73 (0.25,0.98)	0.850	0.32 (0.01,0.65)		
Nephrology	0.775	0.39 (0.04,0.76)	0.751	0.40 (0.12,0.94)		
Neurology & Neurosurgery	0.786	0.41 (0.01,0.66)	0.757	0.33 (0.02,0.89)		
Orthopedics	0.863	0.70 (0.44,0.98)	0.872	0.34 (0.00,0.95)		
Pulmonology & Lung Surgery	0.776	0.61 (0.10,0.99)	0.778	0.37 (0.07,0.82)		
Urology	0.831	0.36 (0.00,0.90)	0.829	0.24 (0.01,0.74)		

Additional analyses were conducted to evaluate the validity of the Best Hospitals rankings, as well as the component measures that are used to produce the rankings. In the Cardiology and Heart Surgery specialty, we evaluated ranking differences between hospitals with heart transplant programs against those without. We performed similar analyses in the Cancer specialty (for bone marrow transplant centers), Gastroenterology and GI surgery (liver transplant) and in nephrology (kidney transplant). We also looked at how hospitals with specialized AHA service codes performed on outcomes in related specialties (e.g., service code 41-cancer for the cancer specialty, service code 47-orthopedic for the orthopedics specialty, and service codes 13 and 42- surgical and heart for the cardiac specialty). Additionally, we assessed how closely specialty rankings and outcomes for a given hospital matched its rating in related Best Hospitals for Procedures and Conditions cohorts. In the Cardiology and Heart Surgery specialty, we compared ratings in coronary artery bypass, surgical and transcatheter aortic valve replacement, and congestive heart failure to the specialty rank. We performed similar analyses in Orthopedics (comparing to hip and knee replacement), Cancer (comparing to colon and lung resection), and Pulmonology and Lung Surgery (comparing to heart failure and chronic obstructive pulmonary disease). Lastly, we performed similar analyses to

understand whether hospitals operating trauma centers attained higher ranks in each specialty. In each case, the results of the risk adjusted mortality and discharge to home scores were consistent with expectations.

Survival Score

The rankings present mortality results through the use of a survival score. Survival scores are used to convey performance on outcome measures so that users of the rankings can quickly see how hospitals perform relative to each other. As described below, the survival (and discharge) scores represent a range of performance rather than a precise point estimate of performance based on the RE. This is used for display purposes in the rankings only.

For the 2020-21 rankings, we published survival scores as integer values ranging from 1 to 5; previously they ranged from 1 to 10. See an example of a survival score of 3, indicating performance not statistically different from expected, in *Figure 3*.

Figure 3. Display of Survival Outcome on U.S. News Website

Survival Relative survival 30 days after undergoing knee replacement surgery, compared to other hospitals treating similar patients.

Our approach to determining each hospital's survival score falls under the general rubric of statistical significance testing. The cutoffs are different for each hospital. The survival score is reflective of a hospital's estimated risk-adjusted value (RE) on the outcome compared to other hospitals, as well as its Medicare claims volume and the incidence of that outcome. We compare each hospital's risk-adjusted outcome value to a normal distribution, taking into account precision as well as how a hospital compares to other hospitals—the greater a hospital's volume, the more certain we are of its estimated outcome value. For rare outcomes, such as death in Orthopedics, relatively few hospitals will have a rate that would designate it as above or below average. It is important to keep in mind that the bands displayed provide a heuristic for the RE, which is the underlying continuous metric that is used in calculating the rankings. Consequently, two hospitals with the same displayed survival score—but different underlying REs—may receive different rankings even if they have identical data on all other measures.

The display scores place hospitals into one of five scores reflecting their performance and our level of certainty about it. This takes into account the adjusted RE values along with measures of variability in the population of eligible hospitals to assign one of 5 groups based on how much they deviate from the mean. The center of the distribution, a score of 3, is defined as being less than 75%

confidence in difference from the mean. A score of 4 represents hospitals that are better than average with 75% confidence and a score of 5 represents hospitals that are better than average with 90% confidence. Scores of 1 and 2 are the inverse of 5 and 4, respectively. Given that ranked hospitals are a subset of all hospitals who generally perform better on patient outcomes, there will be more ranked hospitals with scores of 4 and 5.

Discharge to Home Score

The discharge to home measure assesses how well a hospital does at managing to discharge patients to home rather than sending them on to another acute or post-acute care setting following hospitalization. In general, patients who are well enough to be discharged home have achieved better functional outcomes than patients who require discharge to an institutional care setting.

The denominator for this measure includes only patients who have been discharged following a qualifying inpatient admission. The discharge status codes used in this measure come from the claims evaluated in the CMS SAF data. Hospitalizations with discharge status codes of 07 (left against medical advice or discontinued care), 20 (expired, did not recover - Christian Science), 21 (discharged to court/law enforcement), 30 (still a patient), 40 (expired at home, hospice claim), 41 (expired in facility, hospice claim), 42 (expired place unknown, hospice claim), or 87 (discharged to court/law enforcement with planned readmission) are excluded from the numerator and denominator, as are hospitalizations with a missing or invalid discharge status code and those with admission source code 8 (admitted upon direction of a court or law enforcement). Starting with the 2020-21 rankings, patients who received nonsurgical care and were discharged to home hospice (discharge status code 50) are treated as having been discharged to home. We changed our approach in 2020 due to feedback we received stating that for patients who are dying (such as patients with advanced cancer), being discharged to home hospice is often the best patient-centered outcome. Discharge to a location other than home is indicated by one of the following patient discharge status codes: 0, 02, 03, 04, 05, 08, 09, 21, 43, 51, 61, 62, 63, 64, 65, 66, 69, 70, 71, 72, 82, 83, 84, 85, 87, 88, 89, 90, 91, 92, 93, 94, 95.

Similar to the survival score, the discharge to home score in the 2020-21 rankings is determined by statistical significance testing and is expressed as an integer from 1 to 5; previously the score was determined by quantiles and ranged from 1 to 10.

Normalization and Weighting

As with structural measures, the outcome measures were normalized before being weighted and combined. The normalization formula can be found in *Section II.B Structure*. Once

normalized, the survival and discharge to home scores were weighted based on the importance of each measure in defining the overall care within hospitals. In all data-driven specialties, the survival score was given a weight of 30, and the discharge to home score was given a weight of 7.5. These weighted scores are used in the calculation of the overall raw score in *Section II.G Calculation of the Overall Score for the Data-Driven Specialties*. For all specialties, the sum of the weights is 37.5%, the overall weight for the outcomes component of the overall score.

D. Process/Expert Opinion

For the 2020-21 rankings, the process/expert opinion component was worth 27.5% of the overall score in all specialties except for Cardiology & Heart Surgery, in which the process/expert opinion component was worth 24.5% of the total score, and Neurology & Neurosurgery, in which it was worth 25.5%.

The process/expert opinion dimension of the Donabedian paradigm reflects care decisions in the hospital setting such as making 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. 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 proxy measure.

To collect these nominations, a survey of board-certified physicians across the country is conducted each year. As with past years, the 2020-21 rankings use nominations from the most recent 3 years of physician surveys (2018, 2019, and 2020). Scores were calculated separately in each year and averaged such that each year's scores are given equal weighting in the final expert opinion score as shown in *Table 9.*

Table 9. 2018, 2019, and 2020 Expert Opinion Weights by Survey Year

Sample Source	Expert Opinion Weight (%)
2018 Physician Survey	33.3
2019 Physician Survey	33.3
2020 Physician Survey	33.3

The sections below describe the 2020 survey. The approaches used for the 2018 and 2019 surveys are described in the corresponding methodology reports for those years, available at www.rti.org/besthospitals.

Expert opinion scores were calculated in the same manner for both data-driven and expert opinion-based specialties. The following description therefore applies to both.

2020 Survey Approach

Sample Selection

The sample for the 2020 physician survey was selected from a database of all practicing U.S. physicians compiled by Doximity, the largest online professional network of U.S. physicians. Doximity's comprehensive Physician Database includes every practicing U.S. physician, identified by National Provider Identifier (NPI) number. Sources 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 750,000 registered and verified physician members who review and update their profiles to provide another set of primary data. *Table 10* provides the population counts of specialists in the Doximity database by those who are Doximity members and nonmembers as of November 1, 2019, when the sample of Doximity nonmembers was selected.

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 sent to 217,036 physicians across the 16 specialties and was conducted from February to March 2020. 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 – i.e., those who were board certified in a relevant specialty – received alerts upon login to Doximity.com or use of 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 (https://www2.census.gov/geo/pdfs/maps-data/maps/reference/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 expert opinion scores that are nationally representative.

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 combination token incentive. The survey was conducted from January 9 through March 20, 2020.

Table 10. Population Counts by Best Hospitals Specialty, Doximity Members and Nonmembers

	Subspecialties Included	Doximity	Doximity
Specialty	(based on board certification)	Members	Nonmembers
Cancer	Hematology, medical oncology, complex general surgical oncology, surgical oncology, gynecologic oncology, musculoskeletal oncology, radiation oncology, therapeutic radiology	17,233	5,828
Cardiology & Heart Surgery	Cardiovascular diseases, clinical cardiac electrophysiology, thoracic surgery, adult congenital heart disease, advanced heart failure and transplant, interventional cardiology, vascular surgery	26,816	8,469
Diabetes & Endocrinology	Endocrinology, diabetes & metabolism	4,928	2,034
Ear, Nose & Throat	Otolaryngology, plastic surgery within head & neck	8,575	2,785
Gastroenterology & GI Surgery*	Gastroenterology, colon and rectal surgery, transplant hepatology	15,207	5,506
Geriatrics	Geriatric medicine	4,530	2,020
Gynecology	Obstetrics & gynecology	27,783	11,625
Nephrology	Nephrology	7,491	3,100
Neurology & Neurosurgery	Neurology, neurological surgery, neuroradiology	18,049	6,654
Ophthalmology	Ophthalmology	13,492	5,821
Orthopedics	Orthopedic surgery, sports medicine	18,155	7,617
Psychiatry	Psychiatry	26,080	16,205
Pulmonology & Lung Surgery	Pulmonary diseases	10,652	3,930
Rehabilitation	Physical medicine & rehabilitation	7,254	3,132
Rheumatology	Rheumatology	3,868	1,845
Urology	Urology	6,923	2,783

^{*} General surgeons certified by the American Board of Surgery were also eligible if they were members of the American Society for Metabolic and Bariatric Surgery, the American Society of Colon and Rectal Surgeons, the Americas Hepato-Pancreato-Biliary Association, or the Society of American Gastrointestinal and Endoscopic Surgeons.

Response Rates

The overall response rate for the 2018, 2019, and 2020 surveys was 12.1% using American Association of Public Opinion Research (AAPOR) standard response rate 6, which treats undeliverables as ineligibles. The 2020 combined response rate for the Doximity member and nonmember surveys was 10.9% using AAPOR standard response rate 6. Further details are provided below.

Member survey. Of the 217,036 Doximity members identified as eligible in one of the 16 specialties as of November 1, 2019, 23,654 completed the web survey. The final response rate was 10.9% using AAPOR standard response rate 2. *Table 11* shows response rates by region and specialty.

Table 11. Member Survey Response Rates by Region and Specialty, 2020

Specialty	Midwest (%)	Northeast (%)	South (%)	West (%)	Total (%)
Cancer	17.3	20.3	10.1	11.2	14.4
Cardiology & Heart Surgery	13.5	14.8	10.4	10.2	12.1
Diabetes & Endocrinology	15.6	16.7	8.7	11.8	12.9
Ear, Nose & Throat	20.2	19.3	15.0	15.0	16.9
Gastroenterology & GI Surgery	14.4	14.0	8.3	9.7	11.2
Geriatrics	6.5	13.9	7.2	8.6	9.3
Gynecology	5.2	11.2	3.5	4.7	5.8
Nephrology	15.3	18.6	9.0	9.3	12.5
Neurology & Neurosurgery	18.3	18.1	11.3	12.2	14.6
Ophthalmology	15.7	11.9	10.0	13.7	12.4
Orthopedics	11.4	18.1	6.9	7.9	10.4
Psychiatry	4.8	10.1	4.0	3.5	5.9
Pulmonology & Lung Surgery	13.5	19.0	9.6	10.7	13.1
Rehabilitation	12.0	12.1	7.2	9.1	9.8
Rheumatology	14.3	16.2	8.2	7.5	11.5
Urology	17.7	21.2	10.0	13.1	14.6
Overall Response Rate	12.6%	15.0%	8.2%	9.0%	10.9%

Note: Response rates are rounded.

^{§§§} Definitions are available online at http://www.aapor.org/AAPOR_Main/media/publications/Standard-Definitions20169theditionfinal.pdf

Nonmember survey. Of the 3,200 physicians sampled in 2020, 670 were deemed ineligible after determining they were no longer actively practicing or because we were unable to verify their eligibility. Of the remaining 2,530 physicians, 370 returned the completed questionnaire. That represents a final response rate of 14.6% using AAPOR standard response rate 6. *Table 12* shows response rates by region and specialty.

Survey Response Weighting

The weighting approach for the 2020 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.

Table 12. Nonmember Survey Response Rates by Region and Specialty, 2020

Specialty	Midwest (%)	Northeast (%)	South (%)	West (%)	Total (%)
Cancer	12.9	12.5	18.6	21.1	16.9
Diabetes & Endocrinology	20.0	6.1	17.5	13.2	14.7
Ear, Nose & Throat	9.7	20.8	15.3	19.5	16.1
Gastroenterology & GI Surgery	29.4	13.5	18.0	14.3	18.6
Geriatrics	11.8	17.4	14.3	22.2	16.4
Gynecology	11.4	8.8	18.0	10.8	13.2
Heart & Heart Surgery	23.5	8.1	16.9	13.9	15.7
Nephrology	20.0	9.7	10.9	17.6	14.0
Neurology & Neurosurgery	15.6	16.0	14.8	17.6	15.9
Ophthalmology	18.2	19.4	8.6	21.4	16.0
Orthopedics	14.3	7.7	16.9	17.1	14.9
Psychiatry	11.5	10.3	10.5	3.1	8.9
Pulmonology & Lung Surgery	9.1	30.8	11.8	17.5	16.0
Rehabilitation	13.3	13.3	3.9	7.7	8.6
Rheumatology	20.0	11.8	11.1	15.4	14.2
Urology	9.7	10.0	12.9	18.9	13.1
Overall Response Rate	15.8%	13.3%	13.9%	15.9%	14.6%

Note: Response rates are rounded.

For the 2020 Doximity member survey, we used post-stratification 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 all Doximity members nationally. Since all Doximity members were surveyed, weights were used to adjust for differences in nonresponse only by region and demographics.

We additionally investigated whether physicians' hospital affiliations affected their survey responses. Although we did observe that physicians at certain hospitals had higher response rates than physicians at other hospitals, we did not find systematic bias in the expert opinion scores. This is because a given hospital is affiliated with a very small percentage of all sampled physicians.

In each specialty, the sample for the 2020 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 responses to make nominations representative of Doximity nonmembers nationally. Weights were based on probability of selection within each unique specialty-region combination and on adjustments to account for nonresponders.

Expert opinion scores were tabulated separately for Doximity members and nonmembers and then combined to create 2020 expert opinion scores. *Table 13* shows the expert opinion weight for Doximity members and nonmembers in each specialty for 2020. The weight is based on the proportion of Doximity members and nonmembers in the population, so the expert opinion score is representative of all physicians in the nation. Expert opinion scores for each of the past 3 years were then averaged to create the final weighted expert opinion values that appear in the methodology report.

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^{****} Age categories were collapsed for females because there were too few female physicians over 55 in the sample.

Table 13. 2020 Expert Opinion Weights for Doximity Members and Nonmembers by Specialty

	Expert Opinion Weight			
Best Hospitals Specialty	Doximity Member (%)	Doximity Nonmember (%)		
Cancer	74.7	25.3		
Cardiology & Heart Surgery	76.0	24.0		
Diabetes & Endocrinology	70.8	29.2		
Ear, Nose & Throat	75.5	24.5		
Gastroenterology & GI Surgery	73.4	26.6		
Geriatrics	69.2	30.8		
Gynecology	70.5	29.5		
Nephrology	70.7	29.3		
Neurology & Neurosurgery	73.1	26.9		
Ophthalmology	69.9	30.1		
Orthopedics	70.4	29.6		
Psychiatry	61.7	38.3		
Pulmonology & Lung Surgery	73.0	27.0		
Rehabilitation	69.8	30.2		
Rheumatology	67.7	32.3		
Urology	71.3	28.7		

Note: Weights are rounded.

Log Transformation

The online and print rankings display weighted 3-year expert opinion values. Before incorporating the values into the scoring for the 12 data-driven specialties, however, we implemented a log transformation to adjust for the skewed distribution. The log transformation was not applied in the four expert opinion-based specialties.

By its nature, a survey that solicits recommendations for "bests" will generate data that do not follow a normal distribution. Relatively few hospitals will receive even one "best" recommendation. Of those that do, even fewer will receive a significant number. The distribution of responses will inevitably be highly skewed. Because outcome and structural data are not similarly skewed, expert opinion would have a disproportionate impact if the extreme skewness was not addressed.

Log transformation in the data-driven rankings reshapes the distribution to match expert opinion data more closely to those of the other components. Transformation is applied to the weighted expert opinion data using the formula $log(R_X + 10) - 1$, where R_X is the weighted expert opinion score for hospital X. Adding a constant of 10 moderates the effect of the transformation.

The transformed data are then scaled to a minimum of 0 and maximum of 100. *Figure 4* demonstrates the impact of the log transformation. Transformed expert opinion scores are higher than untransformed scores, but the impact is greater on low scores than on high scores, as illustrated by these examples:

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

Skewness is reduced, and the overall effect of the expert opinion score on hospitals' final standing in the rankings is diminished.

Normalization and Weighting

As with structural and outcome measures, expert opinion data were normalized before being combined with other metrics. In Diabetes & Endocrinology and Nephrology, expert opinion scores were normalized into a distribution from 0 to 1, with the lowest observed score being normalized to 0 and the highest observed score being normalized to 1. In other specialties, normalization transformed index values into a distribution between 0 and 1 based on a measure's range of *possible* (as opposed to observed) values. The possible values for a hospital's expert opinion score ranges from 0% (no nominations in the latest three years) to 100% (every surveyed physician nominated the hospital). A hospital's normalized expert opinion score, after log transformation, was given a component weight of 24.5 in Cardiology & Heart Surgery and 27.5 in all other data-driven specialties. This weighted score is used in the calculation of the overall raw score in *Section II.G Calculation of the Overall Score for the Data-Driven Specialties*.

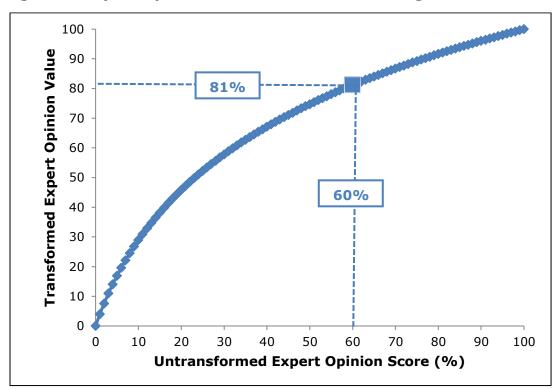


Figure 4. Expert Opinion Data Before and After Log Transformation

E. Patient Experience Score

Starting with the 2019-20 rankings, the Best Hospitals Specialty Rankings include a patient experience score based on data from the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) patient satisfaction survey

(https://www.medicare.gov/hospitalcompare/Data/Overview.html). This measure was incorporated in response to feedback from patients, hospital leaders and other stakeholders about the importance of the patient experience when considering healthcare quality.

For this measure, a hospital's linear mean overall score from HCAHPS (variable name H_HSP_RATING_LINEAR_SCORE) will be used to calculate the patient experience score. The data file from HCAHPS used for the 2020-21 rankings is from January 1, 2018 (measure start date), through December 31, 2018 (measure end date). For the 11 cancer specialty hospitals exempt from the CMS Inpatient Prospective Payment System, analogous data from the PPS-exempt Cancer Hospital (PCH) HCAHPS dataset were used. If a hospital has information from both sources, we use the PPS-exempt data for the Cancer specialty only. Otherwise, we use the information provided in either the standard HCAHPS or the PPS-exempt for all specialties. While PCH-HCAHPS reporting is voluntary for these hospitals, all 11 exempt cancer hospitals have reported data to CMS

for PCH-HCAHPS and are available for analysis. HCAHPS scores in both datasets could range from 0 to 100.

For hospitals with multiple Medicare Provider Numbers (MPN) in the standard HCAHPS data, we average their HCAHPS scores for inclusion in the rankings. If a hospital is missing entirely from the HCAHPS data, we rank the hospital in each specialty without regard to HCAHPS. This is done by first calculating the overall score in each specialty for all eligible hospitals minus the HCAHPS measure. Then, the overall score is computed for all hospitals with HCAHPS values (and including the HCAHPS measure). Finally, the overall score for hospitals missing HCAHPS is derived based on their overall score value from the first calculation (the score without HCAHPS). This ensures that their overall score in the version including HCAHPS aligns with their score in the version not including HCAHPS.

Note that while we use a weighted version of the HCAHPS scores in the overall rankings for each of the 12 data-driven specialties (see *Section II.G Calculation of the Overall Score for the Data-Driven Specialties*), hospital profiles on <u>usnews.com</u> show the CMS star ratings as a score ranging from 1-5. The star ratings are easier for comparisons between hospitals by consumers and are more easily understood than the HCAHPS score. Note that in cases where multiple scores are available and have been averaged, we display the star value associated with the hospital's main MPN.

Normalization and Weighting

The patient experience scores are normalized before being combined with other metrics for the final ranking. The normalization formula is based on the theoretical minimum and maximum values of 0 and 100. This effectively results in the observed score being converted into a decimal between 0 and 1. A hospital's normalized patient experience score is then given a weight of 5 in all other data-driven specialties. This weighted score is used in the calculation of the overall raw score in *Section II.G Calculation of the Overall Score for the Data-Driven Specialties*.

F. Public Transparency (Cardiology & Heart Surgery and Neurology & Neurosurgery)

A public transparency component was added to the analysis for Cardiology & Heart Surgery in the 2016-17 rankings and for Neurology & Neurosurgery in the 2020-21 rankings.

For many years, clinicians in various medical specialties have collaborated with their counterparts at other hospitals to create clinical registries to foster quality improvement. More recently, public transparency has been identified as an important additional application for registry-

based quality measurement. The Society of Thoracic Surgeons (STS) initiated voluntary public reporting for ACSD-participating hospitals in 2010. In late 2015, the American College of Cardiology (ACC) began a similar program for two of the 10 registries that comprise the NCDR, the CathPCI Registry and the ICD Registry. In 2019, the American Heart Association (AHA) Get With The Guidelines (GWTG)^{††††} quality improvement programs started voluntary public reporting.

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. Moreover, it demonstrates a public commitment on the part of the participating hospitals to the process of pursuing quality improvement.

Cardiology & Heart Surgery

This measure rewards hospitals for voluntarily reporting cardiac-care performance data to the public through one or both of two important clinical registries: the National Cardiovascular Disease Registry (NCDR), which is maintained by the ACC, and the Adult Cardiac Surgery Database (ACSD), maintained by the STS.

Hospitals received a score of 0 to 3 for participating in public reporting with ACC and STS regardless of the specific ratings each registry reported (based on data available as of February 1, 2020). Hospitals that voluntarily publicly reported through one group but not the other received a score of 2 for this measure. Hospitals that publicly reported through both received a score of 3. Hospitals that supplied data to the ACC and/or the STS but did not allow the results to be made public received a score of 0. No normalization or weighting was done to this measure. The final public transparency score is used in the calculation of the overall raw score in *Section II.G Calculation of the Overall Score for the Data-Driven Specialties*.

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 the ACC registry 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 February 1, 2020. The publicly reported data include the following measures from each registry:

^{††††} https://www.heart.org/en/professional/quality-improvement/get-with-the-guidelines/get-with-the-guidelines-stroke/get-with-the-guidelines-stroke-overview

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

Chest Pain – MI Registry (formerly the ACTION Registry)

The Chest Pain – MI Registry is the nation's largest quality improvement program for the care of patients with acute myocardial infarction (AMI), and has recently expanded to also include those with unstable angina and low-risk chest pain. The ACC credit measure has been updated to include this registry, as this is the first year that voluntary public reporting has become available for registry participants. The publicly reported data include the following measures:

- STEMI Performance Composite
- Overall Defect Free Care Composite (Endorsed by the National Quality Forum)

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 1, 2020. 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

Neurology & Neurosurgery

The transparency measure rewards hospitals for voluntarily reporting stroke care to the public through the Get With The Guidelines (GWTG) quality improvement program from the AHA. To receive credit, hospitals had to submit an opt-in form to the GWTG registry by December 9, 2019. Hospitals received a score of 2 points for participating in public reporting, while hospitals that did not choose to be transparent through GWTG received no credit. No normalization or weighting was done to this measure. The final public transparency score is used in the calculation of the overall raw score in *Section II.G Calculation of the Overall Score for the Data-Driven Specialties*.

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

All Specialties (Excluding Cardiology & Heart Surgery and Neurology & Neurosurgery)

The U.S. News ranking score reflects the following weights for each of the major components:

- Structure = 30%
- Process/expert opinion = 27.5%
- Outcomes = 37.5%
- Patient experience = 5%

Individual measure weights can be found in the component specific sections above.

Rankings by U.S. News score for the top 50 hospitals in each specialty are shown in *Appendix D*. Hospitals were recognized as High Performing in a specialty, for the Best Regional Hospitals lists, if they were not ranked in the top 50 but they received a score in the top 10 percent of all hospitals receiving a score in that specialty.

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 sum of the four weighted ranking components, as shown below:

Raw score =
$$\{ (\sum_{i=1}^{n_s} S_i) + P + (\sum_{i=1}^{n_o} O_i) + PE \},$$
 (2)

where

 S_i = normalized and weighted value for structural measure i,

P = normalized and weighted value for process/expert opinion score,

 O_i = normalized and weighted value for outcomes measure i,

PE = normalized and weighted hospital-wide patient experience score.

This formula is illustrative only. It *cannot* be used to calculate the U.S. News 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):

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

Cardiology & Heart Surgery

For Cardiology & Heart Surgery, the U.S. News score included a fifth component—public transparency—which accounts for 3% of the overall score. To accommodate this component, process/expert opinion 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/expert opinion = 24.5%
- Outcomes = 37.5%
- Patient experience = 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 =
$$\{(\sum_{i=1}^{n_s} S_i) + P + (\sum_{i=1}^{n_o} O_i) + PE + PT\},$$
 (4)

where

 S_i = normalized and weighted value for Cardiology & Heart Surgery structural measure i.

P = normalized and weighted value for Cardiology & Heart Surgery process/expert opinion score,

 O_i = normalized and weighted value for Cardiology & Heart Surgery outcomes measure i,

PE = normalized and weighted hospital-wide patient experience score,

PT = 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.

Neurology & Neurosurgery

For Neurology & Neurosurgery, the U.S. News score in the 2020-21 rankings added a fifth component—public transparency—that accounts for 2% of the overall score. To accommodate this component, process/expert opinion weight was reduced to 25.5%. The U.S. News score for Neurology & Neurosurgery reflects the following weights for each major component:

- Structure = 30%
- Process/expert opinion = 25.5%
- Outcomes = 37.5%
- Patient experience = 5%
- Public transparency = 2%

The formula for calculating the raw score for Neurology & Neurosurgery is shown in Equation (4), as shown below:

Raw score =
$$\{(\sum_{i=1}^{n_s} S_i) + P + (\sum_{i=1}^{n_o} O_i) + PE + PT\},$$
 (4)

where

 S_i = normalized and weighted value for Neurology & Neurosurgery structural measure i,

P = normalized and weighted value for Neurology & Neurosurgery process/expert opinion score,

 O_i = normalized and weighted value for Neurology & Neurosurgery outcomes measure i,

PE = normalized and weighted hospital-wide patient experience score,

PT = 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. Expert Opinion-Based Specialties

Available data for the four expert opinion-based specialties are significantly limited. Life-threatening conditions and procedures are more uncommon in Ophthalmology, Psychiatry, and Rehabilitation, rendering mortality irrelevant as a primary outcome. Inpatient volume in Rheumatology is also extremely low, making calculation of mortality unreliable. Reliable structural measures also are unavailable in these four specialties in most cases. Therefore, expert opinion alone determines the ranking in these specialties. This section describes the eligibility and procedures used to develop the rankings for these four specialties.

A. Eligibility

In specialties driven solely by expert opinion, hospitals have never had to meet the same eligibility standards as in the data-driven specialties. Starting with the 2015-16 rankings, a hospital has to have an expert opinion score of 1% or greater to be eligible for ranking.

Ranked hospitals are those with an expert opinion score of at least 5% across the last 3 years. Hospitals with a score of at least 3% and less than 5% are recognized as High Performing in the Best Regional Hospitals lists.

B. Process/expert opinion

The data-driven specialties and expert opinion-based specialties share the same process/expert opinion component (see *Section II.D Process/Expert Opinion* for more information).

C. Calculation of the Rankings

As described above, scores for the expert opinion-based 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 expert opinion (see *Appendix E*).

IV. Number of Ranked Hospitals

This year, 134 different hospitals were ranked in at least one data-driven or expert opinion-based Best Hospitals specialty. Another 19 specialty hospitals that closely coordinate care with a partner hospital shared one or two specialty-specific rankings with that partner.

V. Honor Roll & Best Regional Hospitals

The Honor Roll, which since 1990 has recognized excellence across a broad range of Best Hospitals specialties, was revamped in 2016-17. The updated methodology factors in the Procedures and Conditions ratings and reduces the role of expert opinion in the Honor Roll rankings. The 2020-21 Honor Roll utilizes the same method established in 2016-17 and 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 six points for No. 20. All hospitals ranked 21–50 received 5 points. A hospital ranked No. 1 in all 12 data-driven specialties would have received 25 x 12 = 300 points.
- 2. In each of the four expert opinion-based 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, which receives 1 point. All hospitals from No. 11 to the last ranked hospital also received 1 point. A hospital ranked No. 1 in all four expert opinion-based specialties would have received 40 points.
- 3. In eight of the ten procedures and conditions for which U.S. News published 2020-21 ratings, the hospitals received 12 points for each rating of High Performing. Only six points were awarded for a High Performing rating in AVR or TAVR, because these two procedures are different approaches to treating the same disease. Hospitals that were rated High Performing in all ten procedures and conditions received 108 points.
- 4. The 2020-21 Honor Roll recognizes the 20 hospitals that earned the most points out of the possible total of 448 across the 16 specialties and 10 procedures and conditions. The Honor Roll is ranked from No. 1 to No. 20, based on points.

The 2020-21 Honor Roll appears in *Appendix F*.

Since it's not always advisable to travel distances to receive hospital-based care, U.S. News ranks hospitals regionally in both states and major metro areas. Within a state or metro area, regional hospital rank is determined by a hospital's performance in the Best Hospitals Specialty Rankings and by its scores across each of the nine Procedures and Conditions cohorts. Details of the scoring methodology for the Best Regional Hospitals listings by state and metro areas are available at http://health.usnews.com/health-care/best-hospitals/articles/faq-how-and-why-we-rank-and-rate-hospitals.

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^{###} 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); transcatheter aortic valve replacement (TAVR); colon cancer surgery, and lung cancer surgery.

VI. Changes to the Methodology for 2020-21

A review of the changes to the methodology for this year of the Best Hospitals Rankings is provided below. A brief description of changes made in past years can be found in Appendix D. For complete information on changes made in previous years, we recommend reviewing the project methodology reports for those years, which are available online at www.rti.org/besthospitals.

Updates to the Risk Adjustment of the Mortality and Discharge to Home Scores. For the 2020-21 rankings, all covariates are the same as was used in the 2019-20 rankings with the exception of the removal of the ICD version. All years of data incorporated in the 2020-21 rankings used ICD-10 codes, so this covariate was no longer needed in the model.

Move to Calendar Year for Medicare Data. For all Medicare data used in the project, we have switched from fiscal to calendar year. We made this change for two reasons. First, to harmonize the specialty hospital rankings with the Procedures & Conditions ratings, where calendar year data has been used for a number of years. Second, calendar year data is three months more recent than the corresponding fiscal year data, so this change ensures that more up-to-date data are used for the rankings.

Accounting for Medicare Advantage in Volume Measures. To measure hospital volume in each specialty, we used volume counts from the MedPAR datasets, which includes patients who have Medicare Advantage insurance, to adjust volumes to account for Medicare cases missing from the SAF datasets. For hospitals that treat Medicare Advantage patients, using this adjustment produced a more precise measure of volume and removed the need to use county-level Medicare Advantage penetration rate, as we have done in the past, to adjust Medicare fee-for-service volume. In a small number of cases, MedPAR data was not available, so the county-level Medicare Advantage penetration rate was used to estimate the adjustment to the volume.

Discharge to Home Update. For the "discharge to home" outcome measure, patients who received nonsurgical care and were discharged to home hospice (discharge status code 50) are now treated as having been discharged to home. We changed our approach due to feedback we received stating that for patients who are dying (such as patients with advanced cancer), being discharged to home hospice is often the best patient-centered outcome. Additionally, all patients who were discharged home with planned readmission (discharge status codes 81 or 86) are now treated as having been discharged to home. Patients with any of several rare codes indicating the involvement of a court or law enforcement agency were excluded from the measure.

Stroke Registry Transparency Measure. A new measure of public transparency was added this year in Neurology & Neurosurgery. The hospitals that opted by the December 2019

deadline to publicly report performance measures from the American Heart Association's Get With The Guidelines-Stroke program received credit if evaluated in this specialty. The weight assigned to this transparency measure is 2 percent, and the weight assigned to Expert Opinion in this specialty was be reduced by the same amount.

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 additional outcome measures for possible inclusion. We will continue to evaluate new and alternative outcome measures that may provide unique information on performance of hospital in caring for patients.
- Further refine the risk-adjustment of the outcome measures. We will continue to evaluate additional risk-adjustment refinements that may provide more precise adjustment for patient mix factors, including social determinants of health.
- Add objective data to expert opinion-based specialties. We are examining opportunities to add structural data and outcome measures to the current expert opinion-based specialties. As announced in late 2018, we have developed a methodology for the rehabilitation rankings that includes a broader array of measures. Our aim is to introduce this new rehabilitation ranking in 2021.
- 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.
- **Review external data sources.** We will investigate additional and new sources of data that offer quality measures for all hospitals. Potential data sources 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 2020-21 Physician Survey Materials



Best Hospitals

Your nominations will be reflected in the 2020-21 *U.S. News & World Report* <<specialty>> rankings.

Please name up to 5 U.S. hospitals that in your opinion provide the best care in <<specialty>> for patients who have the most challenging conditions and/or surgical procedures.

Do not consider location or cost. For a hospital that is part of a health system or medical school, please name the individual hospital.

	Hospital	City	State
a.			
b.			
C.			
d.			
e.			

Thank you for your participation in this important study!

Please respond by returning your survey in the included postpaid envelope, or by faxing your response to (800) 476-9721.

RTI

Conducted by:

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Appendix B Structural Variable Map

The following variables, used to construct structural elements of the 2020-21 data-driven rankings, were taken from the 2018 Annual Survey of Hospitals Database published by the American Hospital Association, unless otherwise specified. Hospitals did not receive more than one point for any one service.

Key Technologies (8 points possible)

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

Cancer Advanced Technologies (8 points possible)

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

Cardiology & Heart Surgery Advanced Technologies (6 points possible)

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

Diabetes & Endocrinology Advanced Technologies (4 points possible)

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

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

1 point awarded if
SRADHOS, SRADSYS or SRADVEN=1

Gastroenterology & GI Surgery Advanced Technologies (7 points possible)

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

Gynecology Advanced Technologies (5 points possible)

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

Nephrology Advanced Technologies (7 points possible)

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

Neurology & Neurosurgery Advanced Technologies (5 points possible)

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

Orthopedics Advanced Technologies (2 points possible)

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

Pulmonology & Lung Surgery 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:

Calculation for hospitals with <u>no</u> onsite skilled nursing: Full-time Equivalent Registered Nurses (FTEN) divided by Adjusted Average Daily Census (ADJADC). In cases where FTEN is missing the value is imputed using a sample of hospitals with non-extreme ratios with the following data: FTEN (Full time equivalent registered nurses reported), FTERN (Full time equivalent registered nurses estimated), ADJADC (Adjusted Average Daily Census) BDTOT (total hospital beds set up and staffed).

Calculation for hospitals with onsite skilled nursing: If a hospital has a nursing home type of long-term care unit (SUNITS=1) and reports registered nurse FTEs for this facility (FTERNLT>0), then calculate the ratio by dividing the Registered Nurses FTEs (FTEN) – the Registered Nurses FTEs assigned to the nursing facility (FTERNLT) by the modified Adjusted Average Daily Census (ADJADCH). Note that the ADJADCH is provided by the AHA directly to the project.

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 & Lung 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

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

ICU Specialists

1 point awarded if...

if (FTEINT>0 or TPINT>0 or INTCAR>0 or FTEMSI>0 or FTECIC>0 or FTEOIC>0) then intens=1; if FTEINT>0 and FTEINT=sum(of FTENIC FTEPIC) then intens=0;

Appendix C 2020-21 Diagnosis Related Group (DRG) Groupings by Specialty

Cancer

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
	Allogeneic bone marrow transplant	014	Include all
S		016	Include all
		017	Include all
S	Craniotomy with Major Device Implant or Acute Complex Central Nervous System (CNS) Principal Diagnosis (PDX) with MCC or Chemotherapy Implant or Epilepsy with Neurostimulator	023	Include procedures: 3E0Q005
М	Nervous system neoplasms	054	Include all
		055	Include all
М	Ear, nose, mouth & throat malignancy	146	Include all
		147	Include all
		148	Include all
		180	Include all
M	Respiratory neoplasms	181	Include all
		182	Include all
	Digestive malignancy	374	Include all
M		375	Include all
		376	Include all
	Malignancy of hepatobiliary system or pancreas	435	Include all
M		436	Include all
		437	Include all
S	Spinal fus exc cerv w spinal curv/malig/infec or 9+ fus	456	Include diagnoses: C41.2, C79.51, C79.52, C7B.03
		457	See MS-DRG 456
		458	See MS-DRG 456

Cancer (cont.)

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
M	Pathological fractures & musculoskelet & conn tiss malig	542 543	Exclude diagnoses: M30.1, M31.2, M31.30, M31.31, M48.40XA, M48.41XA, M48.42XA, M48.43XA, M48.44XA, M48.45XA, M48.45XA, M48.46XA, M48.47XA, M48.48XA, M48.50XA, M48.51XA, M48.52XA, M48.53XA, M48.54XA, M48.55XA, M48.56XA, M48.57XA, M48.58XA, M80.002A, M80.011A, M80.012A, M80.019A, M80.021A, M80.022A, M80.029A, M80.031A, M80.032A, M80.039A, M80.041A, M80.042A, M80.049A, M80.051A, M80.052A, M80.059A, M80.079A, M80.062A, M80.069A, M80.071A, M80.072A, M80.079A, M80.08XA, M80.811A, M80.812A, M80.83PA, M80.821A, M80.822A, M80.829A, M80.831A, M80.832A, M80.822A, M80.829A, M80.831A, M80.851A, M80.852A, M80.859A, M80.861A, M80.862A, M80.851A, M80.852A, M80.879A, M80.88XA, M84.30XA, M84.311A, M84.312A, M84.331A, M84.332A, M84.334A, M84.332A, M84.331A, M84.331A, M84.334A, M84.334A, M84.334A, M84.341A, M84.342A, M84.343A, M84.344A, M84.353A, M84.354A, M84.359A, M84.36A, M84.351A, M84.352A, M84.35A, M84.359A, M84.36A, M84.377A, M84.373A, M84.374A, M84.374A, M84.375A, M84.375A, M84.377A, M84.375A, M84.474A, M84.412A, M84.410A,
S	Mastectomy for malignancy	582 583	Include all

Cancer (cont.)

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
M	Major skin disorders	595 596	Include diagnoses: C43.0, C43.20, C43.21, C43.22, C43.30, C43.31, C43.39, C43.4, C43.51, C43.52, C43.59, C43.60, C43.61, C43.62, C43.70, C43.71, C43.72, C43.8, C43.9, C4A.0, C4A.10, C4A.11, C4A.12, C4A.20, C4A.21, C4A.22, C4A.30, C4A.31, C4A.39, C4A.4, C4A.51, C4A.52, C4A.59, C4A.60, C4A.61, C4A.62, C4A.70, C4A.71, C4A.72, C4A.8, C4A.9, D03.0, D03.20, D03.21, D03.22, D03.30, D03.39, D03.4, D03.51, D03.52, D03.59, D03.60, D03.61, D03.62, D03.70, D03.71, D03.72, D03.8, D03.9 See MS-DRG 595
		597	Include all
М	Malignant breast disorders	598	Include all
IVI	Walighant broast disorders	599	Include all
		656	Include all
S	Kidney & ureter procedures for neoplasm	657	Include all
	, ,	658	Include all
		686	Include all
М	Kidney & urinary tract neoplasms	687	Include all
	Tradition of district of the state of the st	688	Include all
	Other male reproductive system O.R. proc for	715	Include all
S	malignancy	716	Include all
	,	722	Include all
M	Malignancy, male reproductive system	723	Include all
		724	Include all
	Literine 9 admove were for evenion or admoved	736	Include all
S	Uterine & adnexa proc for ovarian or adnexal malignancy	737	Include all
		738	Include all
		739	Include all
S	Uterine,adnexa proc for non-ovarian/adnexal malig	740	Include all
		741	Include all
		754	Include all
M	Malignancy, female reproductive system	755	Include all
		756	Include all
	Major hematol/immun diag exc sickle cell crisis &	808	Include diagnoses: T86.00, T86.01, T86.02, T86.03, T86.09
М	coagul	809	See MS-DRG 808
	Coagui	810	See MS-DRG 808
		820	Include all
S	Lymphoma & leukemia w major O.R. procedure	821	Include all
		822	Include all
		823	Include all
S	Lymphoma & non-acute leukemia w other O.R. proc	824	Include all
		825	Include all

Cancer (cont.)

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
S	Myeloprolif disord or poorly diff neopl w maj O.R. proc	826	Exclude diagnoses: Z85.00, Z85.01, Z85.020, Z85.028, Z85.030, Z85.038, Z85.040, Z85.048, Z85.05, Z85.060, Z85.068, Z85.07, Z85.09, Z85.110, Z85.118, Z85.12, Z85.20, Z85.21, Z85.22, Z85.230, Z85.238, Z85.29, Z85.3, Z85.40, Z85.41, Z85.42, Z85.43, Z85.44, Z85.45, Z85.46, Z85.47, Z85.48, Z85.49, Z85.50, Z85.51, Z85.520, Z85.528, Z85.53, Z85.54, Z85.59, Z85.6, Z85.71, Z85.72, Z85.79, Z85.810, Z85.818, Z85.819, Z85.820, Z85.821, Z85.828, Z85.830, Z85.831, Z85.840, Z85.841, Z85.848, Z85.850, Z85.858, Z85.89, Z85.9, Z87.410
		827	See MS-DRG 826
		828	See MS-DRG 826
S	Myeloprolif disord or poorly diff neopl w other O.R.	829	See MS-DRG 826
3	proc	830	See MS-DRG 826
		834	Include all
M	Acute leukemia w/o major O.R. procedure	835	Include all
		836	Include all
	Chemo w acute leukemia as sdx or w high dose chemo agent	837	Include all
M		838	Include all
		839	Include all
		840	Include all
M	Lymphoma & non-acute leukemia	841	Include all
		842	Include all
М	Other musicansiif die er nearly diff nearly dis-	843	See MS-DRG 826
IVI	Other myeloprolif dis or poorly diff neopl diag	844 845	See MS-DRG 826 See MS-DRG 826
		846	Include all
M	Chemotherapy w/o acute leukemia as secondary	847	Include all
IVI	diagnosis	848	Include all

Cardiology & Heart Surgery

	MS-	
DRG Title	DRG	ICD-10
Heart transplant or implant of heart assist system	001	Include all
neart transplant of implant of heart assist system 002	002	Include all
Major chest procedures	163	Include procedures: 025N0ZZ, 025N3ZZ, 025N4ZZ, 025P0ZZ, 025P3ZZ, 025P4ZZ, 025QZZ, 025QZZ, 025QAZZ, 025R0ZZ, 025R0ZZ, 025R3ZZ, 025R4ZZ, 025R0ZZ, 025S3ZZ, 025X4ZZ, 025T0ZZ, 025T3ZZ, 025T4ZZ, 025V0ZZ, 025V3ZZ, 025V4ZZ, 025W0ZZ, 025W3ZZ, 025W3ZZ, 025W3ZZ, 025W3ZZ, 025W3ZZ, 025W3ZZ, 025W3ZZ, 025W3ZZ, 025W3ZZ, 028P0ZZ, 025W3ZZ, 028P3ZZ, 02CM3ZZ, 02CM0ZZ, 02CM0ZZ, 02CM0ZZ, 02CM0ZZ, 02CM3ZZ, 02CM0ZZ, 02R0M3ZZ, 02R0M3ZZ, 02R0MZZ, 03B0ZZ, 03C0ZZ, 03C0ZZ, 03C0ZZ, 03C0ZZ, 03C0ZZ, 03C0ZZ
	Heart transplant or implant of heart assist system Major chest procedures	Heart transplant or implant of heart assist system 001 002

Cardiology & Heart Surgery (cont.)

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
S	Major chest procedures (cont.)	163 (cont.)	05B14ZZ, 05B30ZZ, 05B33ZZ, 05B34ZZ, 05B40ZZ, 05B43ZZ, 05B44ZZ, 05B50ZZ, 05B53ZZ, 05B54ZZ, 05B60ZZ, 05B63ZZ, 05B64ZZ, 05C00ZZ, 05C04ZZ, 05C10ZZ, 05C14ZZ, 05C30ZZ, 05C34ZZ, 05C40ZZ, 05C4ZZ, 05C50ZZ, 05C54ZZ, 05C60ZZ, 05C64ZZ, 05L30CZ, 05L30DZ, 05L30ZZ, 05L33CZ, 05L33DZ, 05L33ZZ, 05L34CZ, 05L34DZ, 05L34ZZ, 05L40CZ, 05L40DZ, 05L40ZZ, 05L43CZ, 05L43DZ, 05L43ZZ, 05L44CZ, 05L44DZ, 05L44ZZ, 05L50CZ, 05L50DZ, 05L50ZZ, 05L53CZ, 05L53DZ, 05L53ZZ, 05L54CZ, 05L54DZ, 05L54ZZ, 05L60CZ, 05L60DZ, 05L60ZZ, 05L63CZ, 05L63DZ, 05L63ZZ, 05L64CZ, 05L64DZ, 05L64ZZ, 05R007Z, 05R00JZ, 05R00KZ, 05R047Z, 05R04JZ, 05R04KZ, 05R107Z, 05R10JZ, 05R10KZ, 05R347Z, 05R34JZ, 05R34KZ, 05R407Z, 05R40JZ, 05R40KZ, 05R447Z, 05R44JZ, 05R44KZ, 05R607Z, 05R50JZ, 05R50KZ, 05R547Z, 05R54JZ, 05R64KZ, 05R607Z, 05R60JZ, 05R60KZ, 05R647Z, 05R64JZ, 05R64KZ, 0W9D00Z, 0W9D0ZX, 0W9D0ZZ, 0WCD0ZZ, 0WCD3ZZ, 0WCD4ZZ, 0WHD03Z, 0WHD0YZ, 0WPD01Z, 0WPD03Z, 0WPD01Z, 0WPD03Z, 0WPD01Z, 0WPD03Z, 0WPD01Z, 0WPD03Z, 0WPD07Z, 0WPD03Z, 0WPD3Z, 0WWD3Z, 0W
S	Other heart assist system implant	165 215	See MS-DRG: 163 Include all
<u> </u>		216	Include all
S	Cardiac valve & oth maj cardiothoracic proc w card cath	217 218	Include all
S	Cardiac valve & oth maj cardiothoracic proc w/o card cath	219 220 221	Include all Include all Include all
S	Cardiac defib implant w cardiac cath w AMI/HF/shock	222	Include all
S	Cardiac defib implant w cardiac cath w/o AMI/HF/shock	224 225	Include all
S	Cardiac defibrillator implant w/o cardiac cath	226 227	Include all
S	Other cardiothoracic procedures	228 229 230	Include all Include all Include all
S	Coronary bypass w PTCA	231 232	Include all
S	Coronary bypass w cardiac cath	233 234	Include all
S	Coronary bypass w/o cardiac cath	235 236	Include all
S	Permanent cardiac pacemaker implant	242 243 244	Include all Include all Include all

Cardiology & Heart Surgery (cont.)

Diabetes & Endocrinology

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
S	Adrenal & pituitary procedures	614	Include all
	Transmar a pitaliary procedures	615	Include all
		619	Include all
S	O.R. procedures for obesity	620	Include all
		621	Include all
	Ckin grafta 9 wound debrid for andea putrit 9	622	Include all
S	Skin grafts & wound debrid for endoc, nutrit & metab dis	623	Include all
	metab dis	624	Include all
	Thyroid, parathyroid & thyroglossal procedures	625	Include all
S		626	Include all
		627	Include all
		628	Include all
S	Other endocrine, nutrit & metab O.R. proc	629	Include all
	,	630	Include all
	Diabetes	637	Include all
М		638	Include all
		639	Include all
М	Misc disorders of nutrition, metabolism, fluids/electrolyes	640	Exclude diagnosis: P92.6
М	Endocrine disorders	643	Include all
IVI	Endocine disorders	644	Include all

Ear, Nose & Throat

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
		011	Include all
S	Tracheostomy for face, mouth & neck diagnoses	012	Include all
		013	Include all
S	Major head & neck procedures	129	Include all
3	I Major flead & fleck procedures	130	Include all
S	Cranial/Facial Procedures	131	Include all
8		132	Include all
S	Other ear, nose, mouth & throat O.R. procedures	133	Include all
8		134	Include all
S	Salivary gland procedures	139	Include all
	Ear, nose, mouth & throat malignancy	146	Include all
M		147	Include all
		148	Include all
М	Otitis media & URI	152	Include all
		154	Include all
M	Other ear, nose, mouth and throat diagnosis	155	Include all
		156	Include all

Gastroenterology & GI Surgery

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
S	Stomach, esophageal & duodenal proc	326 327	Include all Include all
S	Major small & large bowel procedures	328 329 330	Include all Include all
	Dactel reception	331 332	Include all Include all
S	Rectal resection	333 334 335	Include all Include all
S	Peritoneal adhesiolysis	336 337	Include all
S	Minor small & large bowel procedures	344	Include procedures: 0D580ZZ, 0D583ZZ, 0D584ZZ, 0D587ZZ, 0D588ZZ, 0D5A0ZZ, 0D5A3ZZ, 0D5A4ZZ, 0D5A7ZZ, 0D5A8ZZ, 0D5B0ZZ, 0D5B3ZZ, 0D5B4ZZ, 0D5B7ZZ, 0D5B8ZZ, 0D5C0ZZ, 0D5C3ZZ, 0D5C4ZZ, 0D5C7ZZ, 0D5C3ZZ, 0D5C7ZZ, 0D5E7ZZ, 0D5E7ZZ, 0D5E7ZZ, 0D5E7ZZ, 0D5E7ZZ, 0D5E7ZZ, 0D5E7ZZ, 0D5E7ZZ, 0D5H0ZZ, 0D5H3ZZ, 0D5H7ZZ, 0D5H0ZZ, 0D5H3ZZ, 0D5L7ZZ, 0D5M0ZZ, 0D5M3ZZ, 0D5K7ZZ, 0D5M7ZZ, 0D5M0ZZ, 0D5M3ZZ, 0D98M0Z, 0D980Z, 0D980Z, 0D980ZZ, 0D9840Z, 0D987ZZ, 0D987ZZ, 0D980Z, 0D980ZZ, 0D984ZZ, 0D987ZZ, 0D980ZZ, 0D984ZZ, 0D987ZZ, 0D980ZZ, 0D980ZZ, 0D9A0ZZ, 0D9A0ZZ, 0D9A0ZZ, 0D9A0ZZ, 0D9A0ZZ, 0D9B0ZZ, 0D9B0ZZ, 0D9C0ZZ, 0D9C0ZZ, 0D9C40Z, 0D9C4ZZ, 0D9C70Z, 0D9C7ZZ, 0D9C8ZZ, 0D9E0ZZ, 0D9F7ZZ, 0D9F0ZZ, 0D9H0ZZ, 0DG8AZZ, 0DC6AZZ, 0DC6

Gastroenterology & GI Surgery (cont.)

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
<i>S</i>	Minor small & large bowel procedures (cont.)	344 (cont.)	ODP000Z, ODP002Z, ODP003Z, ODP007Z, ODP00CZ, ODP00DZ, ODP00JZ, ODP00JZ, ODP00KZ, ODP00KZ, ODP00WZ, ODP00JZ, ODP03DZ, ODP03Z, ODP04Z, ODP08Z, ODP08Z, ODP08Z, ODP08Z, ODP08Z, ODP00Z, ODPD0ZZ, ODPD03Z, ODPD03Z, ODPD0ZZ, ODPD3ZZ, ODPD4ZZ, ODPD8ZZ, ODPD8ZZ, ODPD8ZZ, ODPD8ZZ, ODPD8ZZ, ODPD8ZZ, ODSAZZ, ODW03ZZ, ODW0
S	Other digestive system O.R. procedures	356 357 358	Include all Include all
М	Major esophageal disorders	368 369 370	Include all Include all
М	Major gastrointestinal disorders & peritoneal infections	371 372 373	Include all Include all Include all

Gastroenterology & GI Surgery (cont.)

Medical/	DDC Title	MS-	TOD 10
Surgical	DRG Title	DRG	ICD-10
		374	Include all
M	Digestive malignancy	375	Include all
		376	Include all
		377	Include all
M	G.I. hemorrhage	378	Include all
	•	379	Include all
		380	Include all
M	Complicated peptic ulcer	381	Include all
		382	Include all
M	Uncomplicated peptic ulcer	383	Include all
		385	Include all
M	Inflammatory bowel disease	386	Include all
	•	387	Include all
N	G.I. obstruction	388	Include all
M	G.I. ODSTRUCTION	389	Include all
M	Esophagitis, gastroent & misc digest disorders	391	Include all
		393	Include all
М	Other digestive system diagnoses	394	Include all
		405	Include all
S	Pancreas, liver & shunt procedures	406	Include all
		407	Include all
		408	Include all
S	Biliary tract proc except only cholecyst w or w/o	409	Include all
	c.d.e.	410	Include all
		411	Include all
S	Cholecystectomy w c.d.e.	412	Include all
	, ,	413	Include all
		414	Include all
S	Cholecystectomy except by laparoscope w/o c.d.e.	415	Include all
		417	Include all
S	Laparoscopic cholecystectomy w/o c.d.e.	418	Include all
		420	Include all
S	Hepatobiliary diagnostic procedures	421	Include all
	Tropatozmany anagriconic processarios	422	Include all
		423	Include all
S	Other hepatobiliary or pancreas O.R. procedures	424	Include all
		425	Include all
		432	Include all
M	Cirrhosis & alcoholic hepatitis	433	Include all
141	Similatio a algorithm hopatitio	434	Include all
		435	Include all
M	Malignancy of hepatobiliary system or pancreas	436	Include all
141	ivialignancy of nepatobiliary system or pancreas	437	Include all
		438	Include all
M	Disorders of pancreas except malignancy	439	Include all
171	Disorders of particleas except malignaticy	440	Include all
		441	Exclude diagnosis: R94.5
M	Disorders of liver except malig,cirr,alc hepa	442	See MS-DRG 442
		442	OGC INIO-DIVO 442

Geriatrics

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
S	Head transplant or implant of boost assist avetors	001	Include all
8	Heart transplant or implant of heart assist system	002	Include all
S	ECMO or trach w MV 96+ hrs or PDX exc face, mouth & neck w maj O.R.	003	Include all
S	Trach w MV 96+ hrs or PDX exc face, mouth & neck w/o maj O.R.	004	Include all
S	Liver transplant	005 006	Include all
S	Lung transplant	007	Include all
S	Simultaneous pancreas/kidney transplant	008	Include all
S	Pancreas transplant	010	Include all
		011	Include all
S	Tracheostomy for face, mouth & neck diagnoses	012	Include all
		013	Include all
		014	Include all
S	Allogeneic bone marrow transplant	016	Include all
		017	Include all
	later and all and all and all and all and all and all all and all all and all all all all all all all all all al	020	Include all
S	Intracranial vascular procedures w PDX	021	Include all
	hemorrhage	022	Include all
0	One in the interest of the PDV	023	Include all
S	Cranio w major dev impl/acute complex CNS PDX	024	Include all
	Craniotomy & endovascular intracranial procedures	025	Include all
S		026	Include all
		027	Include all
		028	Include all
S	Spinal procedures	029	Include all
		030	Include all
		031	Include all
S	Ventricular shunt procedures	032	Include all
	·	033	Include all
		034	Include all
S	Carotid artery stent procedure	035	Include all
		036	Include all
		037	Include all
S	Extracranial procedures	038	Include all
		039	Include all
		040	Include all
S	Periph & cranial nerve & other nerv syst proc	041	Include all
		042	Include all
М	Chinal diparders & injurios	052	Include all
IVI	Spinal disorders & injuries	053	Include all
М	Nervous system neoplasms	054	Include all
IVI	ivervous system neopiasms	055	Include all
М	Degenerative nervous system disorders	056	Include all
IVI	Degenerative hervous system disorders	057	Include all
		058	Include all
M	Multiple sclerosis & cerebellar ataxia	059	Include all
		060	Include all

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
	Jackania Chraka Brassanhari Osakasian ar	061	Include all
M	Ischemic Stroke, Precerebral Occlusion or Transient Ischemia with Thrombolytic Agent	062	Include all
	Transient ischemia with Thiombolytic Agent	063	Include all
		064	Include all
M	Intracranial hemorrhage or cerebral infarction	065	Include all
		066	Include all
	Name of the same o	067	Include all
М	Nonspecific cva & precerebral occlusion w/o infarct	068	Include all
М	Transient ischemia	069	Include all
		070	Include all
М	Nonspecific cerebrovascular disorders	071	Include all
	'	072	Include all
		073	Include all
М	Cranial & peripheral nerve disorders	074	Include all
	\" \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	075	Include all
М	Viral meningitis	076	Include all
		077	Include all
М	Hypertensive encephalopathy	078	Include all
	Tryportonoire energinalepasity	079	Include all
		080	Include all
M	Nontraumatic stupor & coma	081	Include all
		082	Include all
М	Traumatic stupor & coma, coma >1 hr	083	Include all
IVI	Tradinatic stupor & coma, coma > 1 m	084	Include all
		085	Include all
М	Traumatic stupor & coma, coma <1 hr	086	Include all
IVI	Tradinatic stupor & coma, coma vi in	087	Include all
		088	Include all
М	Concussion	089	Include all
IVI	Concussion	090	Include all
		091	Include all
М	Other disorders of nervous system	092	Include all
IVI	Other disorders of hervous system	093	Include all
		094	Include all
М	Bacterial & tuberculous infections of nervous	095	Include all
IVI	system	095	Include all
		090	
М	Non-bacterial infect of nervous sys exc viral	097	Include all
IVI	meningitis	099	Include all
M	Seizures	100	Include all
		101	Include all
M	Headaches	102	Include all
		103	Include all
S	Orbital procedures	113	Include all
	·	114	Include all
S	Extraocular procedures except orbit	115	Include all
S	Intraocular procedures	116	Include all
	madodiai procedures	117	Include all
М	Acute major eye infections	121	Include all
	and the second s	122	Include all

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
М	Neurological eye disorders	123	Include all
М	Other disorders of the eve	124	Include all
IVI	Other disorders of the eye	125	Include all
S	Major head & neck procedures	129	Include all
3	I Major Head & Heck procedures	130	Include all
S	Cranial/facial procedures	131	Include all
<u> </u>	Cramainaciai procedures	132	Include all
S	Other ear, nose, mouth & throat O.R. procedures	133	Include all
<u> </u>	Other ear, nose, mount & inoat o.r. procedures	134	Include all
S	Sinus & mastoid procedures	135	Include all
	Ollius & mastola procedures	136	Include all
S	Mouth procedures	137	Include all
	·	138	Include all
S	Salivary gland procedures	139	Include all
		146	Include all
М	Ear, nose, mouth & throat malignancy	147	Include all
		148	Include all
M	Dysequilibrium	149	Include all
М	Epistaxis	150	Include all
		151	Include all
М	Otitis media & URI	152	Include all
		153	Include all
l	0.1 - 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	154	Include all
М	Other Ear, Nose, Mouth, and Throat Diagnoses	155	Include all
		156	Include all
.,	Destal & Oal Bissess	157	Include all
М	Dental & Oral Diseases	158	Include all
		159	Include all
	Maior shoot ansas dunas	163	Include all
S	Major chest procedures	164 165	Include all
		166	Include all
S	Other rean evetem O.D. precedures	167	Include all
8	Other resp system O.R. procedures	168	Include all
		175	Include all
M	Pulmonary embolism	176	Include all
		177	Include all
М	Respiratory infections & inflammations	178	Include all
IVI	Respiratory infections & inflaminations	179	Include all
		180	Include all
М	Respiratory neoplasms	181	Include all
IVI		182	Include all
		183	Include all
М	Major chest trauma	184	Include all
IVI	i wajor onest trauma	185	Include all
		186	Include all
М	Pleural effusion	187	Include all
IVI	i ibulai bilusion	188	Include all
М	Pulmonary edema & respiratory failure	189	Include all
IVI	r unnonary euema ox respiratory failure	109	IIIoluut all

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
		190	Include all
М	Chronic obstructive pulmonary disease	191	Include all
	,		Include all
			Include all
М	Simple pneumonia & pleurisy		Include all
	- Compre processing or processey		Include all
			Include all
М	Interstitial lung disease		Include all
	3		Include all
			Include all
М	Pneumothorax	200	Include all
			Include all
.,	B 130 0 0	202	Include all
М	Bronchitis & asthma		Include all
М	Respiratory signs & symptoms		Include all
			Include all
М	Other respiratory system diagnoses		Include all
			Include all
М	Respiratory system diagnosis w ventilator support		Include all
S	Other heart assist system implant		Include all
	•		Include all
S	Cardiac valve & oth maj cardiothoracic proc w card		Include all
	cath		Include all
			Include all
S	Cardiac valve & oth maj cardiothoracic proc w/o		Include all
	card cath		Include all
	Cardiac defib implant w cardiac cath w		Include all
S	AMI/HF/shock		Include all
	Cardiac defib implant w cardiac cath w/o		Include all
S	AMI/HF/shock		Include all
			Include all
S	Cardiac defibrillator implant w/o cardiac cath		Include all
			Include all
S	Other cardiothoracic procedures		Include all
	,		Include all
_	0 1 5701		Include all
S	Coronary bypass w PTCA		Include all
_			Include all
S	Coronary bypass w cardiac cath		Include all
	0 1 1 " "		Include all
S	Coronary bypass w/o cardiac cath		Include all
			Include all
S	Amputation for circ sys disorders exc upper limb &	191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229	Include all
	toe		Include all
			Include all
S	Permanent cardiac pacemaker implant		Include all
	- Simulating and page market implant		Include all
S	AICD generator procedures		Include all

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
		246	Include all
S	Perc cardiovasc proc w drug-eluting stent	247	Include all
		248	Include all
		249	Include all
S	Perc cardiovasc proc w non-drug-eluting stent	250	Include all
		251	Include all
		252	Include all
S	Other vascular procedures	253	Include all
		254	Include all
	Unner limb 9 too amoutation for aire quatem	255	Include all
S	Upper limb & toe amputation for circ system disorders	256	Include all
	disorders	257	Include all
S	Cardina management device replacement	258	Include all
8	Cardiac pacemaker device replacement	259	Include all
	Onding a second on a sining accorded to the	260	Include all
S	Cardiac pacemaker revision except device	261	Include all
	replacement	262	Include all
S	Vein ligation & stripping	263	Include all
S	Other circulatory system O.R. procedures	264	Include all
S	AICD lead procedures	265	Include all
0	Fadavasavlas Cardina Valva Daulasavast	266	Include all
S	Endovascular Cardiac Valve Replacement	267	Include all
0	Aortic and heart assist procedures except pulsation	268	Include all
S	balloon	269	Include all
		270	Include all
S	Other major cardiovascular procedures	271	Include all
	,	272	Include all
	Daniel de la constitución de la	273	Include all
S	Percutaneous intracardiac procedures	274	Include all
		280	Include all
M	Acute myocardial infarction, discharged alive	281	Include all
		282	Include all
		283	Include all
M	Acute myocardial infarction, expired	284	Include all
	•	285	Include all
	O' - Istan Paratana and AMI	286	Include all
М	Circulatory disorders except AMI, w card cath	287	Include all
		288	Include all
M	Acute & subacute endocarditis	289	Include all
		290	Include all
		291	Include all
М	Heart failure & shock	292	Include all
		293	Include all
	D	294	Include all
М	Deep vein thrombophlebitis	295	Include all
		296	Include all
М	Cardiac arrest, unexplained	297	Include all
	, , , , , , , , , , , , , , , , , , , ,	298	Include all

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
		299	Include all
М	Peripheral vascular disorders	300	Include all
	'	301	Include all
		302	Include all
М	Atherosclerosis	303	Include all
		304	Include all
М	Hypertension	305	Include all
		306	Include all
M	Cardiac congenital & valvular disorders	307	Include all
		308	Include all
М	Cardiac arrhythmia & conduction disorders	309	Include all
IVI	Cardiac arriyumila & conduction disorders	310	Include all
M	Angina pectoris	311	Include all
M	Syncope & collapse	312	Include all
M	Chest pain	313	Include all
IVI	Chest pain	314	Include all
М	Other sireulatory ayatam diagnosas	315	Include all
IVI	Other circulatory system diagnoses		
		316	Include all
		326	Include all
S	Stomach, esophageal & duodenal proc	327	Include all
		328	Include all
		329	Include all
S	Major small & large bowel procedures	330	Include all
		331	Include all
		332	Include all
S	Rectal resection	333	Include all
		334	Include all
		335	Include all
S	Peritoneal adhesiolysis	336	Include all
		337	Include all
		338	Include all
S	Appendectomy w complicated principal diag	339	Include all
		340	Include all
		341	Include all
S	Appendectomy w/o complicated principal diag	342	Include all
		343	Include all
		344	Include all
S	Minor small & large bowel procedures	345	Include all
	J	346	Include all
		347	Include all
S	Anal & stomal procedures	348	Include all
l	7 mai a otomai procoduros	349	Include all
		350	Include all
S	Inguinal & femoral hernia procedures	351	Include all
	inganiai & lemoral nemia procedures	352	Include all
		353	Include all
S	 Hernia procedures except inguinal & femoral	354	Include all
3	Trienna procedures exceptingunara remotal		
		355	Include all

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
		356	Include all
S	Other digestive system O.R. procedures	357	Include all
		358	Include all
		368	Include all
M	Major esophageal disorders	369	Include all
	, ,	370	Include all
	Markey and other first order to the control of the	371	Include all
M	Major gastrointestinal disorders & peritoneal	372	Include all
	infections	373	Include all
		374	Include all
M	Digestive malignancy	375	Include all
	5 ,	376	Include all
		377	Include all
M	G.I. hemorrhage	378	Include all
	3	379	Include all
		380	Include all
M	Complicated peptic ulcer	381	Include all
		382	Include all
		383	Include all
М	Uncomplicated peptic ulcer	384	Include all
		385	Include all
М	Inflammatory bowel disease	386	Include all
	milanimatory bowor alcoaco	387	Include all
		388	Include all
М	G.I. obstruction	389	Include all
141	C.I. Oboli dollon	390	Include all
		391	Include all
М	Esophagitis, gastroent & misc digest disorders	392	Include all
		393	Include all
М	Other digestive system diagnoses	394	Include all
IVI	Other digestive system diagnoses	395	Include all
		405	Include all
S	Pancreas, liver & shunt procedures	406	Include all
	r andreas, liver a share procedures	407	Include all
		408	Include all
S	Biliary tract proc except only cholecyst w or w/o	409	Include all
3	c.d.e.	410	Include all
		411	Include all
S	Cholecystectomy w c.d.e.	412	Include all
3	Cholecystectomy w c.u.e.	413	Include all
		414	Include all
S	Chalagyatastamy avaant by lanaragaana w/a a d a	414	Include all
3	Cholecystectomy except by laparoscope w/o c.d.e.		
		416	Include all
S	Langragania shalagwatastamww/a a dia	417	Include all
٥	Laparoscopic cholecystectomy w/o c.d.e.	418	Include all
		419	Include all
C	Honotohiliany diagnostic procedures	420	Include all
S	Hepatobiliary diagnostic procedures	421	Include all
		422	Include all

Medical/		MS-	
Surgical	DRG Title	DRG	ICD-10
		423	Include all
S	Other hepatobiliary or pancreas O.R. procedures	424	Include all
		425	Include all
		432	Include all
M	Cirrhosis & alcoholic hepatitis	433	Include all
	·	434	Include all
		435	Include all
M	Malignancy of hepatobiliary system or pancreas	436	Include all
		437	Include all
		438	Include all
M	Disorders of pancreas except malignancy	439	Include all
		440	Include all
		441	Include all
M	Disorders of liver except malig,cirr,alc hepa	442	Include all
		443	Include all
		444	Include all
M	Disorders of the biliary tract	445	Include all
		446	Include all
		453	Include all
S	Combined anterior/posterior spinal fusion	454	Include all
		455	Include all
	Chinal for any common principal complexity for an O	456	Include all
S	Spinal fus exc cerv w spinal curv/malig/infec or 9+ fus	457	Include all
	ius	423 424 425 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 453 454 455	Include all
S	Spinal fusion except cervical	459	Include all
3	Spirial lusion except cervical	460	Include all
S	Bilateral or multiple major joint procs of lower	461	Include all
3	extremity	462	Include all
	Wnd debrid & skn grft exc hand, for musculo-conn		Include all
S	tiss dis		Include all
	1135 UIS		Include all
			Include all
S	Revision of hip or knee replacement		Include all
		468	Include all
S	Major Hip and Knee Joint Replacement or Reattachment of Lower Extremity with MCC or Total Ankle Replacement	469	Include all
	·	471	Include all
S	Cervical spinal fusion	472	Include all
	·	473	Include all
	Association for any and advalated any 0 and times	474	Include all
S	Amputation for musculoskeletal sys & conn tissue	475	Include all
	dis	476	Include all
	District of the second	477	Include all
S	Biopsies of musculoskeletal system & connective		Include all
	tissue		Include all
			Include all
S	Hip & femur procedures except major joint	481	Include all
	• • • • • • • • • • • • • • • • • • • •		Include all

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
S	Major joint & limb reattachment proc of upper extremity	483	Include all
		485	Include all
S	Knee procedures w pdx of infection	486	Include all
		487	Include all
S	Knee procedures w/o pdx of infection	488	Include all
3	Milee procedures w/o pax of liffection	489	Include all
		492	Include all
S	Lower extrem & humer proc except hip,foot,femur	493	Include all
		494	Include all
	Local excision & removal int fix devices exc hip &	495	Include all
S	femur	496	Include all
	lemui	497	Include all
S	Local excision & removal int fix devices of hip &	498	Include all
S	femur	499	Include all
		500	Include all
S	Soft tissue procedures	501	Include all
		502	Include all
		503	Include all
S	Foot procedures	504	Include all
		505	Include all
S	Major thumb or joint procedures	506	Include all
S	Major aboulder or albow joint procedures	507	Include all
3	Major shoulder or elbow joint procedures	508	Include all
S	Arthroscopy	509	Include all
		510	Include all
S	proc	511	Include all
	pioc	512	Include all
S	Hand or wrist proc, except major thumb or joint	513	Include all
S	proc	514	Include all
		515	Include all
S	Other musculoskelet sys & conn tiss O.R. proc	516	Include all
		517	Include all
		518	Include all
S	Back & Neck Procedures Except Spinal Fusion	519	Include all
		520	Include all
М	Creatures of family	533	Include all
IVI	Fractures of femur	534	Include all
N	Exactures of him 9 nature	535	Include all
M	Fractures of hip & pelvis	536	Include all
N 4	Corning strains 9 dialogations of him making 9 think	537	Include all
M	Sprains, strains, & dislocations of hip, pelvis & thigh	538	Include all
		539	Include all
M	Osteomyelitis	540	Include all
	•	541	Include all
	Dethalania I frantissa 0 se sa lastatat 0 se s	542	Include all
М	Pathological fractures & musculoskelet & conn tiss	543	Include all
	malig	544	Include all

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
		545	Include all
M	Connective tissue disorders	546	Include all
		547	Include all
		548	Include all
M	Septic arthritis	549	Include all
		550	Include all
М	Madical back problems	551	Include all
IVI	Medical back problems	552	Include all
М	Bone diseases & arthropathies	553	Include all
IVI	bone diseases & artinopatines	554	Include all
М	Signs & symptoms of musculoskeletal system &	555	Include all
IVI	conn tissue	556	Include all
N.4	Tandanitis musaitis 9 humaitis	557	Include all
М	Tendonitis, myositis & bursitis	558	Include all
	Afternoon more also believed as a constant of	559	Include all
M	Aftercare, musculoskeletal system & connective	560	Include all
	tissue	561	Include all
M	Fx, sprn, strn & disl except femur, hip, pelvis &	562	Include all
М	thigh	563	Include all
	<u> </u>	564	Include all
М	Other musculoskeletal sys & connective tissue	565	Include all
	diagnoses	566	Include all
		570	Include all
S	Skin debridement	571	Include all
		572	Include all
		573	Include all
S	Skin graft for skin ulcer or cellulitis	574	Include all
	grant grant and an arrange	575	Include all
		576	Include all
S	Skin graft except for skin ulcer or cellulitis	577	Include all
	3	578	Include all
		579	Include all
S	Other skin, subcut tiss & breast proc	580	Include all
	'	581	Include all
_		582	Include all
S	Mastectomy for malignancy	583	Include all
	Breast biopsy, local excision & other breast	584	Include all
S	procedures	585	Include all
		592	Include all
М	Skin ulcers	593	Include all
	CKIT GIOOTO	594	Include all
		595	Include all
М	Major skin disorders	596	Include all
		597	Include all
М	Malignant breast disorders	598	Include all
IVI	Manghant breast disorders	599	Include all
		600	Include all
М	Non-malignant breast disorders	601	Include all
		602	Include all
М	Cellulitis	603	Include all
		บบอ	Illiciuue ail

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
М	Trauma to the akin aubout ties 9 broast	604	Include all
IVI	Trauma to the skin, subcut tiss & breast	605	Include all
М	Minor skin disorders	606	Include all
IVI	WITHOU SKITT disorders	607	Include all
S	Adronal & nituitary procedures	614	Include all
S	Adrenal & pituitary procedures	615	Include all
	Amoutat of lower limb for andoering putrit 9	616	Include all
S	Amputat of lower limb for endocrine,nutrit,& metabol dis	617	Include all
	metabol dis	618	Include all
		619	Include all
S	O.R. procedures for obesity	620	Include all
		621	Include all
	Ckin grafta & wound dahrid for andog nutrit &	622	Include all
S	Skin grafts & wound debrid for endoc, nutrit & metab dis	623	Include all
	metab dis	624	Include all
		625	Include all
S	Thyroid, parathyroid & thyroglossal procedures	626	Include all
		627	Include all
		628	Include all
S	Other endocrine, nutrit & metab O.R. proc	629	Include all
	•	630	Include all
		637	Include all
М	Diabetes	638	Include all
		639	Include all
	Misc disorders of nutrition, metabolism,	640	Include all
М	fluids/electrolyes	641	Include all
M	Inborn and other disorders of metabolism	642	Include all
		643	Include all
М	Endocrine disorders	644	Include all
		645	Include all
S	Kidney transplant	652	Include all
		653	Include all
S	Major bladder procedures	654	Include all
	major stadder procedures	655	Include all
		656	Include all
S	Kidney & ureter procedures for neoplasm	657	Include all
	Triandy & dividi procedures for hospidem	658	Include all
		659	Include all
S	Kidney & ureter procedures for non-neoplasm	660	Include all
	ritality & dictor procedures for non-neoplasm	661	Include all
		662	Include all
S	Minor bladder procedures	663	Include all
3	Williof bladder procedures	664	Include all
		665	Include all
S	Prostatectomy	666	Include all
3	i rosiaicolomy	667	Include all
		668	Include all
S	Transurathral procedures	669	Include all
3	Transurethral procedures		
		670	Include all

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
S	Urothral procedures	671	Include all
3	Urethral procedures	672	Include all
		673	Include all
S	Other kidney & urinary tract procedures	674	Include all
		675	Include all
			Include all
М	Renal failure		Include all
			Include all
M	Admit for renal dialysis		Include all
l			Include all
M	Kidney & urinary tract neoplasms		Include all
			Include all
М	Kidney & urinary tract infections		Include all
	, ,		Include all
М	Urinary stones w esw lithotripsy		Include all
	, , , , , , , , , , , , , , , , , , , ,		Include all
М	Urinary stones w/o esw lithotripsy		Include all
	, , , , , , , , , , , , , , , , , , , ,		Include all
М	Kidney & urinary tract signs & symptoms		Include all
	, , , , , ,		Include all
IVI	Urethral stricture		Include all
	Other Lide of Organization to the Company		Include all
IVI	Other kidney & urinary tract diagnoses		Include all
			Include all
S	Major male pelvic procedures		Include all
-	<u> </u>		Include all
S	Penis procedures		Include all
			Include all
S	Testes procedures		Include all
			Include all
S	Transurethral prostatectomy		Include all
	Other male reproductive system O.P. proc for		Include all
S			Include all
			Include all
S			Include all
	manghanoy		Include all
М	Malignancy male reproductive system		Include all
	Manghanoy, maio roproduotivo oyotom		Include all
			Include all
M	Benign prostatic hypertrophy		Include all
<u> </u>	1.6		Include all
М	M Renal failure 682 1 M Admit for renal dialysis 685 1 M Kidney & urinary tract neoplasms 687 1 M Kidney & urinary tract infections 689 1 M Urinary stones w esw lithotripsy 691 1 M Urinary stones w/o esw lithotripsy 693 1 M Kidney & urinary tract signs & symptoms 695 1 M Urethral stricture 697 1 M Other kidney & urinary tract diagnoses 699 1 S Major male pelvic procedures 700 1 S Penis procedures 709 1 S Penis procedures 710 1 S Testes procedures 710 1 S Testes procedures 711 1 S Transurethral prostatectomy 714 1 S Other male reproductive system O.R. proc for malignancy 716 1 M Malignancy, male reproductive	Include all	
			Include all
M	Other male reproductive system diagnoses		Include all
	Pelvic evisceration, rad hysterectomy & rad		Include all
S	l		Include all
	•		Include all
S	·	737	Include all
	malignancy	738	Include all

S Uterine,adnexa proc for non-ovarian/adnexal malig S Uterine & adnexa proc for non-malignancy S Uterine & adnexa proc for non-malignancy S D&C, conization, laparoscopy & tubal interruption S Vagina, cervix & vulva procedures Table 1 Table 2 Table 2 Table 3 Table 2 Table 3 Table 3 Table 3 Table 4 Table 4 Table 3 Table 4 Table	
S Uterine & adnexa proc for non-malignancy S D&C, conization, laparoscopy & tubal interruption S Vagina, cervix & vulva procedures 741 Include all 742 Include all 743 Include all 744 Include all 745 Include all 746 Include all 747 Include all	
S Uterine & adnexa proc for non-malignancy The state of	
S Uterine & adnexa proc for non-malignancy S D&C, conization, laparoscopy & tubal interruption S Vagina, cervix & vulva procedures 743 Include all 744 Include all 745 Include all 746 Include all 747 Include all	
S D&C, conization, laparoscopy & tubal interruption T44 Include all T45 Include all T45 Include all T46 Include all T46 Include all T47 Include all T47 Include all T47 Include all T48 Include all T48 Include all T49 Include all	
S D&C, conization, laparoscopy & tubal interruption S Vagina, cervix & vulva procedures 745 Include all 746 Include all 747 Include all	
S Vagina, cervix & vulva procedures 746 Include all 746 Include all 747 Include all	
S Vagina, cervix & vulva procedures 747 Include all	
747 Include all	
S Female reproductive system reconstructive procedures 748 Include all	
S Other female reproductive system O.R. procedures 749 Include all	
750 Include all	_
754 Include all	
M Malignancy, female reproductive system 755 Include all	
756 Include all	
757 Include all	
M Infections, female reproductive system 758 Include all	
759 Include all	
Menstrual & other female reproductive system 760 Include all	
disorders /61 Include all	
799 Include all	
S Splenectomy 800 Include all	
801 Include all	
Other O.R. proc of the blood & blood forming	
organs out include all	
804 Include all	
Major hematol/immun diag exc sickle cell crisis & 808 Include all	
M coadh	
810 Include all	
M Red blood cell disorders 812 Include all	
M Coagulation disorders 813 Include all	
814 Include all	
M Reticuloendothelial & immunity disorders 815 Include all	
816 Include all	
820 Include all	
S Lymphoma & leukemia w major O.R. procedure 821 Include all	
822 Include all	
823 Include all	
S Lympnoma & non-acute leukemia w otner O.R. 824 Include all	
proc 825 Include all	
826 Include all	
S Myeloprolif disord or poorly diff neopl w maj O.R. 827 Include all	
proc 828 Include all	
Mycloprolif digard or poorly diff poorly other O.D. 920 Include all	
S proc 830 Include all	
834 Include all	
M Acute leukemia w/o major O.R. procedure 835 Include all	
836 Include all	

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
	Chama w aguta laukamia ag adv ar w high daga	837	Include all
M	Chemo w acute leukemia as sdx or w high dose chemo agent	838	Include all
	chemo agent	839	Include all
		840	Include all
M	Lymphoma & non-acute leukemia	841	Include all
		842	Include all
		843	Include all
M	Other myeloprolif dis or poorly diff neopl diag	844	Include all
		845	Include all
	Chamatharany w/a aguta laukamia ag agaandari	846	Include all
M	Chemotherapy w/o acute leukemia as secondary	847	Include all
	diagnosis	848	Include all
M	Radiotherapy	849	Include all
		853	Include all
S	Infectious & parasitic diseases w O.R. procedure	854	Include all
		855	Include all
	Postonorativo or post traumatic infactions w O.P.	856	Include all
S	Postoperative or post-traumatic infections w O.R.	857	Include all
	proc	858	Include all
M	Postoperative & post-traumatic infections	862	Include all
		863	Include all
M	Fever of unknown origin	864	Include all
М	Fever	865	Include all
М	Viral illness	866	Include all
		867	Include all
M	Other infectious & parasitic diseases diagnoses	868	Include all
		869	Include all
		870	Include all
M	Septicemia or severe sepsis w MV 96+ hours	871	Include all
		872	Include all
S	O.R. procedure w principal diagnoses of mental illness	876	Include all
M	Acute adjustment reaction & psychosocial dysfunction	880	Include all
М	Depressive neuroses	881	Include all
М	Neuroses except depressive	882	Include all
М	Disorders of personality & impulse control	883	Include all
M	Organic disturbances & mental retardation	884	Include all
M	Psychoses	885	Include all
M	Behavioral & developmental disorders	886	Include all
M	Other mental disorder diagnoses	887	Include all
	Alcohol/drug abuse or dependence w rehabilitation	895	Include all
M	therapy	896	Include all
	· •	897	Include all
_	Monadal March	901	Include all
S	Wound debridements for injuries	902	Include all
		903	Include all
S	Skin grafts for injuries	904	Include all
_	5	905	Include all

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
S	Hand procedures for injuries	906	Include all
		907	Include all
S	Other O.R. procedures for injuries	908	Include all
	,	909	Include all
M	Traumatic injury	913	Include all
IVI	Traumatic injury	914	Include all
М	Allergic reactions	915	Include all
IVI	Allergic reactions	916	Include all
M	Poisoning & toxic effects of drugs	917	Include all
IVI	1 olsoning & toxic ellects of drugs	918	Include all
		919	Include all
M	Complications of treatment	920	Include all
		921	Include all
М	Other injury, poisoning & toxic effect diag	922	Include all
	7 7 7	923	Include all
S	Extensive burns or full thickness burns w MV 96+ hrs w skin graft	927	Include all
S	Full thickness burn w skin graft or inhal inj	928	Include all
		929	Include all
М	Extensive burns or full thickness burns w MV 96+ hrs w/o skin graft	933	Include all
M	Full thickness burn w/o skin grft or inhal inj	934	Include all
M	Non-extensive burns	935	Include all
	O.R. proc w diagnoses of other contact w health services	939	Include all
S		940	Include all
	COLVIDOO	941	Include all
М	Rehabilitation	945	Include all
	Trondom date.	946	Include all
М	Signs & symptoms	947	Include all
	- G.g. G. G. G. M. P. G. M. G.	948	Include all
M	Aftercare	949	Include all
	Other forters influencing beauty	950	Include all
M S	Other factors influencing health status	951	Include all
<u> </u>	Craniotomy for multiple significant trauma	955	Include all
S	Limb reattachment, hip & femur proc for multiple significant trauma	956	Include all
	Other O.R. procedures for multiple significant trauma	957	Include all
S		958	Include all
		959	Include all
l		963	Include all
М	Other multiple significant trauma	964	Include all
		965	Include all
S	HIV w extensive O.R. procedure	969	Include all
	<u>'</u>	970	Include all
N 4	1107	974	Include all
M	HIV w major related condition	975	Include all
N 4	LIV/w or w/o other related condition	976	Include all
M	HIV w or w/o other related condition	977	Include all

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
	Fytensiya O.B. wassadyya yayalatad ta minsinal	981	Include all
S	Extensive O.R. procedure unrelated to principal	982	Include all
	diagnosis	983	Include all
S	Prostatic O.R. procedure unrelated to principal diagnosis	984	Include all
		985	Include all
		986	Include all
	Non-extensive O.R. proc unrelated to principal diagnosis	987	Include all
S		988	Include all
		989	Include all

Gynecology

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
S	Pelvic evisceration, rad hysterectomy & rad	734	Include all
	vulvectomy	735	Include all
	Uterine & adnexa proc for ovarian or adnexal	736	Include all
S	malignancy	737	Include all
		738	Include all
		739	Include all
S	Uterine,adnexa proc for non-ovarian/adnexal malig	740	Include all
		741	Include all
S	Uterine & adnexa proc for non-malignancy	742	Include all
S		743	Include all
S	Vertex and 0 decreased an	746	Include all
8	Vagina, cervix & vulva procedures	747	Include all
S	Other female remaduative eveters O.B. massedures	749	Include all
8	Other female reproductive system O.R. procedures	750	Include all
	Malignancy, female reproductive system	754	Include all
М		755	Include all
		756	Include all
	Infections, female reproductive system	757	Include all
М		758	Include all
		759	Include all
	Menstrual & other female reproductive system	760	Include all
М	disorders	761	Include all

Nephrology

DRG Title	MS- DRG	ICD-10
Simultaneous pancreas/kidney transplant	008	Include all
Kidney transplant	652	Include all
		Include all
Major bladder procedures		Include all
Kidney & ureter procedures for neoplasm	655	Include all Include procedures: 410093, 410094, 410095, 410493, 410494, 410495, 04100A3, 04100A4, 04100A5, 04100A3, 04100A4, 04100A5, 04100A3, 04100A4, 04100A5, 04100Z4, 04100Z4, 0410A5, 0410A3, 0410A4A, 0410A45, 0410A43, 0410A4A, 0410A45, 0410A43, 0410A44, 0410A45, 0410A45, 0450A22, 04SA3ZZ, 04SA4ZZ, 06S90ZZ, 06S93ZZ, 06S9AZZ, 06SB0ZZ, 06SB3ZZ, 06SBAZZ, 0713073, 0713074, 0713076, 0713077, 0713078, 0713079, 0713073, 0713074, 07130J9, 07130J3, 07130J4, 07130J9, 07130J3, 07130J2, 07130J9, 07130J3, 07130Z4, 07130Z6, 07130Z7, 07130Z8, 07130Z9, 07130ZA, 07130Z4, 07130Z6, 07130Z7, 07133Z8, 0713474, 0713476, 0713477, 0713478, 0713479, 0713473, 0713474, 0713476, 0713473, 07134J3, 07134J4, 07134J3, 07134J4, 07134J3, 07134J4, 07134J3, 07134J4, 07134J3, 07134J4, 07134J3, 07134K3, 07134K3, 07134K4, 07134K6, 07134K7, 07134Z4, 07134Z6, 07134Z7, 07134Z8, 07134Z9, 07134ZA, 07134Z4, 07134Z6, 07134Z7, 07134Z8, 07134Z9, 07140J3, 07140J4, 07140J6, 07140J7, 07140J8, 07140J9, 07140J3, 07140J4, 07140J6, 07140J7, 07140J8, 07140J9, 07140J3, 07140J4, 07140J6, 07140J7, 07140J8, 07140J9, 07140J4, 07140Z6, 07140Z6, 07140Z7, 07140Z8, 07140Z9, 07140Z3, 07140Z4, 07140Z6, 07140Z7, 07140Z8, 07144Z7, 07144Z8, 07144Z6, 07144Z6, 07144Z7, 07144Z8, 07144Z6, 07144Z6, 07144Z7, 07144Z8, 07144Z6, 07144Z7, 07144Z8, 07144Z6, 07144Z6, 07144Z7, 07144Z8, 07144Z6, 07144Z6, 07144Z7, 07144Z8, 07144Z6, 07144Z6, 07144Z7, 07144Z8, 07144Z6, 07144Z6, 07144Z7, 0714ZZ, 0754ZZ, 0759ZZ, 0759ZZ
	Simultaneous pancreas/kidney transplant Kidney transplant Major bladder procedures	Simultaneous pancreas/kidney transplant 008 Kidney transplant 652 653 Major bladder procedures 655

Nephrology (cont.)

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
S	Kidney & ureter procedures for neoplasm (cont.)	656 (cont.)	OTB48ZZ, OTC00ZZ, OTC03ZZ, OTC04ZZ, OTC07ZZ, OTC08ZZ, OTC10ZZ, OTC13ZZ, OTC14ZZ, OTC14ZZ, OTC17ZZ, OTC18ZZ, OTC33ZZ, OTC33ZZ, OTC44ZZ, OTC44ZZ, OTC18ZZ, OTD00ZZ, OTD03ZZ, OTD03ZZ, OTD04ZZ, OTD13ZZ, OTD14ZZ, OTD14ZZ, OTD14ZZ, OTB153ZZ, OTF54ZZ, OTF43ZZ, OTF44ZZ, OTF44ZZ, OTF44ZZ, OTH502Z, OTL30ZZ, OTH50YZ, OTH53ZZ, OTH58YZ, OTH58YZ, OTH58ZZ, OTH58ZZ, OTH58ZZ, OTL34DZ, OTL30ZZ, OTL33DZ, OTL33DZ, OTL33ZZ, OTL34DZ, OTL34DZ, OTL34DZ, OTL34DZ, OTL37ZZ, OTL34DZ, OTL34DZ, OTL37ZZ, OTL34DZ, OTL34DZ, OTL44DZ, OTL4DZ, OTL47DZ, OTL47DZ, OTL47DZ, OTL47DZ, OTL44DZ, OTL44DZ, OTM02Z, OTM14ZZ, OTM02Z, OTM14ZZ, OTM02Z, OTM04ZZ, OTM14ZZ, OTM02Z, OTM50ZZ, OTP50DZ, OTP50DZ, OTP50DZ, OTP50ZZ, OTP53ZZ, OTP53ZZ, OTP53ZZ, OTP53ZZ, OTP53ZZ, OTP53ZZ, OTP53ZZ, OTP58ZZ, OTQ03ZZ, OTQ3ZZ, OTQ3

Nephrology (cont.)

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
S	Kidney & ureter procedures for non-neoplasm	659 660	See MS-DRG 656 See MS-DRG 656
	Kidney & ureter procedures for non-neoplasm Other kidney & urinary tract procedures	659	See MS-DRG 656 See MS-DRG 656 See MS-DRG 656 Include procedures: 0373346, 0373356, 0373366, 0373376, 0373446, 0373456, 0373466, 0373456, 0377346, 0377346, 0377346, 0377366, 0377366, 0377366, 0377366, 0377366, 0377366, 0377366, 0377366, 0377366, 0379366, 0470356, 0470366, 0470376, 0471341, 0471346, 0471356, 0471366, 0471376, 0472341, 0472346, 0472356, 0472366, 0472376, 0473341, 0473346, 0473356, 0473376, 0473341, 0473346, 047356, 0474376, 0473376, 0474341, 0473346, 047356, 0474341, 0473346, 0475366, 0474341, 0475346, 0475366, 0476356, 0476356, 0476356, 0476366, 0476376, 0475364, 0476356, 0476366, 0476376, 0476341, 0477346, 0477356, 0476356, 0476356, 0476376, 0476341, 0477346, 0477366, 0477376, 0478341, 0478346, 0478356, 0478366, 0479376, 0373366, 0377366, 0377366, 0377366, 0378366, 0378366, 04793366, 0479376, 0373366, 0377366, 0378366, 04793366, 0470366, 0471366, 0473366, 0476366, 0
			03VS0ZZ, 03VS4ZZ, 03VT0ZZ, 03VT4ZZ, 03VU0ZZ, 03VU4 03VV0ZZ, 03VV4ZZ, 03VY0ZZ, 03VY4ZZ, 04590ZZ, 04593Z 04594ZZ, 045A0ZZ, 045A3ZZ, 045A4ZZ, 047034Z, 04703DZ 04703ZZ, 047134Z, 04713DZ, 04713ZZ, 047234Z, 04723DZ 04723ZZ, 047334Z, 04733DZ, 04733ZZ, 047434Z, 04743DZ 04743ZZ, 047534Z, 04753DZ, 04753ZZ, 047634Z, 04763DZ

Nephrology (cont.)

Medical/	DRG Title	MS-	ICD-10
Surgical	Other kidney & urinary tract procedures (cont.)	673 (cont.)	047H3ZZ, 047J34Z, 047J3DZ, 047J3ZZ, 047K041, 047K0D1, 047K0Z1, 047K341, 047K3D1, 047K3ZE, 047K3ZE, 047K3ZE, 047K441, 047K4D1, 047K3Z1, 047L3D1, 047L3D1, 047L3D1, 047L021, 047L3D1, 047L4D1, 047L0D1, 047L0Z1, 047L3D1, 047L3D1, 047L3D1, 047L3D1, 047L4D1, 047L4D1, 047L4D1, 047M0D1, 047M0Z1, 047M3D1, 047M3Z1, 047M3D1, 047M3Z1, 047M3Z1, 047M3D1, 047M3Z2, 04C10Z6, 04C10Z2, 04C13Z6, 04C13ZZ, 04C14Z6, 04C14ZZ, 04C20Z6, 04C20ZZ, 04C33Z6, 04C33ZZ, 04C34Z6, 04C34ZZ, 04C30Z6, 04C30ZZ, 04C33Z6, 04C33ZZ, 04C34Z6, 04C34ZZ, 04C30Z6, 04C30ZZ, 04C33Z6, 04C33ZZ, 04C34Z6, 04C34ZZ, 04C40Z6, 04C60ZZ, 04C63Z6, 04C53ZZ, 04C54Z6, 04C34ZZ, 04C60Z6, 04C60ZZ, 04C63Z6, 04C53ZZ, 04C54Z6, 04C34ZZ, 04C60Z6, 04C60ZZ, 04C33Z6, 04C53ZZ, 04C54Z6, 04C64ZZ, 04C60Z6, 04C60ZZ, 04C33Z6, 04C53ZZ, 04C54Z6, 04C64ZZ, 04C60Z6, 04C60ZZ, 04C33Z6, 04C33ZZ, 04C54Z6, 04C64ZZ, 04C60Z6, 04C60ZZ, 04C33Z6, 04C33ZZ, 04C54Z6, 04C64ZZ, 04C60Z6, 04C60ZZ, 04C33Z6, 04C33ZZ, 04C64Z6, 04C64ZZ, 04C60Z6, 04C80ZZ, 04C33Z6, 04C33ZZ, 04C64Z6, 04C64ZZ, 04C00Z6, 04C60ZZ, 04C3Z6, 04C3ZZ, 04C64Z6, 04C64ZZ, 04C026, 04C60ZZ, 04C3Z6, 04C3ZZ, 04C84Z6, 04C84ZZ, 04C026, 04C60ZZ, 04C03Z6, 04C3ZZ, 04C84Z6, 04C64ZZ, 04C026, 04C00ZZ, 04C03Z6, 04C3ZZ, 04C84Z6, 04C64ZZ, 04C026, 04C0ZZ, 04C03Z6, 04C63ZZ, 04C64Z6, 04C64ZZ, 04C026, 04C0ZZ, 04C03Z6, 04C63ZZ, 04C64Z6, 04C64ZZ, 04C026, 04C0ZZ, 04C03Z6, 04C63ZZ, 04C63ZC, 04C63ZZ, 04C63ZC, 04C63ZZ, 04C63ZZ, 04C64Z6, 04C64ZZ, 04C026, 04C0ZZ, 04C63Z6, 04C63ZZ, 04

Nephrology (cont.)

Surgical	DRG Title	MS- DRG	ICD-10
Ø	Other kidney & urinary tract procedures (cont.)	673 (cont.)	06UB4JZ, 06V00CZ, 06V00DZ, 06V00ZZ, 06V03CZ, 06V03DZ, 06V03ZZ, 06V04CZ, 06V04DZ, 06V04ZZ, 06V10ZZ, 06V14ZZ, 06V20ZZ, 06V24ZZ, 06V30ZZ, 06V34ZZ, 06V40ZZ, 06V44ZZ, 06V50ZZ, 06V54ZZ, 06V60ZZ, 06V64ZZ, 06V70ZZ, 06V74ZZ, 06V80ZZ, 06V84ZZ, 06V90ZZ, 06V94ZZ, 06VB0ZZ, 06VB4ZZ See MS-DRG 673
		675	See MS-DRG 673
		682	Include all
М	Renal failure	683	Include all
		684	Include all
M	Kidney & urinary tract neoplasms	686 687 688	Include diagnoses: C64.1, C64.2, C64.9, C65.1, C65.2, C65.9, C79.00, C79.01, C79.02, C7A.093, D30.00, D30.01, D30.02, D30.10, D30.11, D30.12, D3A.093 See MS-DRG 686 See MS-DRG 686
		000	
М	Kidney & urinary tract infections	689 695	Include diagnoses: A18.11, A52.75, A98.5, N10, N11.0, N11.8, N11.9, N12, N13.6, N15.1, N28.84, N28.85, N28.86 Include all
М	Other kidney & urinary tract diagnoses	698 699 700	Include diagnoses: E08.21, E08.22, E08.29, E09.21, E09.22, E09.29, E10.21, E10.22, E10.29, E11.21, E11.22, E11.29, E13.21, E13.22, E13.29, I70.1, I72.2, I75.81, I77.73, I82.3, M10.30, M10.311, M10.312, M10.319, M10.321, M10.322, M10.329, M10.331, M10.332, M10.339, M10.341, M10.342, M10.349, M10.351, M10.352, M10.359, M10.361, M10.362, M10.369, M10.371, M10.372, M10.379, M10.38, M10.39, N00.0, N00.1, N00.2, N00.3, N00.4, N00.5, N00.6, N00.7, N00.8, N00.9, N01.0, N01.1, N01.2, N01.3, N01.4, N01.5, N01.6, N01.7, N01.8, N01.9, N02.0, N02.1, N02.2, N02.3, N02.4, N02.5, N02.6, N02.7, N02.8, N02.9, N03.0, N03.1, N03.2, N03.3, N03.4, N03.5, N03.6, N03.7, N03.8, N03.9, N04.0, N04.1, N04.2, N04.3, N04.4, N04.5, N04.6, N04.7, N04.8, N04.9, N05.0, N05.1, N05.2, N05.3, N05.4, N05.5, N05.6, N05.7, N05.8, N05.9, N06.0, N06.1, N06.2, N06.3, N06.4, N06.5, N06.6, N06.7, N06.8, N06.9, N07.0, N07.1, N07.2, N07.3, N07.4, N07.5, N07.6, N07.7, N07.8, N07.9, N08, N14.0, N14.1, N14.2, N14.3, N14.4, N15.0, N15.8, N15.9, N16, N25.0, N25.1, N25.81, N25.89, N25.9, N26.1, N26.9, N27.0, N27.1, N27.9, N28.0, N28.1, N28.81, N28.83, N28.9, N29, R80.2, S37.001A, S37.002A, S37.009A, S37.011A, S37.012A, S37.019A, S37.021A, S37.022A, S37.029A, S37.031A, S37.032A, S37.039A, S37.041A, S37.042A, S37.049A, S37.059A, S37.061A, S37.062A, S37.069A, S37.091A, S37.092A, S37.099A, Z52.4, Z94.0 See MS-DRG 698

Neurology & Neurosurgery

Surgical DRG DRG	
022 Include all	
S Cranio w major dev impl/acute complex CNS PDX 023 Include all	
S Cranio w major dev impl/acute complex CNS PDX 024 Include all	
025 Include all	
S Craniotomy & endovascular intracranial procedures 026 Include all	
027 Include all	
031 Include all	
S Ventricular shunt procedures 032 Include all	
033 Include all	
034 Include all	
S Carotid artery stent procedure 035 Include all	
036 Include all	
037 Include all	
S Extracranial procedures 038 Include all	
039 Include all	
040 Include all	
S Periph & cranial nerve & other nerv syst proc 041 Include all	
042 Include all	
M Spinal disorders & injuries 052 Include all	
U53 Include all	
M Nervous system neoplasms 054 Include all	
U55 Include all	
M Degenerative nervous system disorders 056 Include all	
US7 Include all	
M Multiple sclerosis & cerebellar ataxia 059 Include all	
060 Include all	
M Acute ischemic stroke w use of thrombolytic agent 061 Include all 062 Include all	
M Acute ischemic stroke w use of thrombolytic agent 062 Include all 063 Include all	
063 Include all	
M Intracranial hemorrhage or cerebral infarction 065 Include all	
066 Include all	
067 Include all	
M Nonspecific cva & precerebral occlusion w/o infarct 067 Include all	
M Transient ischemia 069 Include all	
070 Include all	
M Nonspecific cerebrovascular disorders 071 Include all	
073 Include all	
M Cranial & peripheral nerve disorders 074 Include all	
075 Include all	
M Viral meningitis 076 Include all	
077 Include all	
M Hypertensive encephalopathy 078 Include all	
079 Include all	
080 Include all	
M Nontraumatic stupor & coma 081 Include all	

Neurology & Neurosurgery (cont.)

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
		082	Include all
M	Traumatic stupor & coma, coma >1 hr	083	Include all
		084	Include all
		085	Include all
M	Traumatic stupor & coma, coma <1 hr	086	Include all
		087	Include all
		091	Include all
M	Other disorders of nervous system	092	Include all
		093	Include all
		094	Include all
M	Bacterial & tuberculous infections of nervous system	095	Include all
		096	Include all
	Non-hadarial infact of naryous ave ave viral	097	Include all
M	Non-bacterial infect of nervous sys exc viral meningitis	098	Include all
	memnyina	099	Include all
M	Seizures w MCC	100	Include all
S	Craniotomy for multiple significant trauma	955	Include all

Orthopedics

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
S	Spinal procedures	028	Exclude procedures: 001U074, 001U076, 001U077, 001U079, 001U0J4, 001U0J4, 001U0J6, 001U0J7, 001U0J9, 001U0K4, 001U0K6, 001U0K7, 001U0J9, 001U3T4, 001U3T9, 001U3J4, 001U3J4, 001U3J6, 001U3J7, 001U3J9, 001U3J4, 001U3J4, 001U3J4, 001U3J4, 001U3J4, 001U3K4, 001U3K6, 001U3K7, 001U3K9, 005T0ZZ, 005T3ZZ, 005T4ZZ, 005W0ZZ, 005W3ZZ, 005W4ZZ, 005W0ZZ, 005W3ZZ, 005W3ZZ, 005W3ZZ, 005W3ZZ, 005W3ZZ, 005W3ZZ, 005W3ZZ, 008W0ZZ, 008W3ZZ, 008W0ZZ, 008W0ZZ, 008W0ZZ, 009W0ZZ, 009W0ZZ, 009W0ZZ, 009W0ZZ, 009W0ZZ, 009U0ZZ, 009U0ZZ, 009U0ZZ, 009U0ZZ, 009U0ZZ, 009U0ZZ, 009W0ZZ, 009W4ZZ, 009W4ZZ, 009W0ZZ, 009W0ZZ, 009W0ZZ, 009W4ZZ, 009W4ZZ, 009W0ZZ, 009W0ZZ, 009W0ZZ, 009W4ZZ, 009W4ZZ, 00BT0ZZ, 00BT3ZX, 00BT3ZX, 00BT3ZX, 00BT3ZX, 00BT3ZX, 00BT3ZX, 00BW3ZZ, 00BW3ZZ, 00BW3ZZ, 00BW3ZZ, 00BW0ZZ, 00EW3ZZ, 0

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
S	Spinal procedures (cont.)	028 (cont.) 029 030	0RB13ZZ, 0RB14ZZ, 0RB40ZZ, 0RB43ZZ, 0RB44ZZ, 0RB60ZZ, 0RB63ZZ, 0RB64ZZ, 0RBA0ZZ, 0RBA3ZZ, 0RBA4ZZ, 0SB00ZZ, 0SB03ZZ, 0SB04ZZ, 0SB30ZZ, 0SB33ZZ, 0SB34ZZ, 0SB50ZZ, 0SB53ZZ, 0SB54ZZ, 0SB60ZZ, 0SB63ZZ, 0SB64ZZ, 0SB70ZZ, 0SB73ZZ, 0SB74ZZ, 0SB80ZZ, 0SB84ZZ See MS-DRG 028
S	Combined anterior/posterior spinal fusion	453 454 455	Include all Include all Include all
S	Spinal fus exc cerv w spinal curv/malig/infec or 9+ fus	456 457 458	Include all Include all
S	Spinal fusion except cervical	459 460	Include all
S	Bilateral or multiple major joint procs of lower extremity	461 462	Include all
S	Wound Debridement and Skin Graft Except Hand, for Musculo-Connective Tissue Disease	463 464 465	Include procedures: 0SP909Z, 0SP90JZ, 0SP93JZ, 0SP94JZ, 0SPA0JZ, 0SPA3JZ, 0SPA4JZ, 0SPB0JZ, 0SPB0JZ, 0SPB3JZ, 0SPB4JZ, 0SPB0JZ, 0SPB0JZ, 0SPB3JZ, 0SPB4JZ, 0SPC0JZ, 0SPC0JZ, 0SPC3JC, 0SPC3JZ, 0SPC4JZ, 0SPD0JZ, 0SPD0JZ, 0SPD3JZ, 0SPD4JC, 0SPD4JZ, 0SPE0JZ, 0SPE3JZ, 0SPE4JZ, 0SPR0JZ, 0SPR3JZ, 0SPR4JZ, 0SPS0JZ, 0SPS3JZ, 0SPS4JZ, 0SPT0JZ, 0SPT3JZ, 0SPT4JZ, 0SPU0JZ, 0SPU3JZ, 0SPU4JZ, 0SPW0JZ, 0SPW3JZ, 0SPW4JZ, 0SPW0JZ, 0SPW3JZ, 0SPW4JZ
S	Revision of hip or knee replacement	466 467 468	Include all Include all Include all
S	Major joint replacement or reattachment of lower extremity	469	Include all
S	Cervical spinal fusion	471 472 473	Include all Include all Include all
S	Hip & femur procedures except major joint	480 481 482	Include all Include all
S	Major joint & limb reattachment proc of upper extremity	483	Include all
S	Knee procedures w pdx of infection	485 486 487	Include all Include all
S	Lower extrem & humer proc except hip,foot,femur	492 493 494	Include all Include all

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
our groun		495	Include all
S	Local excision & removal int fix devices exc hip & femur	496	Include all
	lemur	497	Include all
S	Local excision & removal int fix devices of hip &	498	Include all
	femur	499	Include all
S	Soft tissue procedures	500	Include all
		501	Include all
	Factorial	503	Include all
S	Foot procedures	504	Include all
S	Major thumb or joint procedures	505 506	Include all
	Major thumb of joint procedures	507	Include all
S	Major shoulder or elbow joint procedures	508	Include all
S	Other musculoskelet sys & conn tiss O.R. proc	515	Include procedures: 0MM00ZZ, 0MM04ZZ, 0MM10ZZ, 0MM14ZZ, 0MM20ZZ, 0MM24ZZ, 0MM30ZZ, 0MM34ZZ, 0MM34ZZ, 0MM40ZZ, 0MM40ZZ, 0MM40ZZ, 0MM40ZZ, 0MM60ZZ, 0MM64ZZ, 0MM60ZZ, 0MM64ZZ, 0MM90ZZ, 0MM94ZZ, 0MM80ZZ, 0MM84ZZ, 0MM60ZZ, 0MM90ZZ, 0MM94ZZ, 0MMD4ZZ, 0MMF0ZZ, 0MMF4ZZ, 0MMC4ZZ, 0MMC4ZZ, 0MMC4ZZ, 0MMC4ZZ, 0MMC4ZZ, 0MMC4ZZ, 0MMC4ZZ, 0MMC4ZZ, 0MMC6ZZ, 0MMM6ZZ, 0MMC6ZZ, 0

Medical/	DRG Title	MS-	ICD-10
Surgical	DRG TILLE	DRG	
S	Other musculoskelet sys & conn tiss O.R. proc (cont.)	515 (cont.)	OMUGOKZ, OMUG47Z, OMUG4JZ, OMUG4KZ, OMUHOTZ, OMUHOJZ, OMUHOKZ, OMUHOYZ, OMUHAJZ, OMUHAKZ, OMUJOZ, OMUJOZ, OMUJOZ, OMUKOKZ, OMUKATZ, OMUJAZ, OMUKATZ, OMUJAZ, OMUKAZ, OMUMOKZ, OMUMOKZ, OMUMOKZ, OMUMOKZ, OMUMAZ, OMUNAKZ, OMUNAZ, OMUNAKZ, OMUNAZ, OMUNAKZ, OMUNAZ, OMUNAKZ, OMUPOZ, OMUPAZ, OMURAZ, OMBGOZ, ONBG3ZZ, ONBGAZZ, ONBGAZZ, ONBGAZZ, ONBHAZZ, ONBRAZZ, ONRGAZZ, O

Medical/	DRG Title	MS-	ICD 10
Surgical	DRG Title	DRG	ICD-10
S	Other musculoskelet sys & conn tiss O.R. proc (cont.)	515 (cont.)	ONUV4KZ, ONUX07Z, ONUX0, ONUX3, JZ, ONUX4, JZ, OP800ZZ, OP803ZZ, OP804ZZ, OP810ZZ, OP813ZZ, OP814ZZ, OP80ZZ, OP83ZZ, OP843ZZ, OP824ZZ, OP80ZZ, OP83ZZ, OP83ZZ, OP845ZZ, OP840ZZ, OP863ZZ, OP843ZZ, OP860ZZ, OP863ZZ, OP863ZZ, OP863ZZ, OP860ZZ, OP863ZZ, OP863ZZ, OP863ZZ, OP860ZZ, OP863ZZ, OP863ZZ, OP868ZZ, OP883ZZ, OP884ZZ, OP80ZZ, OP873ZZ, OP874ZZ, OP80ZZ, OP883ZZ, OP88BZZ, OP88DZZ, OP870ZZ, OP873ZZ, OP874ZZ, OP880ZZ, OP883ZZ, OP884ZZ, OP80ZZ, OP873ZZ, OP874ZZ, OP880ZZ, OP883ZZ, OP884ZZ, OP870ZZ, OP873ZZ, OP874ZZ, OP880ZZ, OP83ZZ, OP874ZZ, OP80ZZ, OP83ZZ, OP878ZZ, OP860ZZ, OP83ZZ, OP86ZZ, OP860ZZ, OP83ZZ, OP878ZZ, OP878ZZ, OP872Z, OP872Z

Medical/	DRG Title	MS-	ICD 10
Surgical	DRG Title	DRG	ICD-10
\wp	Other musculoskelet sys & conn tiss O.R. proc (cont.)	515 (cont.)	OPQ94ZZ, OPQBOZZ, OPQB3ZZ, OPQB4ZZ, OPQROZZ, OPQR3ZZ, OPQR3ZZ, OPQR3ZZ, OPQR3ZZ, OPQR3ZZ, OPQR3ZZ, OPQR3ZZ, OPQT3ZZ, OPQT4ZZ, OPQV0ZZ, OPQV3ZZ, OPQV0ZZ, OPQV3ZZ, OPQV0ZZ, OPROJZ, OPRIJZ, OPROJZ, OPUJZ,

Medical/	DRG Title	MS-	TCD-10
Surgical	DRG TITLE	DRG	ICD-10
S	Other musculoskelet sys & conn tiss O.R. proc (cont.)	515 (cont.)	OPU84KZ, OPU907Z, OPU90JZ, OPU90KZ, OPU937Z, OPU93JZ, OPU93KZ, OPU947Z, OPU80JZ, OPUB3KZ, OPUB07Z, OPUB3KZ, OPUB3KZ, OPUB3KZ, OPUB3KZ, OPUB3KZ, OPUB3KZ, OPUB3KZ, OPUB3KZ, OPUB3KZ, OPUR3KZ, OPUS3KZ, OPU73KZ, OPU74KZ, OPU74KZ, OPU70KZ, OPU

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
S	Other musculoskelet sys & conn tiss O.R. proc (cont.)	515 (cont.)	OQR13KZ, 0QR14YZ, 0QR14JZ, 0QR14KZ, 0QR207Z, 0QR20JZ, 0QR20KZ, 0QR23TZ, 0QR23JZ, 0QR23KZ, 0QR24YZ, 0QR24JZ, 0QR24YZ, 0QR23JZ, 0QR30JZ, 0QR30KZ, 0QR33TZ, 0QR33TZ, 0QR33KZ, 0QR30KZ, 0QR34YZ, 0QR40JZ, 0QR40KZ, 0QR40JZ, 0QR40JZ, 0QR40JZ, 0QR44YZ, 0QR44JZ, 0QR44YZ, 0QR44YZ, 0QR44YZ, 0QR44YZ, 0QR44YZ, 0QR44YZ, 0QR50YZ, 0QR50KZ, 0QR53TZ, 0QR53JZ, 0QR53KZ, 0QR53KZ, 0QR53Z, 0QR53JZ, 0QR53JZ, 0QR63KZ, 0QR64XZ, 0QRQ07Z, 0QRQ0JZ, 0QRQ0KZ, 0QRQ3Z, 0QRQ3JZ, 0QRQ3JZ, 0QRQ0JZ, 0QRQ0KZ, 0QRG3Z, 0QRG3JZ, 0QRG3JZ, 0QRG0KZ, 0QRG0KZ, 0QRG3Z, 0QRG3JZ, 0QRG0JZ, 0QRG0KZ, 0QRG0JZ, 0QRG0JZ, 0QRG0JZ, 0QRG0JZ, 0QRG0JZ, 0QRG0JZ, 0QRG0JZ, 0QRG0JZ, 0QRS0JZ, 0QRS0JZ

Medical/	DRG Title	MS-	ICD-10
Surgical	DRG TILLE	DRG	
S	Other musculoskelet sys & conn tiss O.R. proc (cont.)	515 (cont.)	ORGDOKZ, ORGDOZZ, ORGD34Z, ORGD37Z, ORGD3JZ, ORGDSKZ, ORGD3ZZ, ORGD44Z, ORGD47Z, ORGDJZ, ORGD4Z, ORGD4ZZ, ORH004Z, ORH034Z, ORH044Z, ORH04Z, ORH03Z, ORJ00ZZ, ORD00Z, ORP003Z, ORP003Z, ORP004Z, ORP007Z, ORP00AZ, ORP00AZ, ORP00AZ, ORP00AZ, ORP00AZ, ORP03Z, ORP04Z, ORP03Z, ORP04Z, ORP03Z, ORP04Z, ORP04Z, ORP04Z, ORP04Z, ORP04Z, ORP04Z, ORP10Z, ORP13Z, ORP13Z, ORP13Z, ORP13Z, ORP13Z, ORP13Z, ORP13Z, ORP3Z, ORQ3Z, ORP3Z, ORQ3Z, ORQ3ZZ, ORQ3Z

Medical/	DRG Title	MS-	ICD-10
Surgical	DRG TILLE	DRG	
O	Other musculoskelet sys & conn tiss O.R. proc (cont.)	515 (cont.)	ORU64KZ, ORUAO7Z, ORUAOKZ, ORUA37Z, ORUA3KZ, ORUA47Z, ORUAKAKZ, ORUCO7Z, ORUCOJZ, ORUCOKZ, ORUC37Z, ORUC3JZ, ORUCSXZ, ORUC47Z, ORUCAJZ, ORUCAYZ, ORUCAYZ, ORUCAYZ, ORUDAYZ, ORUDAYZ, ORUDAYZ, ORUDAYZ, ORUDAYZ, ORUDAYZ, ORUDAYZ, ORUDAYZ, ORWO03Z, ORW003Z, ORW03Z, ORW003Z, ORW004Z, ORW004Z, ORW00Z, ORW003Z, ORW04Z, ORW04Z, ORW04Z, ORW04Z, ORW100Z, ORW103Z, ORW104Z, ORW103Z, ORW104Z, ORW103Z, ORW104Z, ORW103Z, ORW104Z, ORW103Z, ORW103Z, ORW104Z, ORW103Z, ORW103Z, ORW13Z, ORW14Z, ORW14Z, ORW14Z, ORW14Z, ORW14Z, ORW14Z, ORW14Z, ORW14Z, ORW30Z, ORW30Z, ORW30Z, ORW30Z, ORW30Z, ORW33Z, ORW43Z, ORW44Z, ORW43Z, ORW43Z, ORW53Z, ORW53Z, ORW53Z, ORW53Z, ORW53Z, ORW53Z, ORW55Z, ORW53Z, ORW55Z, ORW53Z, ORW53Z, ORW55Z, ORW53Z, ORW53Z, ORW53Z, ORW53Z, ORW53Z, ORW53Z, ORW53Z, ORW53Z, ORW63Z, OR

Medical/	DDC Title	MS-	TCD 10
Surgical	DRG Title	DRG	ICD-10
ω	Other musculoskelet sys & conn tiss O.R. proc (cont.)	515 (cont.)	0SC30ZZ, 0SC33ZZ, 0SC34ZZ, 0SC40ZZ, 0SC43ZZ, 0SC64ZZ, 0SC64ZZ, 0SC63ZZ, 0SC84ZZ, 0SH004Z, 0SH034Z, 0SH044Z, 0SH304Z, 0SH334Z, 0SH344Z, 0SH004Z, 0SH534Z, 0SH544Z, 0SH304Z, 0SH634Z, 0SH644Z, 0SH504Z, 0SH534Z, 0SH544Z, 0SH604Z, 0SH63AZ, 0SH644Z, 0SH02Z, 0SJ20ZZ, 0SJ30ZZ, 0SJ40ZZ, 0SJ50ZZ, 0SJ60ZZ, 0SJ00ZZ, 0SJ20ZZ, 0SJ30ZZ, 0SP004Z, 0SP004Z, 0SP004Z, 0SP004Z, 0SP003Z, 0SP004Z, 0SP004Z, 0SP004Z, 0SP03Z, 0SP004Z, 0SP04Z, 0SP23Z, 0SP20Z, 0SP30Z, 0SP40Z, 0SP40Z, 0SP40Z, 0SP40Z, 0SP40Z, 0SP40Z, 0SP40Z, 0SP50Z, 0SQ0ZZ, 0SR0ZZ, 0SR0ZZ, 0SR0ZZ, 0SR0ZZ, 0SR0ZZ, 0SR0ZZ, 0SR0ZZ, 0

Medical/	DRG Title	MS-	ICD-10
Surgical	DRG TITLE	DRG	
S	Other musculoskelet sys & conn tiss O.R. proc (cont.)	515 (cont.)	OSUB3JZ, OSUB3KZ, OSUB47Z, OSUB4JZ, OSUB4KZ, OSUCO7Z, OSUCO9C, OSUCO9Z, OSUCOJZ, OSUCOKZ, OSUCO7Z, OSUCO9Z, OSUCOJZ, OSUCOKZ, OSUCA7Z, OSUCA4JZ, OSUCAKZ, OSUCAYZ, OSUCAYZ, OSUCAKZ, OSUDO9Z, OSUDOJZ, OSUDOKZ, OSUDOKZ, OSUDOSZ, OSUDOSZ, OSUDOJZ, OSUDOKZ, OSUDOKZ, OSUDAYZ, OSUDAKZ, OSUDAYZ, OSUDAJZ, OSUDAYZ, OSUDAJZ, OSUDAYZ, OSUDAJZ, OSUDAKZ, OSUDAYZ, OSUFOKZ, OSUFAYZ, OSUFAKZ, OSUFAYZ, OSUFAKZ, OSUFAYZ, OSUFAKZ, OSUFAKZ, OSUGOKZ, OSUGOKZ, OSUGAYZ, OSUGAKZ, OSUJAJZ, OSUJAKZ, OSUJAJZ, OSUJAKZ, OSUJAJZ, OSUJAKZ, OSUJAJZ, OSUJAKZ, OSUJAJZ, OSUJAKZ, OSUJAJZ, OSUJAKZ, OSUJAZ, OSUJAKZ, OSUJAZ, OSUJAKZ, OSUKAYZ, OSUKAJZ, OSUKAYZ, OSUKAJZ, OSUKAJZ, OSUKAJZ, OSUKAZ, OSUMAZ, OSUMAZ, OSUMAZ, OSUMAZ, OSUMAZ, OSUMAZ, OSUMAZ, OSUMAZ, OSUNAZ, OSUNAZ, OSUNAZ, OSUNAZ, OSUNAZ, OSUNAZ, OSUPAZ, OSUCOKZ, OSUQAZ, OSUCOKZ, OSUQAZ, OSUCOKZ, OSUQAZ, OSUCOKZ, OSWOOZ, OSWOO

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
S	Other musculoskelet sys & conn tiss O.R. proc (cont.)	515 (cont.)	0W040KZ, 0W040ZZ, 0W0437Z, 0W043JZ, 0W043KZ, 0W043ZZ, 0W0447Z, 0W044JZ, 0W0507Z, 0W050JZ, 0W050KZ, 0W050ZZ, 0W0537Z, 0W053JZ, 0W053JZ, 0W054JZ, 0W054KZ, 0W054ZZ, 0W054KZ, 0W040YZ, 0WU40JZ, 0WU40KZ, 0WU447Z, 0WU44JZ, 0WU44ZZ, 0WU50ZZ, 0WU50KZ, 0WU54ZZ, 0WU54ZZ, 0WU54ZZ, 0YM20ZZ, 0YM30ZZ, 0YM40ZZ, 0YM50ZZ, 0YM60ZZ, 0YM90ZZ, 0YMB0ZZ
		516	See MS-DRG 515 See MS-DRG 515
		518	Include all
S	Back & Neck Procedures Except Spinal Fusion	519	Include all
		520	Include all
М	Fractures of femur	533	Include all
IVI	1 radiates of formal	534	Include all
М	Fractures of hip & pelvis	535	Include all
	r - r -	536	Include all
М	Osteomyelitis	539 540	Include all
IVI	Osteomyenus	541	Include all

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
M	Pathological fractures & musculoskelet & conn tiss malig	542 543 544	Include diagnoses: M48.40XA, M48.41XA, M48.42XA, M48.43XA, M48.44XA, M48.45XA, M48.46XA, M48.47XA, M48.43XA, M48.50XA, M48.51XA, M48.52XA, M48.53XA, M48.54XA, M48.50XA, M48.51XA, M48.57XA, M48.53XA, M48.54XA, M48.55XA, M48.50XA, M48.57XA, M48.58XA, M80.00XA, M80.011A, M80.012A, M80.012A, M80.021A, M80.022A, M80.029A, M80.031A, M80.032A, M80.039A, M80.041A, M80.042A, M80.049A, M80.051A, M80.052A, M80.059A, M80.079A, M80.08XA, M80.80XA, M80.811A, M80.812A, M80.819A, M80.821A, M80.822A, M80.829A, M80.831A, M80.831A, M80.832A, M80.839A, M80.841A, M80.842A, M80.849A, M80.851A, M80.852A, M80.859A, M80.861A, M80.862A, M80.869A, M80.871A, M80.872A, M80.879A, M80.88XA, M84.30XA, M84.311A, M84.312A, M84.319A, M84.333A, M84.334A, M84.339A, M84.341A, M84.342A, M84.353A, M84.351A, M84.351A, M84.351A, M84.354A, M84.354A, M84.351A, M84.351A, M84.352A, M84.353A, M84.354A, M84.361A, M84.371A, M84.377A, M84.372A, M84.379A, M84.377A, M84.377A, M84.471A, M84.472A, M84.474A, M84.474A, M84.474A, M84.475A, M84.575A, M84.575A, M84.575A, M84.575A, M84.575A, M84.575A, M84.575A, M84.575A, M84.575A, M84.475A, M84.552A, M84.551A, M84.552A, M84.553A, M84.551A, M84.552A, M84.553A, M84.554A, M84.553A, M84.554A, M84.555A, M84.554A, M84.555A, M84.554A, M84.554
S	Limb reattachment, hip & femur proc for multiple significant trauma	956	Include all

Pulmonology & Lung Surgery

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
S	ECMO or trach w MV 96+ hrs or PDX exc face, mouth & neck w maj O.R.	003	Include all
S	Trach w MV 96+ hrs or PDX exc face, mouth & neck w/o maj O.R.	004	Include all
S	Lung transplant	007	Include all
S	Major chest procedures	163	Include procedures: 02JA0ZZ, 02JY0ZZ, 0B530ZZ, 0B533ZZ, 0B537ZZ, 0B538ZZ, 0B540ZZ, 0B543ZZ, 0B547ZZ, 0B548ZZ, 0B550ZZ, 0B553ZZ, 0B567ZZ, 0B568ZZ, 0B567ZZ, 0B568ZZ, 0B567ZZ, 0B568ZZ, 0B567ZZ, 0B568ZZ, 0B588ZZ, 0B587ZZ, 0B588ZZ, 0B590ZZ, 0B593ZZ, 0B59ZZ, 0B59ZZ, 0B588ZZ, 0B59ZZ, 0B58BZZ, 0B59ZZ, 0B58BZZ, 0B59ZZ, 0B58BZZ, 0B59ZZ, 0B56ZZ, 0B57ZZ, 0B5H0ZZ, 0B5H3ZZ, 0B5H7ZZ, 0B5H7ZZ, 0B5H0ZZ, 0B5H3ZZ, 0B5H7ZZ, 0B5H7ZZ, 0B5H0ZZ, 0B5H3ZZ, 0B5H7ZZ, 0B5M0ZZ, 0B5MZZ, 0B930Z, 0B930Z, 0B930Z, 0B933ZZ, 0B934ZZ, 0B940Z, 0B934ZZ, 0B930Z, 0B93ZZ, 0B930Z, 0B93ZZ, 0B940Z, 0B94ZZ, 0B940Z, 0B94ZZ, 0B940Z, 0B94ZZ, 0B94ZZ, 0B94ZZ, 0B94ZZ, 0B94ZZ, 0B94ZZ, 0B94ZZ, 0B94ZZ, 0B950ZZ, 0B950ZZ, 0B950ZZ, 0B950ZZ, 0B950ZZ, 0B950ZZ, 0B96ZZ, 0B98ZZ, 0B9BZZ, 0BBZZ, 0B

Medical/		MS-	
Surgical	DRG Title	DRG	ICD-10
S	Major chest procedures (cont.)	163 (cont.)	BBC74ZZ, 0BC80ZZ, 0BC83ZZ, 0BC84ZZ, 0BC90ZZ, 0BC93ZZ, 0BC94ZZ, 0BCBCDZZ, 0BCB3ZZ, 0BCB4ZZ, 0BCC0ZZ, 0BCC3ZZ, 0BCC63ZZ, 0BCC4ZZ, 0BCCDZZ, 0BCD3ZZ, 0BCD3ZZ, 0BCDAZZ, 0BCD7ZZ, 0BCD3ZZ, 0BCD6ZZ, 0BC67ZZ, 0BCD7ZZ, 0BCD6ZZ, 0BC63ZZ, 0BC64ZZ, 0BC67ZZ, 0BC68ZZ, 0BCH0ZZ, 0BCG3ZZ, 0BCH4ZZ, 0BCH7ZZ, 0BCBC8ZZ, 0BCH0ZZ, 0BCH3ZZ, 0BCH4ZZ, 0BCH7ZZ, 0BCBC8ZZ, 0BCH0ZZ, 0BC3ZZ, 0BCH4ZZ, 0BCH7ZZ, 0BCBC3ZZ, 0BCM2Z, 0BCM3ZZ, 0BCM4ZZ, 0BCM7ZZ, 0BCM8ZZ, 0BCM3ZZ, 0BCM4ZZ, 0BCM7ZZ, 0BCM8ZZ, 0BCM3ZZ, 0BCM3ZZ

Medical/	DDC Title	MS-	TCD 10
Surgical	DRG Title	DRG	ICD-10
S	Major chest procedures (cont.)	163 (cont.)	DBM90ZZ, OBMBOZZ, OBMCOZZ, OBMDOZZ, OBMFOZZ, OBMGOZZ, OBMHOZZ, OBMJOZZ, OBMSJZZ, OBNSJZZ, OBNSSZZ, OBNSZZ, OBPOJZ, OBQOJZZ, OBQOJZZ, OBQOJZZ, OBQOJZZ, OBQOJZZ, OBQOJZZ, OBQOJZZ, OBQOJ

Medical/	DDG 7"1	MS-	TOP 10
Surgical	DRG Title	DRG	ICD-10
Surgical	Major chest procedures (cont.)	163 (cont.)	0BQM8ZZ, 0BQN0ZZ, 0BQN3ZZ, 0BQN4ZZ, 0BQP0ZZ, 0BQP3ZZ, 0BQP4ZZ, 0BQT0ZZ, 0BQT3ZZ, 0BQT4ZZ, 0BQT0ZZ, 0BQT3ZZ, 0BQT4ZZ, 0BR10ZZ, 0BR10ZZ, 0BR10ZZ, 0BR10ZZ, 0BR10ZZ, 0BR20KZ, 0BR24TZ, 0BR34JZ, 0BR24KZ, 0BR307Z, 0BR30JZ, 0BR30KZ, 0BR34TZ, 0BR34JZ, 0BR34KZ, 0BR307Z, 0BR30JZ, 0BR30KZ, 0BR34TZ, 0BR34JZ, 0BR34KZ, 0BR50TZ, 0BR50KZ, 0BR60KZ, 0BR64Z, 0BR64Z, 0BR64Z, 0BR60TZ, 0BR60JZ, 0BR60KZ, 0BR67Z, 0BR64JZ, 0BR64KZ, 0BR60TZ, 0BR60JZ, 0BR60KZ, 0BR67Z, 0BR64Z, 0BR60TZ, 0BR80JZ, 0BR80KZ, 0BR74TZ, 0BR84JZ, 0BR74KZ, 0BR80TZ, 0BR80JZ, 0BR80KZ, 0BR87Z, 0BR84JZ, 0BR97Z, 0BR80JZ, 0BR80KZ, 0BR80TZ, 0BR80Z, 0BR90KZ, 0BR94TZ, 0BR84JZ, 0BR96KZ, 0BR80TZ, 0BR80Z, 0BR80ZZ, 0BS90ZZ, 0BS90ZZ, 0BS90ZZ, 0BS50ZZ, 0BS60ZZ, 0BS70ZZ, 0BS60ZZ, 0BS70ZZ, 0BS90ZZ, 0BS90ZZ, 0BS90ZZ, 0BS0ZZ, 0BS0ZZ, 0BS90ZZ, 0BS90ZZ, 0BS70ZZ, 0BS70ZZ, 0BS70ZZ, 0BS70ZZ, 0BT4ZZ, 0BT4ZZ, 0BT4ZZ, 0BT50ZZ, 0BT64ZZ, 0BT60ZZ, 0BT64ZZ, 0BT90ZZ, 0BT64ZZ, 0BT90ZZ, 0BT64ZZ, 0BT60ZZ, 0BT60ZZ, 0BT64ZZ, 0BT60ZZ, 0BU60ZZ, 0BV60ZZ, 0BV60ZZ, 0BV60ZZ, 0BV60ZZ, 0BV60ZZ, 0BV60ZZ, 0BV60ZZ, 0BV60ZZ,

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
S	Major chest procedures (cont.)	163 (cont.)	0BV68DZ, 0BV68ZZ, 0BV70CZ, 0BV70DZ, 0BV70ZZ, 0BV73CZ, 0BV73DZ, 0BV73DZ, 0BV73ZZ, 0BV74CZ, 0BV74DZ, 0BV74ZZ, 0BV77DZ, 0BV77ZZ, 0BV78DZ, 0BV78ZZ, 0BV80CZ, 0BV80DZ, 0BV80DZ, 0BV83CZ, 0BV83DZ, 0BV83DZ, 0BV83ZZ, 0BV84CZ, 0BV84DZ, 0BV84DZ, 0BV87DZ, 0BV87ZZ, 0BV88DZ, 0BV88DZ, 0BV84DZ, 0BV90CZ, 0BV90DZ, 0BV90ZZ, 0BV93CZ, 0BV93DZ, 0BV93ZZ, 0BV94CZ, 0BV94DZ, 0BV94DZ, 0BV94DZ, 0BV94DZ, 0BV94DZ, 0BVB0CZ, 0BVB0DZ, 0BVB0DZ, 0BVB3DZ, 0BVB3DZ, 0BVB3DZ, 0BVB3DZ, 0BVB3ZZ, 0BVB3DZ, 0BVB3ZZ, 0BVB3DZ, 0BVB3ZZ, 0BVB3DZ, 0BVB3DZ, 0BVB7ZZ, 0BVB3DZ, 0BW00ZZ, 0BW03DZ, 0BW00ZZ, 0BW03DZ, 0BWC0DZ, 0WUR0DZ, 0DC50ZZ, 0DQ53ZZ, 0DQ54ZZ, 0DQ57ZZ, 0DQ58ZZ, 0WJ80ZZ, 0WUR0DZ, 0WU
S	Other resp system O.R. procedures	166 167 168	Include all Include all
M	Pulmonary embolism	175 176	Include all Include all
М	Respiratory infections & inflammations	177 178 179	Exclude diagnoses: R76.11, R76.12 See MS-DRG 177 See MS-DRG 177
M	Respiratory neoplasms	180 181 182	Exclude diagnoses: D14.2, D14.30, D14.31, D14.32, D14.4, D15.2, D15.7, D15.9, D16.7, D19.0, D3A.090 See MS-DRG 180 See MS-DRG 180
M	Major chest trauma	183 184 185	Include all Include all
М	Pleural effusion	186 187	Include all
M	Pulmonary edema & respiratory failure	189	Include all

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
		190	Include all
M	Chronic obstructive pulmonary disease	191	Include all
		192	Include all
M	Simple angumenia & plauriey	193	Include all
IVI	Simple pneumonia & pleurisy	194	Include all
	Interstitial lung disease	196	Include all
M		197	Include all
		198	Include all
М	Pneumothorax	199	Exclude diagnoses: J95.811
IVI	rileumoutorax	200	See MS-DRG 199
M	Bronchitis & asthma	202	Include all
М	Respiratory system diagnosis w ventilator support	207	Include all
IVI	Respiratory system diagnosis w ventilator support	208	Include all
	Septicemia or severe sepsis w MV 96+ hours	870	Include all
M		871	Include all
		872	Include all

Urology

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
S	Major bladder procedures	653 654 655	Include all Include all
S	Kidney & ureter procedures for neoplasm	656	Include procedures: 0T1307B, 0T130JB, 0T130KB, 0T130ZB, 0T1347B, 0T134JB, 0T134KB, 0T134ZB, 0T1407B, 0T140JB, 0T140KB, 0T140ZB, 0T1447B, 0T144JB, 0T144KB, 0T144ZB, 0T16076, 0T16077, 0T16078, 0T16079, 0T1607A, 0T1607B, 0T1607C, 0T1607D, 0T160JG, 0T160J7, 0T160J8, 0T160J9, 0T160JA, 0T160JB, 0T160JC, 0T160JD, 0T160KG, 0T160K7, 0T160K8, 0T160K9, 0T160KA, 0T160KB, 0T160KC, 0T160KD, 0T160Z6, 0T160Z7, 0T160Z8, 0T160Z9, 0T160ZA, 0T160ZB, 0T160ZC, 0T160ZD, 0T163JD, 0T16476, 0T1647D, 0T16478, 0T16479, 0T1647A, 0T1647B, 0T1647C, 0T164JB, 0T164JC, 0T164JD, 0T164K6, 0T164K7, 0T164K8, 0T164K9, 0T164KA, 0T164KB, 0T164KC, 0T164KD, 0T164Z6, 0T164Z7, 0T164Z8, 0T164Z9, 0T164ZA, 0T164ZB, 0T164ZC, 0T164ZD, 0T17076, 0T17077, 0T17078, 0T17079, 0T1707A, 0T1707B, 0T1707C, 0T1707D, 0T170JC, 0T170JD, 0T170JA, 0T170K7, 0T170KB, 0T170ZC, 0T170ZP, 0T170ZB, 0T170ZC, 0T170ZD, 0T170ZB, 0T170ZC, 0T170ZD, 0T173JD, 0T17476, 0T1747A, 0T1747B, 0T1747C, 0T1747B, 0T1747A, 0T174JB, 0T174JC, 0T174JD, 0T174K6, 0T174KD, 0T174ZB, 0T1807C, 0T1807C, 0T1807B, 0

Urology (cont.)

Medical/	DDC Title	MS-	ICD 10
Surgical	DRG Title	DRG	ICD-10
S	Kidney & ureter procedures for neoplasm (cont.)	656 (cont.)	0T180JG, 0T180JJ, 0T180J8, 0T180J9, 0T180JA, 0T180JB, 0T180UC, 0T180JD, 0T180K6, 0T180KC, 0T180K3, 0T180K9, 0T180KA, 0T180KB, 0T180KC, 0T180KD, 0T180ZG, 0T180Z7, 0T180Z8, 0T180Z9, 0T180ZA, 0T180ZB, 0T180ZG, 0T180ZD, 0T183JD, 0T18476, 0T18477, 0T18478, 0T18479, 0T1847A, 0T1847B, 0T1847C, 0T1847D, 0T184JG, 0T184J7, 0T184JB, 0T184J9, 0T184JA, 0T184JB, 0T184JD, 0T184JD, 0T184JB, 0T184JB, 0T184JB, 0T184JB, 0T184JB, 0T184JB, 0T184JB, 0T184JB, 0T184JB, 0T184KB, 0T184KZ, 0T563ZZ, 0T563ZZ, 0T564ZZ, 0T567ZZ, 0T568ZZ, 0T563ZZ, 0T564ZZ, 0T567ZZ, 0T568ZZ, 0T760ZZ, 0T760ZZ, 0T760ZZ, 0T760ZZ, 0T770ZZ, 0T7780ZZ, 0T770ZZ, 0T773ZZ, 0T774ZZ, 0T7780ZZ, 0T790UZ, 0T900ZZ, 0T904UZ, 0T910UZ, 0T910ZZ, 0T914UZ, 0T930UZ, 0T930ZZ, 0T934UZ, 0T940UZ, 0T940ZZ, 0T970ZX, 0T970ZZ, 0T974ZZ, 0T964ZZ, 0T962ZZ, 0T970ZX, 0T970ZZ, 0T974ZZ, 0T984ZZ, 0T986ZZ, 0T970ZX, 0T970ZZ, 0T984ZZ, 0T986ZZ, 0TB63ZZ, 0TB64ZZ, 0TB63ZZ, 0TB60ZZ, 0TB60ZZ, 0TB63ZZ, 0TB73ZZ, 0TC60ZZ, 0TL63ZZ, 0TL64ZZ, 0TL74ZZ, 0TL74ZZ, 0TL77ZZ, 0TL77ZZ, 0TL77ZZ, 0TL78ZZ, 0TN63ZZ, 0TP93ZZ, 0TP93ZZ, 0TP93ZZ, 0TP93ZZ, 0TP93ZZ, 0TP93ZZ, 0TP93ZZ, 0

Urology (cont.)

Medical/ Surgical	DRG Title	MS- DRG	ICD-10
S	Kidney & ureter procedures for neoplasm (cont.)	656 (cont.)	OTW943Z, OTW947Z, OTW94CZ, OTW94DZ, OTW94JZ, OTW94KZ, OTW94MZ, OTW970Z, OTW972Z, OTW973Z, OTW977Z, OTW977Z, OTW97DZ, OTW97DZ, OTW97JZ, OTW97KZ, OTW97MZ, OTW980Z, OTW982Z, OTW983Z, OTW987Z, OTW98CZ, OTW98DZ, OTW98JZ, OTW98KZ, OTW98MZ,OTW98YZ, OWBH0ZZ, OWBH3ZZ, OWBH4ZZ, OWQF0ZZ, OWQF3ZZ, OWQF4ZZ See MS-DRG 656
S	Kidney & ureter procedures for non-neoplasm	658 659 660 661	See MS-DRG 656 See MS-DRG 656 See MS-DRG 656
S	Minor bladder procedures	662 663 664	See MS-DRG 656 Include all Include all Include all
S	Prostatectomy	665 666	Include all
S	Transurethral procedures	668 669	Include all
S	Urethral procedures w CC/MCC	671	Include all
S	Other kidney & urinary tract procedures	673 674	Include procedures: 0VPS0JZ, 0VPS3JZ, 0VPS4JZ, 0VPS7JZ, 0VPS8JZ, 0VUS0JZ, 0VUS4JZ See MS-DRG 673
M	Kidney & urinary tract neoplasms	675 686 687 688	See MS-DRG 673 Exclude diagnoses: C64.1, C64.2, C64.9, C65.1, C65.2, C65.9, C79.00, C79.01, C79.02, C7A.093, D30.00, D30.01, D30.02, D30.10, D30.11, D30.12, D3A.093 See MS-DRG 686 See MS-DRG 686
М	Urinary stones w esw lithotripsy	691 692	Include all
М	Urethral stricture	697	Include all

Urology (cont.)

Medical/	DRG Title	MS- DRG	ICD-10
M	Other kidney & urinary tract diagnoses	698	Exclude diagnoses: E08.21, E08.22, E08.29, E09.21, E09.22, E09.29, E10.21, E10.22, E10.29, E11.21, E11.22, E11.29, E13.21, E13.22, E13.29, I70.1, I72.2, I75.81, I77.73, I82.3, M10.30, M10.311, M10.312, M10.319, M10.321, M10.322, M10.329, M10.331, M10.332, M10.339, M10.341, M10.342, M10.349, M10.351, M10.352, M10.359, M10.361, M10.362, M10.369, M10.371, M10.372, M10.379, M10.38, M10.39, N00.0, N00.1, N00.2, N00.3, N00.4, N00.5, N00.6, N00.7, N00.8, N00.9, N01.0, N01.1, N01.2, N01.3, N01.4, N01.5, N01.6, N01.7, N01.8, N01.9, N02.0, N02.1, N02.2, N02.3, N02.4, N02.5, N02.6, N02.7, N02.8, N02.9, N03.0, N03.1, N03.2, N03.3, N03.4, N03.5, N03.6, N03.7, N03.8, N03.9, N04.0, N04.1, N04.2, N04.3, N04.4, N04.5, N04.6, N04.7, N04.8, N04.9, N05.0, N05.1, N05.2, N05.3, N05.4, N05.5, N05.6, N05.7, N05.8, N05.9, N06.0, N06.1, N06.2, N06.3, N06.4, N06.5, N06.6, N06.7, N06.8, N06.9, N07.0, N07.1, N07.2, N07.3, N07.4, N07.5, N07.6, N07.7, N07.8, N07.9, N08, N14.0, N14.1, N14.2, N14.3, N14.4, N15.0, N15.8, N15.9, N16, N25.0, N25.1, N25.81, N25.89, N25.9, N26.1, N26.9, N27.0, N27.1, N27.9, N28.0, N28.1, N28.81, N28.83, N28.9, N29, R80.2, S37.001A, S37.002A, S37.009A, S37.011A, S37.012A, S37.014A, S37.024A, S37.039A, S37.041A, S37.042A, S37.049A, S37.051A, S37.052A, S37.059A, S37.061A, S37.062A, S37.0609A, S37.091A, S37.091A, S37.092A, S37.009A, S37.001A, S37.062A, S37.001A, S37.052A, S37.059A, S37.001A, S37.062A, S37.0609A, S37.091A, S37.001A, S37.001A, S37.001A, S37.001A, S37.002A, S37.009A, S37.001A, S37.004A, S37.004A, S37.0504A, S37.004A, S37.0052A, S37.009A, S37.001A, S37.004A, S37.00
	Major male pelvic procedures	700 707	See MS-DRG 698 Include all
S		708	Include all
	Penis procedures	709	Include all
S		710	Include all
	Today	711	Include all
S	Testes procedures	712	Include all
S	Transurethral prostatectomy w CC/MCC	713	Include all
S	Other male reproductive system O.R. proc for	715	Include all
	malignancy	716	Include all
S	Other male reproductive system O.R. proc exc	717 718	Include all Include all
	malignancy Malignancy, male reproductive system	722	Include all
М		723	Include all
141		724	Include all
M	Inflammation of the male reproductive system	727 728	Include all
M	Other male reproductive system diagnoses	729	Exclude diagnoses: Z30.2
S	Prostatic O.R. procedure unrelated to principal diagnosis	730 984	See MS-DRG 729 Include all
		985	Include all
		986	Include all

Appendix D Year-by Year History of Methodology Changes

RTI began working with *U.S. News* on the Best Hospitals rankings in 2005. This section details the changes to the previous Best Hospitals methodology used between 2005-2019. These brief descriptions are provided for context to allow consumers of the rankings to review year-over-year changes implemented to the rankings.

Summary of 2019-20 Changes

- Update of the Mortality Measure and Survival Score. Starting with 2019-20, the rankings moved to a new mortality measure as the basis of the survival score. The new measure utilizes risk-adjustment methodologies developed in the Best Hospitals for Procedures and Conditions project to evaluate one of the most important outcomes of care—whether patients live or die as a result of inpatient hospitalization. The new methodology utilizes multilevel logistic regression models to adjust for differences in case mix between hospitals. The model calculates RE (random effect) scores which can be thought of as a hospital level off-set. They represent the risk difference between a hospital and all hospitals in a given specialty, discounted by the reliability of that difference (based on the volume of cases). The models make use of a variety of covariates such as patient age, gender, Medicare status, the year of the visit, Elixhauser comorbidities, dual eligibility for Medicare and Medicaid (a proxy measure of socio-economic status), the DRG group of the claim, and an indicator of whether the claim was coded in ICD-9 or ICD-10 to account for differences in coding practices.
- Addition of the Discharge to Home Score. A new outcome for 2019-20 rankings is the discharge to home score, which assesses how well a hospital does at managing to discharge patients to home rather than sending them on to another acute, post-acute, or long-term care setting following hospitalization. This measure provides unique information about hospital outcome performance that has been available in the Best Hospitals for Procedures and Conditions ratings for a number of years but is new to the Best Hospitals Specialty Rankings.
- Removal of the Patient Safety Score. Since 2009, the Best Hospitals Specialty Rankings have included a patient safety score, which were constructed from a selection of Patient Safety Indicators (PSIs). The PSIs that constituted the patient safety score have evolved over time as our understanding of the validity and reliability of individual PSIs has changed. For 2019-20, we removed the patient safety score from the methodology. While the construct of patient safety remains

important, we concluded that these specific measures are not ideal for comparing hospital performance.

- Addition of Patient Experience Score. In response to feedback from patients,
 hospital leaders and other stakeholders about the importance of the patient
 experience when considering healthcare quality, we introduced the patient experience
 score. This score is based on the linear mean score data from the Hospital
 Consumer Assessment of Healthcare Providers and Systems (HCAHPS) patient
 satisfaction survey.
- Removal of DRG 470 from orthopedics. This DRG, which includes hip and knee
 replacement, was removed from the Best Hospitals rankings because it overlaps with
 cases included in the Best Hospitals for Procedures and Conditions ratings. These
 low-risk procedures generally do not require complex specialty care, and some health
 systems are increasingly treating these cases in settings different from those where
 complex orthopedic care is delivered.

Summary of 2018-19 Changes

- Removal of the transfer adjustment for mortality. Since 2010, the rankings have adjusted mortality ratios for the influence of particularly high or low transfer rates to control for potential bias in the evaluation of hospital outcomes. This was done to address issues with coding of transfers in the datasets used which had been shown to be problematic at times. With the move to the SAF data, the project is now able to use both identified transfers on the record along with calculated implicit transfers which effectively overcomes the previous issues, removing the need for the adjustment.
- Backwards mapping of ICD-10 to ICD-9. Since two of the three years of SAF data used in the rankings for 2018-19 appear in ICD-9 format, the project chose to recode the ICD-10 data from FY2016 into ICD-9 format for the volume and mortality analyses. Due to the increased granularity of the ICD-10 codes, it is possible to backwards map ICD-10 codes to ICD-9 codes. The project team utilized the IBM Watson Health mapping of ICD-10 to ICD-9 codes to recode data, so that the same DRGs could be used for all three years. The project anticipates using the same approach for the 2019-20 rankings before moving completely to ICD-10 in 2020. (See page 26-27.)
- Updated Survival Score calculation. To improve the clarity of the survival scores used in the data-driven specialties, the project team updated the method of calculating these display-only scores (this change does not affect points assigned in the rankings). The scores are now calculated based on the adjusted mortality ratio

(rather than the unadjusted ratio) and are based on quintiles above and below a mortality ratio of 1.0; ratios above 1.0 will receive a score of 1-5, while those below a ratio of 1.0 will receive a score of 6-10. (See pages 31-32.)

Summary of 2017-18 Changes

- Move to SAF data. The project implemented a change from the MedPAR to the SAF inpatient limited datasets for all volume, mortality, and patient safety calculations; the exception is that the HSCRC all-payer database continued to be used for the Patient Safety Score calculations for hospitals located in Maryland. Only patients receiving care under traditional Medicare (fee-for-service) are included in the SAF data used for analyses; as a result, all hospital volumes will be reduced due to the lack of CMS managed care patients in the SAF data.
- Volume adjustment for loss of Medicare Advantage. Volumes were estimated for hospitals in each specialty using an adjustment to account for the loss of Medicare Advantage patients from the analyses. The numerator for the volume calculation was the number of fee-for-service discharges meeting the criteria for inclusion in the specialty. The denominator was the proportion of Medicare beneficiaries enrolled in fee-for-service (as opposed to Medicare Advantage) in the county in which the hospital is located. The denominator was calculated by subtracting from 1.0 the CMS Medicare Advantage penetration estimates, expressed as a decimal less than 1.0, for June 2013. As a result, the volumes reported represent estimates rather than observed volumes of care at each hospital.
- Socioeconomic status (SES) adjustment to the survival score. The rankings now incorporate a new adjustment at the patient level for dual-eligibility for Medicare and Medicaid. The dual eligible flag is set to either 0 (not present) or 1 (present) for each case entering the risk-adjusted mortality equation. This was done to address known differences in morbidity and mortality with hospital patients associated with lower SES; dual-eligibility, or more specifically eligibility for Medicaid, is being used in this case to represent lower SES. The overall impact of the change is very small, but will result in scores that better represent patient survival in hospitals evaluated.
- Intensivists. Hospitals now receive 1 point for having at least one intensivist FTE reported as being available in any adult-focused intensive care unit within the hospital. This change now provides somewhat broader credit to hospitals for having intensivists available than in previous years.
- Nurse Magnet. The Nurse Magnet measure was updated to better reflect program coverage for hospitals that are part of a multi-campus system or an arrangement with another hospital outside the system. Hospitals received 1 point for being recognized as a Nurse Magnet hospital. For hospitals that are part of a special merger or a multiplex healthcare system, the primary hospital is required to have Magnet Recognition status for the combination hospital to receive 1 point. If there is no defined primary hospital, then if either hospital in the special merger has Magnet

Recognition status then both receive credit. Partial credit was not offered in the 2017-2018 rankings.

- Patient safety score. Two of the PSIs used in the patient safety score—PSI 06 (Iatrogenic Pneumothorax) and PSI 14 (Postoperative Wound Dehiscence)—were dropped due to concerns that low base rates could lead to unreliable measurement. The scoring for the remaining individual PSIs was also revised to a three-point scale with the middle category defined as the mean +/- 2 standard deviations. The individual PSI scores were combined to form a 1-9-point Patient Safety Score with higher numbers indicating better performance (i.e., lower rates of patient safety events).
- Nurse staffing score adjustments. The project implemented three changes to the nurse staffing score for the 2017-18 rankings. First, the calculation now includes a correction for hospitals that provide onsite skilled nursing and report their nursing inclusive of both the inpatient and skilled nursing. The nursing FTEs associated with the skilled nursing are removed from the numerator and a corrected adjusted average daily census is used for the denominator. The corrected adjusted average daily census values for hospitals affected by this change are calculated and provided directly to the project by the AHA. Second, to address problems with missing data—in particular the primary nursing FTEs variable (FTEN)—the rankings impute missing FTEN values. For the imputation, hospitals that do not have extreme nurse staffing ratios are selected and the calculation incorporates data from current values for FTEN (Full time equivalent registered nurses reported), FTERN (Full time equivalent registered nurses estimated), ADJADC (Adjusted Average Daily Census) and BDTOT (total hospital beds set up and staffed). Third, to address volatility in the nurse staffing measure for hospitals with relatively low numbers of patients, we adjust the nurse staffing values for hospitals in the lowest quartile of adjusted average daily census by blending their rate with that of the average adjusted nurse staffing rate for hospitals eligible for the rankings.
- Surgical Minimums for Eligibility in Neurology and Neurosurgery. To be eligible for evaluation in the neurology and neurosurgery specialty hospitals are now required to be at the 25th percentile or higher in terms of the ratio of surgical to total discharges within the DRGs evaluated for the specialty. This change was made to address excessive bias in mortality rates for hospitals with a very low ratio of surgical-to-total discharges.

Summary of 2016-17 Changes

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
MedPAR file used for analyses. In previous years, all ages were used which resulted
in somewhat inflated volume rates.

- 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 data for patient safety. In previous years, the data source for the patient safety score was the same 3-year sample from the MedPAR dataset that was used for the volume and mortality analyses. For 2016-17, the rankings used data from the CMS SAF data 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.
- Data for Maryland hospitals. For Maryland hospitals, data from the state's HSCRC all-payer database were 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.
- Honor Roll. Moved to a new format that incorporated results from the 12 data-driven specialty rankings, the 4 expert opinion-based specialty rankings, and the 9 procedures and conditions ratings. Hospitals received points for being ranked in each of the Best Hospitals data-driven and expert opinion only specialties if they appeared in the top 50, and additional points if they achieved a rating of high performing in the procedures and conditions ratings. The Honor Roll now recognizes the 20 hospitals that earned the most points out of the possible total.

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 expert opinion-based 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 expert opinion-based specialty only if it had an expert opinion 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.
- Expert Opinion. In previous years, the hospital with the highest expert opinion score received the full point total (i.e., 32.5 points) for the expert opinion component. Starting in 2012-13, hospitals received a normalized expert opinion score. For example, if the highest expert opinion score in a given specialty is 80%, the hospital receives a normalized score of 0.80. Since expert opinion is worth 32.5% of the overall score, the hospital receives 0.80 x 32.5, or 26 points, for expert opinion instead of the full 32.5 points possible.
- Survey response weighting. Beginning in 2012-13, we calculated expert opinion 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 expert opinion scores within specialties.
- **Honor Roll.** The methodology for assigning Honor Roll points was revised. For data-driven specialties, hospitals received 2 points for ranking among the top 10 hospitals and 1 point for ranking in the next 10 (i.e., 11–20). For expert opinion-based specialties, hospitals received 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 expert opinion-based specialties. In previous years, hospitals representing 3% or more of the total nominations in a specialty were published in print for the expert opinion-based 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 ≥ 75th percentile, 25th−74th percentile and < 25th percentile.

Summary of 2010-11 Changes

- Expert opinion scores transformed. Implemented a new log transformation of the expert opinion survey data prior to standardization. This change will allow expert opinion 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.



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Rank	Hospital	-													
1	University of Texas MD Anderson Cancer Center, Houston	100.0	5	5	5	11,321	1.8	Yes	8	8	1	Yes	2	42.9	Yes
2	Memorial Sloan Kettering Cancer Center, New York Mayo Clinic, Rochester, Minn.	82.7 77.0	5 5	5 5	5 5	6,241 4,108	2.2	Yes Yes	8	8	1	Yes Yes	2	41.7 17.5	Yes Yes
4	Johns Hopkins Hospital, Baltimore	77.0	5	5	5	2,415	2.7	Yes	8	8	1	Yes	2	17.5	Yes
5	Cleveland Clinic	72.8	5	5	5	2,972	2.3	Yes	8	8	1	Yes	2	7.0	Yes
	Dana-Farber/Brigham and Women's Cancer Center, Boston	72.3	5	5	5	4,004	2.2	Yes	8	8	1	Yes	2	22.9	Yes
7	Cedars-Sinai Medical Center, Los Angeles	70.1	5	5	4	2,096	2.7	Yes	8	8	1	No	2	1.2	Yes
	Northwestern Memorial Hospital, Chicago	69.1	5	5	4	2,306	1.9	Yes	8	8	1	Yes	2	2.0	Yes
10	Seattle Cancer Care Alliance/University of Washington Medical Center UCSF Medical Center, San Francisco	66.9 64.9	5 5	5 5	5 5	1,838 2,269	2.2	Yes Yes	8 8	8	1	Yes Yes	2	6.4 3.8	Yes Yes
	H. Lee Moffitt Cancer Center and Research Institute, Tampa	64.5	5	5	5	2,530	1.3	Yes	8	7	1	Yes	2	6.8	Yes
	Siteman Cancer Center, Saint Louis	64.5	5	5	3	3,946	2.4	Yes	8	8	1	Yes	2	3.6	Yes
13	UCLA Medical Center, Los Angeles	63.8	5	5	5	1,894	3.2	Yes	8	8	1	Yes	2	4.7	Yes
	Roswell Park Comprehensive Cancer Center, Buffalo	63.7	5	5	5	1,401	1.8	Yes	8	8	0	Yes	2	2.4	Yes
	City of Hope Helford Clinical Research Hospital, Duarte, Calif.	63.5 63.5	5 5	5 5	5 4	3,230	2.4	Yes	8	8	0	Yes	2	5.0 4.0	Yes
	UPMC Presbyterian Shadyside, Pittsburgh Houston Methodist Hospital	63.2	5	5	4	4,065 1,740	2.2	Yes Yes	8	8	1	Yes No	2	0.3	Yes
	Massachusetts General Hospital, Boston	63.0	5	5	5	3,631	2.4	Yes	8	8	1	Yes	2	10.0	Yes
	NYU Langone Hospitals, New York, N.Y.	62.3	5	5	3	1,913	2.5	Yes	8	8	1	Yes	2	2.7	Yes
	New York-Presbyterian Hospital-Columbia and Cornell, N.Y.	62.2	5	5	4	5,518	2.9	Yes	8	8	1	Yes	2	3.1	Yes
	Hospitals of the University of Pennsylvania-Penn Presbyterian, Philadelphia	62.1	5	5	4	3,408	2.6	Yes	8	8	1	Yes	2	5.4	Yes
	Stanford Health Care-Stanford Hospital, Palo Alto, Calif. Mayo Clinic-Phoenix	62.1 61.4	5 5	5 5	4 5	2,249 1,467	2.7 3.1	Yes Yes	8	8	1	Yes Yes	2	5.5 2.3	Yes Yes
	University of Chicago Medical Center	60.0	5	5	4	2,133	2.3	Yes	8	8	1	Yes	2	3.2	Yes
	University of Alabama at Birmingham Hospital	59.8	5	5	4	2,199	2.1	Yes	8	8	1	Yes	2	0.7	Yes
	USC Norris Cancer Hospital-Keck Medical Center of USC, Los Angeles	59.7	5	5	4	1,192	3.2	Yes	8	8	1	Yes	2	1.1	Yes
	Dan L Duncan Comprehensive Cancer Ctr. at Baylor St. Luke's Med. Ctr., Houston	59.4	5	5	3	816	1.8	Yes	7	8	1	Yes	0	0.3	Yes
	Jefferson Health-Thomas Jefferson University Hospitals, Philadelphia	59.0 58.4	5 5	5 5	3 4	1,918 1,306	2.2 1.9	Yes Yes	8	8	1	Yes Yes	2	1.2	Yes Yes
	University of Kentucky Albert B. Chandler Hospital, Lexington Ohio State University James Cancer Hospital, Columbus	58.3	5	5	5	3,897	2.2	Yes	8	7	1	Yes	2	4.7	Yes
	Beth Israel Deaconess Medical Center, Boston	58.0	5	5	4	1,909	1.4	Yes	8	8	0	Yes	2	2.8	Yes
32	UT Southwestern Medical Center, Dallas	57.8	5	5	4	1,781	2.0	Yes	8	8	1	Yes	2	1.4	Yes
	UF Health Shands Hospital, Gainesville, Fla.	57.6	5	5	4	1,717	2.0	Yes	8	8	1	No	2	1.3	Yes
	Nebraska Medicine-Nebraska Medical Center, Omaha	57.5	5 5	5 5	4	1,165	2.0		8	8	1	Yes	2	0.5	Yes
	University of Maryland Medical Center, Baltimore UC Davis Medical Center, Sacramento, Calif.	57.0 56.9	5	5	3 4	1,007 1,454	2.8 2.6	Yes Yes	8	8	1	Yes Yes	2	0.8	Yes Yes
37	University Hospitals Seidman Cancer Center, Cleveland	56.7	5	4	3	1,933	2.5	Yes	8	8	1	Yes	2	0.6	Yes
38	University of Michigan Hospitals-Michigan Medicine, Ann Arbor	56.1	5	5	5	2,626	2.8	Yes	8	8	1	Yes	2	3.4	Yes
39	MUSC Health-University Medical Center, Charleston, S.C.	55.4	5	5	4	1,431	2.0	Yes	8	8	1	Yes	2	0.5	Yes
	Emory University Hospital, Atlanta	55.1	5	5 5	4	2,118	2.2	Yes	8	8	1	Yes	2	1.8	Yes
	Duke University Hospital, Durham, N.C. Huntsman Cancer Institute at the University of Utah, Salt Lake City	54.7 54.7	5 5	5	4 5	2,712 1,188	2.1	Yes Yes	8	8	0	Yes Yes	2	5.0	Yes Yes
	University of Iowa Hospitals and Clinics, Iowa City	54.7	5	5	3	1,777	1.9	Yes	8	8	1	Yes	2	0.7	Yes
44	UCHealth University of Colorado Hospital, Aurora	54.0	5	5	4	1,488	2.0	Yes	8	8	1	Yes	2	1.4	Yes
	Mayo Clinic-Jacksonville, Fla.	53.3	5	5	5	1,115	2.9	Yes	8	8	1	Yes	2	2.3	Yes
	Montefiore Medical Center, Bronx, N.Y.	53.1	5	5	2	2,695	2.4		8	8	0	Yes	2	0.4	Yes
	UC San Diego Health-Moores Cancer Center Rush University Medical Center, Chicago	52.8 52.5	5 5	5 5	4	1,226 1,625	2.0 2.1	Yes Yes	8 8	8	1	Yes No	2	1.7	Yes Yes
	Mount Sinai Hospital, New York	52.1	5	5	3	2,468	2.1	Yes	8	8	1	Yes	2	1.1	Yes
	Levine Cancer Institute, Charlotte, N.C.	51.8	5	5	3	2,051	1.8		8	8	1	No	2	1.4	Yes

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	Mayo Clinic, Rochester, Minn.	88.9	5	5	5	12,991	2.7	Yes	3	Yes	Yes	6	7	Yes	1	35.0	Yes
3	Cedars-Sinai Medical Center, Los Angeles	84.7	5	5	4	11,249	2.7	Yes	3	Yes	Yes	6	7	Yes	1	8.4	Yes
4 5	New York-Presbyterian Hospital-Columbia and Cornell, N.Y. Massachusetts General Hospital, Boston	82.6 75.9	5 5	5 5	4 5	21,382 10,796	2.9 2.4	Yes Yes	3	Yes Yes	Yes	6	7	Yes Yes	1	14.9	Yes
	Mount Sinai Hospital, New York	74.7	5	5	3	14,367	2.4	Yes	3	Yes	Yes	6	7	Yes	1	4.2	Yes
7	Brigham and Women's Hospital, Boston	73.4	5	5	4	7,758	2.2	Yes	3	Yes	Yes	6	7	Yes	1	10.9	Yes
7	UCLA Medical Center, Los Angeles	73.4	5 5	5 5	5	5,350	3.2	Yes	3	Yes	Yes	6	7	Yes	1	3.8	Yes
9 10	Stanford Health Care-Stanford Hospital, Palo Alto, Calif. Northwestern Memorial Hospital, Chicago	73.3 72.1	5	5	4	4,945 6,457	2.7 1.9	Yes	3	Yes	Yes Yes	6	7	Yes Yes	1	8.0 4.5	Yes
11	NYU Langone Hospitals, New York, N.Y.	67.6	5	5	3	9,681	2.5	Yes	3	Yes	Yes	6	7	Yes	1	5.1	Yes
	Houston Methodist Hospital	67.5	5	5	4	8,917	2.0	Yes	3	Yes	Yes	6	7	No	1	4.8	Yes
13	UT Southwestern Medical Center, Dallas University of Michigan Hospitals-Michigan Medicine, Ann Arbor	66.8 66.0	5 5	5 5	4	4,026 7,636	2.0	Yes	3	Yes	Yes	6	7	No Yes	1	2.1	Yes
15	Keck Medical Center of USC, Los Angeles	65.3	5	5	4	2,374	3.2	Yes	3	Yes	Yes	6	7	Yes	1	0.8	Yes
	Johns Hopkins Hospital, Baltimore	65.2	5	5	5	4,826	2.2	Yes	3	Yes	Yes	6	7	Yes	1	8.4	Yes
17 18	Texas Heart Institute at Baylor St. Luke's Medical Center, Houston Beaumont Hospital-Royal Oak, Mich.	65.1 64.8	5 5	5 5	3	9,300 11,366	1.8 2.0	Yes	3	Yes	Yes	4	7	No Yes	1	4.7	Yes
	Hospitals of the Univ. of Pennsylvania-Penn Presbyterian, Philadelphia	64.6	5	5	4	12,090	2.6	Yes	3	Yes	Yes	6	7	Yes	1	7.5	Yes
20	Mayo Clinic-Phoenix	64.1	5	5	5	3,453	3.1	Yes	3	Yes	Yes	6	7	No	1	2.2	Yes
	NYU Winthrop Hospital, Mineola, N.Y.	62.1	5	5	3	7,874	2.0	Yes	3	Yes	Yes	5	7	Yes	1	1.1	Yes
	St. Luke's Hospital of Kansas City, Mo. Montefiore Medical Center, Bronx, N.Y.	61.6	5 5	5 5	2	6,171 14,801	1.7 2.4	Yes Yes	3	Yes Yes	Yes	6	7	Yes Yes	1 0	0.6	Yes
	St. Francis Hospital-Roslyn, N.Y.	61.0	5	5	5	12,604	2.0	Yes	3	Yes	Yes	4	7	No	1	1.2	Yes
	University of Alabama at Birmingham Hospital	61.0	5	5	4	6,347	2.1	Yes	3	Yes	Yes	6	7	Yes	1	2.3	Yes
26	Vanderbilt University Medical Center, Nashville, Tenn. Baylor Scott and White The Heart Hospital Plano, Texas	60.9 60.5	5 5	5 5	5	7,552 6,839	2.2	Yes	3	Yes Yes	Yes	6 5	7	Yes No	1	3.9	Yes
	University Hospitals Cleveland Medical Center	60.4	5	5	3	5,659	2.5	Yes	3	Yes	Yes	6	7	Yes	1	1.4	Yes
	North Shore University Hospital, Manhasset, N.Y.	60.3	5	5	3	11,515	2.1	Yes	3	Yes	Yes	6	7	Yes	1	1.8	Yes
	Scripps La Jolla Hospitals, La Jolla, Calif.	59.5	5 5	5	4	7,368	3.0	Yes	3	Yes	Yes	5	6	Yes	1	1.2	Yes
32	UC San Diego Health-Sulpizio Cardiovascular Center Barnes-Jewish Hospital, Saint Louis	59.4 58.7	5	5 5	4	3,735 7,853	2.0 2.4	Yes	3	Yes	Yes	6	7	Yes Yes	1	0.8	Yes
	UCSF Medical Center, San Francisco	58.1	5	5	5	2,821	2.6	Yes	3	Yes	Yes	6	7	Yes	1	1.7	Yes
	Rush University Medical Center, Chicago	57.7	5	5	4	3,311	2.1	Yes	3	Yes	Yes	6	7	Yes	1	0.6	Yes
	Duke University Hospital, Durham, N.C. UC Davis Medical Center, Sacramento, Calif.	57.6 57.4	5 5	5 5	4	8,562 3,899	2.1	Yes Yes	3 2	Yes No	Yes Yes	6 5	7	Yes Yes	1	8.3	Yes
37	MedStar Heart and Vascular Institute, Washington, D.C.	57.2	5	5	2	11,593	2.0	Yes	3	Yes	Yes	6	7	Yes	0	1.5	Yes
	Morristown Medical Center, Morristown, N.J.	57.1	5	5	4	11,415	2.0	Yes	3	Yes	Yes	5	7	Yes	1	0.7	Yes
	UCHealth University of Colorado Hospital, Aurora Advocate Christ Medical Center, Oak Lawn, Ill.	56.9 56.8	5 5	5 5	4	3,717 8,883	2.0 2.4	Yes	3	Yes	Yes	6	7	Yes Yes	1	1.1	Yes
	St. Cloud Hospital, St. Cloud, Minn.	56.7	5	5	4	8,144	1.9	Yes	3	Yes	Yes	5	7	Yes	1	0.4	Yes
42	Minneapolis Heart Institute at Abbott Northwestern Hospital	56.4	5	5	4	9,800	2.4	Yes	3	Yes	Yes	6	7	No	1	1.1	Yes
	Cleveland Clinic Hillcrest Hospital	55.0	5	5	4	5,234	1.7	Yes	2	Yes	No	5	7	Yes	1	0.3	Yes
44	VCU Medical Center, Richmond, Va. Emory University Hospital, Atlanta	54.9 54.8	5 5	5 5	4	4,273 4,693	1.9 2.2	Yes	3	Yes Yes	Yes Yes	6	7	Yes No	1	0.5 4.0	Yes
46	Ohio State University Wexner Medical Center, Columbus	54.7	5	5	3	7,997	2.2	Yes	3	Yes	Yes	6	6	Yes	1	1.8	Yes
	OHSU Hospital-Knight Cardiovascular Institute, Portland, Ore.	54.6	5	5	5	3,272	2.2	Yes	3	Yes	Yes	6	7	Yes	1	0.3	Yes
	Cleveland Clinic Fairview Hospital, Cleveland Loyola University Medical Center, Maywood, Ill.	54.3 54.3	5 5	5 5	4	5,120 3,935	1.9 2.5	Yes Yes	3	Yes Yes	Yes Yes	5	7	Yes Yes	1	0.3	Yes
	Beaumont Hospital-Troy, Mich.	54.1	5	5	4	7,712	1.7	Yes	3	Yes	Yes	5	7	Yes	1	0.8	Yes
50	Emory St. Joseph's Hospital, Atlanta	54.1	5	5	4	5,602	2.2	Yes	3	Yes	Yes	5	7	No	1	0.5	Yes
50	Tampa General Hospital	54.1	5	5	4	6,081	2.5	Yes	3	Yes	Yes	6	7	Yes	1	0.3	Yes

	Best Hospitals 2020-21:										_		
	Diabetes & Endocrinology										as Nurse Magnet hospital		
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Rank	Hospital	U.S.	30-day	<u>Si</u>	Ра	2	Nurse	ICU	₽	Pa	8	Ä	3
1	Mayo Clinic, Rochester, Minn.	100.0	5	5	5	944	2.7	Yes	4	8	1	37.2	Yes
	Massachusetts General Hospital, Boston	78.8	4	5	5	966	2.4	Yes	4	8	1	25.7	Yes
3 4	UCSF Medical Center, San Francisco UCLA Medical Center, Los Angeles	77.7 77.3	5 5	5 5	5 5	490 769	2.6	Yes Yes	4	8	1	9.0	Yes
5	New York-Presbyterian Hospital-Columbia and Cornell, N.Y.	73.2	5	5	4	2,295	2.9	Yes	4	8	1	9.0	Yes
	Cleveland Clinic	72.8	4	5	5	834	2.3	Yes	4	8	1	16.2	Yes
7	Johns Hopkins Hospital, Baltimore	70.9	5	5	5	499	2.2	Yes	4	8	1	13.5	Yes
8	Barnes-Jewish Hospital, Saint Louis	70.3	5	5	3	846	2.4	Yes	4	8	1	7.7	Yes
9 10	University of Washington Medical Center, Seattle University of Michigan Hospitals-Michigan Medicine, Ann Arbor	69.6 67.9	5 5	5 5	5 5	247 622	2.2	Yes Yes	4	8	1	6.7 5.9	Yes
11	Hospitals of the Univ. of Pennsylvania-Penn Presbyterian, Philadelphia	66.6	5	4	4	808	2.6	Yes	4	8	1	6.9	Yes
	Mount Sinai Hospital, New York	66.6	5	5	3	959	2.2	Yes	4	8	1	5.2	Yes
13	Cedars-Sinai Medical Center, Los Angeles	65.9	5	5	4	1,010	2.7	Yes	4	8	1	1.6	Yes
14 14	Brigham and Women's Hospital, Boston Emory University Hospital, Atlanta	65.4 65.4	3 5	5 5	4	717 573	2.2	Yes Yes	4	8	1	2.6	Yes
	NYU Langone Hospitals, New York, N.Y.	65.1	5	5	3	1,042	2.5	Yes	4	8	1	4.8	Yes
17	Memorial Sloan Kettering Cancer Center, New York	64.4	5	5	5	323	2.2	Yes	4	8	1	1.8	Yes
	UCHealth University of Colorado Hospital, Aurora	64.1	5	5	4	545	2.0	Yes	4	8	1	6.8	Yes
19 20	University of Chicago Medical Center	63.6 62.4	5 5	5 5	4	548	2.3	Yes	4	8	1	2.9	Yes
21	Beaumont Hospital-Royal Oak, Mich. Northwestern Memorial Hospital, Chicago	61.8	5	5	4	1,329 630	1.9	Yes Yes	4	8	1	3.1	Yes
22	North Shore University Hospital, Manhasset, N.Y.	61.7	5	5	3	975	2.1	Yes	4	8	1	1.0	Yes
23	Montefiore Medical Center, Bronx, N.Y.	61.4	5	5	2	2,347	2.4	Yes	4	8	0	0.7	Yes
	UT Southwestern Medical Center, Dallas	61.1	5	5	4	519	2.0	Yes	4	8	1	3.2	Yes
25 26	Ohio State University Wexner Medical Center, Columbus Beaumont Hospital-Grosse Pointe, Mich.	60.3 60.2	5 5	3 5	3 4	771 467	2.2	Yes Yes	4	7 8	1	1.9	Yes
27	University of Texas MD Anderson Cancer Center, Houston	60.1	5	5	5	433	1.8	Yes	4	8	1	2.9	Yes
28	Houston Methodist Hospital	60.0	5	5	4	827	2.0	Yes	4	8	1	0.6	Yes
29	Hoag Memorial Hospital Presbyterian, Newport Beach, Calif.	59.7	5	5	4	688	2.6	Yes	4	8	1	0.2	Yes
30 31	AdventHealth Orlando Yale-New Haven Hospital, New Haven, Conn.	59.1 59.0	5 5	5 3	3	2,853 1,370	2.2	Yes Yes	4	8 8	0	3.8	Yes
	Mayo Clinic-Phoenix	58.7	4	5	5	336	3.1	Yes	4	8	1	1.5	Yes
33	Mission Hospitals-Mission Viejo and Laguna Beach, Calif.	58.2	5	5	4	362	2.2	Yes	4	8	1	0.0	Yes
	UF Health Shands Hospital, Gainesville, Fla.	57.4	5	5	4	606	2.0	Yes	4	8	1	1.3	Yes
35 36	NYU Winthrop Hospital, Mineola, N.Y. Tampa General Hospital	56.9 56.6	5 5	5 5	3 4	635 783	2.0	Yes Yes	4	8	1	1.4	Yes
37	Beth Israel Deaconess Medical Center, Boston	56.3	5	3	4	597	1.4	Yes	4	8	0	2.3	Yes
38	Abbott Northwestern Hospital, Minneapolis	56.2	5	4	4	448	2.4	Yes	4	8	1	0.1	Yes
39	Mayo Clinic-Jacksonville, Fla.	56.0	3	5	5	332	2.9	Yes	4	8	1	1.6	Yes
	Lenox Hill Hospital, New York	55.8	5 5	5 5	3 2	554 882	2.4	Yes	4	8	0	0.6	Yes
40 42	Mount Sinai Beth Israel, New York Rush University Medical Center, Chicago	55.8 55.7	5	5	4	570	1.4 2.1	Yes Yes	4	8	0	0.9	Yes
43	Mount Sinai Morningside and Mount Sinai West Hospitals, New York	55.6	5	5	3	862	2.0	Yes	4	8	Ō	0.7	Yes
	Vanderbilt University Medical Center, Nashville, Tenn.	55.6	3	5	4	562	2.2	Yes	4	8	1	4.9	Yes
45	Stanford Health Care-Stanford Hospital, Palo Alto, Calif.	55.4	3	5	4	462	2.7	Yes	4	8	1	3.1	Yes
46	UPMC Presbyterian Shadyside, Pittsburgh Christ Hospital, Cincinnati	55.1 54.8	3 5	5 3	4 5	967 422	2.2	Yes Yes	4	8	1	3.8 0.2	Yes Yes
	Duke University Hospital, Durham, N.C.	54.8	3	5	4	622	2.1	Yes	4	8	1	4.2	Yes
		54.8	5	5	3	641			4	8			Yes
47 50	Jefferson Health-Thomas Jefferson University Hospitals, Philadelphia Penn Medicine Chester County Hospital, West Chester, Pa.	54.5	5	3	4	322	2.2	Yes Yes	4	8	1 1	0.9	Yes

	Best Hospitals 2020-21:											_		
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Rank	Hospital	U.S.	ő	Dis	Patient	Number	Nurs	ICU	Ad	Patient	Ta	ě	X	ā
1	Johns Hopkins Hospital, Baltimore	100.0	5	5	5	<u>_</u> 275	2.2	Yes	1	8	Yes	1	18.9	Yes
2	Memorial Sloan Kettering Cancer Center, New York	94.2	5	5	5	425	2.2	Yes	1	8	No	1	2.6	Yes
3 4	Mayo Clinic, Rochester, Minn. University of Texas MD Anderson Cancer Center, Houston	94.0 92.2	5 5	5 5	5 5	536 780	2.7	Yes	1 1	8	Yes No	1	11.3 10.4	Yes Yes
5	Ohio State University Wexner Medical Center, Columbus	91.4	5	3	3	614	2.2	Yes	1	7	Yes	1	6.1	Yes
	Mass. Eye and Ear Infirmary, Mass. General Hospital, Boston	90.0	5	1	5	585	2.4	Yes	1	8	Yes	1	17.4	Yes
7	University of Iowa Hospitals and Clinics, Iowa City	89.3	5	5	3	296	1.9	Yes	1	8	Yes	1	10.9	Yes
8	UCLA Medical Center, Los Angeles Hospitals of the Univ. of Pennsylvania-Penn Presbyterian, Philadelphia	88.6 84.0	5 5	5	5 4	596 523	3.2 2.6	Yes Yes	1	8	Yes Yes	1	8.2 10.3	Yes Yes
	Vanderbilt University Medical Center, Nashville, Tenn.	83.4	5	4	4	461	2.2	Yes	1	8	Yes	ī	9.3	Yes
11	New York-Presbyterian Hospital-Columbia and Cornell, N.Y.	82.7	5	5	4	498	2.9	Yes	1	8	Yes	1	3.9	Yes
12	University of Michigan Hospitals-Michigan Medicine, Ann Arbor MUSC Health-University Medical Center, Charleston, S.C.	81.8 78.2	4	2 5	5 4	466 458	2.8	Yes Yes	1 1	8	Yes Yes	1 1	10.4 6.9	Yes Yes
	UCSF Medical Center, San Francisco	76.8	4	4	5	282	2.6	Yes	1	8	Yes	1	6.6	Yes
15	Stanford Health Care-Stanford Hospital, Palo Alto, Calif.	76.7	3	5	4	359	2.7	Yes	1	8	Yes	1	9.6	Yes
16 17	Cleveland Clinic	76.2 76.1	5 5	3	5	404 384	2.3	Yes Yes	1 1	8	No Yes	1	9.2	Yes
	University of Kansas Hospital, Kansas City Mayo Clinic-Phoenix	75.8	5	5	5	257	3.1	Yes	1	8	No	1	1.6	Yes
19	University of Washington Medical Center, Seattle	74.2	5	3	5	236	2.2	Yes	1	8	No	1	5.9	Yes
	OHSU Hospital, Portland, Ore.	73.9 72.7	4 5	5	5	356 285	2.2	Yes Yes	1	8	Yes Yes	1	2.5 0.9	Yes
	University of Maryland Medical Center, Baltimore Cedars-Sinai Medical Center, Los Angeles	72.7	5	5	4	231	2.7	Yes	1	8	Yes	1	1.5	Yes
	University of Alabama at Birmingham Hospital	72.0	3	5	4	688	2.1	Yes	1	8	Yes	1	1.9	Yes
	Mount Sinai Hospital, New York	71.2	4	5	3	461	2.2	Yes	1	8	Yes	1	4.0	Yes
	UF Health Shands Hospital, Gainesville, Fla. Northwestern Memorial Hospital, Chicago	70.5 69.5	5 4	2	4	360 162	2.0	Yes Yes	1	8	Yes Yes	1	1.3 2.0	Yes Yes
27	Long Island Jewish Medical Center, New Hyde Park, N.Y.	68.8	4	5	3	502	1.6	Yes	1	8	Yes	1	0.8	Yes
	University of Miami Hospital and Clinics-UHealth Tower, Miami	68.6	5	5	3	467	1.3	Yes	1	8	No	0	2.2	Yes
29 30	Barnes-Jewish Hospital, Saint Louis UC Davis Medical Center, Sacramento, Calif.	68.0 67.8	3 4	5 5	3	393 250	2.4	Yes	1	8	Yes Yes	1	5.9 2.9	Yes Yes
	NYU Langone Hospitals, New York, N.Y.	67.2	4	5	3	181	2.5	Yes	1	8	Yes	1	2.8	Yes
	Manhattan Eye, Ear & Throat Hospital, New York	67.0	5	5	3	196	2.4	Yes	1	8	No	0	1.8	Yes
34	UPMC Presbyterian Shadyside, Pittsburgh Brigham and Women's Hospital, Boston	67.0 64.8	3 4	1	4	623 267	2.2	Yes	1 1	8	Yes Yes	1	6.5 2.0	Yes Yes
35	University of Chicago Medical Center	64.7	4	3	4	259	2.3	Yes	1	8	Yes	1	1.1	Yes
36	University of North Carolina Hospitals, Chapel Hill	64.4	3	5	4	383	1.7	Yes	1	8	Yes	1	4.6	Yes
37 38	H. Lee Moffitt Cancer Center and Research Institute, Tampa Emory University Hospital Midtown, Atlanta	63.0 62.7	5 3	5	5 3	222 589	1.3	Yes Yes	1	8	No No	1 0	0.2 2.9	Yes Yes
39	University of Wisconsin Hospitals, Madison	62.6	3	5	4	288	2.1	Yes	1	8	Yes	1	0.7	Yes
	Indiana University Health Medical Center, Indianapolis	62.2	4	3	3	258	2.0	Yes	1	8	Yes	1	0.8	Yes
	Jefferson Health-Thomas Jefferson University Hospitals, Philadelphia University of Virginia Medical Center, Charlottesville	61.9 61.8	3	3	3 4	502 224	2.2	Yes Yes	1	8	Yes Yes	1	2.5 3.0	Yes Yes
	Memorial Hermann-Texas Medical Center, Houston	60.6	3	5	4	232	2.2	Yes	1	8	Yes	1	0.8	Yes
	Keck Medical Center of USC, Los Angeles	58.3	3	3	4	187	3.2	Yes	1	8	Yes	1	2.0	Yes
	UAMS Medical Center, Little Rock, Ark. University Hospitals Cleveland Medical Center	58.3 57.9	4 3	5	3	268 419	2.0	Yes Yes	1 1	7 8	Yes Yes	0	1.2 1.6	Yes Yes
46	Rush University Medical Center, Chicago	57.6	3	5	4	263	2.5	Yes	1	8	Yes	1	0.9	Yes
48	Yale-New Haven Hospital, New Haven, Conn.	57.4	3	3	3	491	2.0	Yes	1	8	Yes	1	1.5	Yes
49	Houston Methodist Hospital	57.2	3	5	4	163	2.0	Yes	1	8	No	1	1.7	Yes
50	UF Health Jacksonville, Fla.	56.7	4	4	3	213	1.4	Yes	1	8	Yes	1	0.0	Yes

	Best Hospitals 2020-21:											_		
	Gastroenterology & GI Surgery											hospital		
Rank	Hospital	U.S. News Specialty Score	30-day survival	Discharging patients to home	Patient experience	Number of patients	Nurse staffing	ICU Specialists	Advanced technologies	Patient services	Trauma center	Recognized as Nurse Magnet hos	Expert opinion	Current AHA responder
1	Mayo Clinic, Rochester, Minn.	100.0	5	5	5	7,221	2.7	Yes	7	8	Yes	1	34.7	Yes
	Cedars-Sinai Medical Center, Los Angeles	94.3	5	5	4	5,899	2.7	Yes	7	8	Yes	1	9.2	Yes
	Cleveland Clinic	91.4	5	5	5	6,639	2.3	Yes	7	8	No	1	24.1	Yes
	Johns Hopkins Hospital, Baltimore	88.3	5	5 5	5 5	3,623	2.2	Yes	7	8	Yes	1	14.8	Yes
	UCLA Medical Center, Los Angeles Mayo Clinic-Phoenix	86.4 80.9	5 5	5	5	3,623 2,511	3.2	Yes	7	8	Yes No	1	8.5 5.2	Yes
7	Massachusetts General Hospital, Boston	79.7	5	5	5	5,657	2.4	Yes	7	8	Yes	1	11.0	Yes
	University of Michigan Hospitals-Michigan Medicine, Ann Arbor	78.1	5	5	5	4,485	2.8	Yes	7	8	Yes	1	6.1	Yes
	Mount Sinai Hospital, New York	77.6	5	5	3	5,314	2.2	Yes	7	8	Yes	1	8.5	Yes
	NYU Langone Hospitals, New York, N.Y.	77.2	5	5	3	5,054	2.5	Yes	7	8	Yes	1	5.3	Yes
	New York-Presbyterian Hospital-Columbia and Cornell, N.Y.	77.1	5	5	4	10,567	2.9	Yes	7	8	Yes	1	7.7	Yes
	Northwestern Memorial Hospital, Chicago	76.7	5	5	4	3,519	1.9	Yes	7	8	Yes	1	5.0	Yes
13	University of Chicago Medical Center	75.2	5	5	4	2,690	2.3	Yes	7	8	Yes	1	6.6	Yes
	Houston Methodist Hospital Keck Medical Center of USC, Los Angeles	74.7 74.3	5 5	5 5	4	5,119 1,820	2.0 3.2	Yes Yes	7	8	No Yes	1 1	0.8 1.4	Yes
	Hospitals of the Univ. of Pennsylvania-Penn Presbyterian, Philadelphia	74.1	5	5	4	4,199	2.6	Yes	7	8	Yes	1	6.6	Yes
	UCSF Medical Center, San Francisco	72.7	5	5	5	2,702	2.6	Yes	7	8	Yes	1	5.8	Yes
	UPMC Presbyterian Shadyside, Pittsburgh	72.7	5	5	4	6,919	2.2	Yes	7	8	Yes	1	4.9	Yes
	Barnes-Jewish Hospital, Saint Louis	71.5	5	5	3	5,377	2.4	Yes	7	8	Yes	1	4.5	Yes
	Beaumont Hospital-Royal Oak, Mich.	71.2	5	5	3	6,237	2.0	Yes	7	8	Yes	1	0.3	Yes
21	Baylor St. Luke's Medical Center, Houston	71.0	5	5	3	3,099	1.8	Yes	7	8	No	1	1.3	Yes
	Loyola University Medical Center, Maywood, Ill.	71.0 70.6	5 5	5 5	3	2,499	2.5	Yes Yes	7 6	8	Yes Yes	1	0.5 1.3	Yes
	NYU Winthrop Hospital, Mineola, N.Y. Tampa General Hospital	70.0	5	5	4	3,664 2,799	2.5	Yes	7	8	Yes	1	1.1	Yes
	University of Wisconsin Hospitals, Madison	70.2	5	5	4	3,462	2.1	Yes	7	8	Yes	1	1.0	Yes
	Duke University Hospital, Durham, N.C.	69.6	5	5	4	3,956	2.1	Yes	7	8	Yes	1	4.4	Yes
	Memorial Sloan Kettering Cancer Center, New York	69.6	5	5	5	5,154	2.2	Yes	6	8	No	1	2.5	Yes
	Mayo Clinic-Jacksonville, Fla.	69.3	5	5	5	2,474	2.9	Yes	7	8	No	1	4.8	Yes
	Cleveland Clinic Weston, Fla.	68.6	5	5	4	2,081	2.7	Yes	7	8	No	0	2.5	Yes
	Jefferson Health-Thomas Jefferson University Hospitals, Philadelphia	68.6	5	5	3	4,248	2.2	Yes	7	8	Yes	1	1.7	Yes
31	Rush University Medical Center, Chicago UC San Diego Health-Jacobs Medical Center	68.5	5 5	5 5	4	2,119 2,393	2.1 2.0	Yes	7 7	8	Yes	1	0.8 2.7	Yes
	Stanford Health Care-Stanford Hospital, Palo Alto, Calif.	68.2 67.7	5	5	4	3,244	2.7	Yes	7	8	Yes	1	1.8	Yes
	Brigham and Women's Hospital, Boston	67.5	5	5	4	4,652	2.7	Yes	6	8	Yes	1	3.8	Yes
_	OHSU Hospital, Portland, Ore.	67.5	5	5	5	2,279	2.2	Yes	7	8	Yes	1	0.8	Yes
	Baylor University Medical Center, Dallas	67.4	5	5	4	4,610	2.0	Yes	7	8	Yes	1	2.2	Yes
37	UT Southwestern Medical Center, Dallas	67.1	5	5	4	2,519	2.0	Yes	7	8	No	1	1.7	Yes
	Hoag Memorial Hospital Presbyterian, Newport Beach, Calif.	67.0	5	5	4	4,404	2.6	Yes	6	8	No	1	0.3	Yes
	UCHealth University of Colorado Hospital, Aurora	66.5	5	5	4	2,642	2.0	Yes	7	8	Yes	1	1.4	Yes
	University Hospitals Cleveland Medical Center Nebraska Medicine-Nebraska Medical Center, Omaha	66.5 66.3	5 5	5 5	3	3,144 2,530	2.5	Yes Yes	7	8	Yes Yes	1	1.4 0.5	Yes
	Scripps La Jolla Hospitals, La Jolla, Calif.	66.3	5	5	4	3,408	3.0	Yes	7	7	Yes	1	0.5	Yes
	Yale-New Haven Hospital, New Haven, Conn.	66.3	5	5	3	6,686	2.0	Yes	7	8	Yes	1	1.3	Yes
	Cleveland Clinic Hillcrest Hospital	66.1	5	5	4	3,054	1.7	Yes	6	8	Yes	1	0.2	Yes
45	UF Health Shands Hospital, Gainesville, Fla.	65.8	5	5	4	2,972	2.0	Yes	7	8	Yes	1	1.4	Yes
	Emory University Hospital, Atlanta	65.5	5	5	4	2,705	2.2	Yes	7	8	No	1	1.2	Yes
46	University of Texas MD Anderson Cancer Center, Houston	65.5	5	5	5	4,192	1.8	Yes	6	8	No	1	2.2	Yes
46 48	University of Texas MD Anderson Cancer Center, Houston St. Francis Hospital-Roslyn, N.Y. John Muir Health-Walnut Creek Medical Center, Walnut Creek, Calif.	65.5 65.4 65.2	5 5 5	5 5 5	5 5 4	4,192 2,961 2,427	1.8 2.0 2.2	Yes Yes Yes	6 6 6	8 8 8	No No Yes	1 1 1	2.2 0.2 0.0	Yes Yes Yes

	Best Hospitals 2020-21:												
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	Geriatrics									Magnet hospital	center		
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		ν.	30-day	Discharging patients	Patient experience	Number	Nurse	ICO	Patient	Recognized	₫	Expert	Current AHA responder
	Hospital Mount Sinai Hospital New York	⊃ 100.0	რ 5	5	3	2 9,889	Z 2.2	Yes	9	₽			
2	Mount Sinai Hospital, New York Cleveland Clinic	98.8	5	5	5	29,889	2.2	Yes	9	1	Yes Yes	19.1 6.6	Yes Yes
3	UCLA Medical Center, Los Angeles	98.1	5	5	5	19,563	3.2	Yes	9	1	No	18.8	Yes
5	Mayo Clinic, Rochester, Minn. Johns Hopkins Hospital, Baltimore	97.1 96.6	5 5	5 5	5 5	31,395 11,073	2.7	Yes Yes	9	1	Yes Yes	9.1 13.6	Yes Yes
	Northwestern Memorial Hospital, Chicago	94.2	5	5	4	15,076	1.9	Yes	9	1	Yes	3.1	Yes
7	Keck Medical Center of USC, Los Angeles	93.7	5	5	4	5,559	3.2	Yes	9	1	Yes	0.6	Yes
8	UCSF Medical Center, San Francisco New York-Presbyterian Hospital-Columbia and Cornell, N.Y.	92.6 92.3	5 5	5 5	5 4	9,953 66,004	2.6	Yes Yes	9	1	Yes Yes	10.9 4.2	Yes Yes
10	NYU Langone Hospitals, New York, N.Y.	90.3	5	5	3	30,876	2.5	Yes	9	1	Yes	3.3	Yes
11	Cedars-Sinai Medical Center, Los Angeles University of Michigan Hospitals-Michigan Medicine, Ann Arbor	90.2 88.9	5 5	5 5	4 5	33,091 15,350	2.7 2.8	Yes	8	1	No Yes	0.3	Yes Yes
13	UC San Diego Health-Jacobs Medical Center	85.5	5	5	4	10,002	2.0	Yes	9	1	Yes	3.0	Yes
	Massachusetts General Hospital, Boston	85.4	5	5	5	27,343	2.4	Yes	9	1	Yes	4.9	Yes
14 16	Rush University Medical Center, Chicago Stanford Health Care-Stanford Hospital, Palo Alto, Calif.	85.4 83.7	5 5	5 5	4	10,309 13,613	2.1	Yes Yes	8	1	Yes Yes	1.7 0.9	Yes Yes
17	Brigham and Women's Hospital, Boston	83.6	5	5	4	19,169	2.2	Yes	9	1	Yes	0.9	Yes
18 19	Barnes-Jewish Hospital, Saint Louis Hospitals of the Univ. of Pennsylvania-Penn Presbyterian, Philadelphia	82.9 82.8	5 5	5 5	3 4	18,755 19,123	2.4 2.6	Yes Yes	9	1	Yes Yes	3.1	Yes Yes
	Oroville Hospital, Oroville, Calif.	82.6	5	5	1	7,377	1.5	Yes	8	0	No	0.0	Yes
20	Yale-New Haven Hospital, New Haven, Conn.	82.6	5	5	3	37,461	2.0	Yes	9	1	Yes	5.5	Yes
22	Emory University Hospital at Wesley Woods, Atlanta UPMC Presbyterian Shadyside, Pittsburgh	82.5 82.1	5 5	5 5	4	11,599 28,134	2.2	Yes Yes	9	1	Yes Yes	1.1 5.8	Yes Yes
24	UC Davis Medical Center, Sacramento, Calif.	81.6	5	5	4	10,652	2.6	Yes	9	1	Yes	0.6	Yes
25	UT Southwestern Medical Center, Dallas Houston Methodist Hospital	80.8 80.4	5 5	5 5	4 4	10,732	2.0	Yes Yes	9	1	No No	0.9	Yes Yes
27	OHSU Hospital, Portland, Ore.	80.3	5	5	5	7,446	2.2	Yes	9	1	Yes	0.6	Yes
	Mayo Clinic-Phoenix	80.2	5	5	5	10,907	3.1	Yes	7	1	No	1.0	Yes
29 30	University of Kansas Hospital, Kansas City Beaumont Hospital-Royal Oak, Mich.	79.8 79.5	5 5	5 5	5 3	12,752 39,250	2.2	Yes	9	1	Yes No	0.7	Yes Yes
31	North Shore University Hospital, Manhasset, N.Y.	79.0	5	5	3	40,318	2.1	Yes	9	1	No	2.6	Yes
32	Beaumont Hospital-Grosse Pointe, Mich. Mayo Clinic-Jacksonville, Fla.	78.5 78.1	5 5	5 5	4 5	10,094 8,590	1.5 2.9	Yes Yes	9	1 1	No Yes	0.0 1.5	Yes Yes
	UF Health Shands Hospital, Gainesville, Fla.	78.1	5	5	4	16,130	2.0	Yes	9	1	Yes	1.6	Yes
35	University of Wisconsin Hospitals, Madison	78.0	5	5	4	13,900	2.1	Yes	9	1	Yes	1.4	Yes
36 37	Kaiser Permanente Anaheim and Irvine Med. Centers, Anaheim, Calif. St. Francis Hospital-Roslyn, N.Y.	77.8 77.4	5	5 5	4 5	9,414 22,445	2.7	Yes Yes	9	1 1	No No	0.6	Yes Yes
	NYU Winthrop Hospital, Mineola, N.Y.	77.2	5	5	3	22,991	2.0	Yes	9	1	No	0.9	Yes
39	Montefiore Medical Center, Bronx, N.Y.	75.9	5	5	2	45,771	2.4	Yes	9	0	No	0.6	Yes
40 41	Hoag Memorial Hospital Presbyterian, Newport Beach, Calif. University of Texas MD Anderson Cancer Center, Houston	75.6 75.5	5 5	5 5	4 5	24,173 9,501	2.6 1.8	Yes Yes	9	1 1	No No	0.2	Yes Yes
42	Indiana Úniversity Health Medical Center, Indianapolis	75.4	5	5	3	14,321	2.0	Yes	9	1	Yes	2.6	Yes
43 44	Memorial Sloan Kettering Cancer Center, New York DMC Harper University Hospital, Detroit	75.1 74.8	5 5	5 5	5 2	9,901 5,920	2.2 1.5	Yes Yes	7 8	1	No No	0.0	Yes Yes
45	UCI Medical Center, Orange, Calif.	74.5	5	5	4	7,970	2.0	Yes	8	1	Yes	1.1	Yes
	Jefferson Health-Thomas Jefferson University Hospitals, Philadelphia	74.1	5	5	3	17,604	2.2	Yes	9	1	No	1.6	Yes
47 48	Baylor St. Luke's Medical Center, Houston Scripps La Jolla Hospitals, La Jolla, Calif.	74.0 73.9	5 5	5 5	3 4	13,688 19,684	1.8 3.0	Yes Yes	6 7	1	No No	0.5	Yes Yes
49	University of Alabama at Birmingham Hospital	73.5	5	5	4	14,938	2.1	Yes	8	1	No	5.2	Yes
50	University of Washington Medical Center, Seattle	73.3	5	5	5	6,049	2.2	Yes	9	1	No	1.2	Yes

	Best Hospitals 2020-21:										_		
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Rank	Hospital	U.S.	30-day	Discharging	Pa	Number	Nurse	ICU	Advanced	Patient	æ	Exp	ā
1	Mayo Clinic, Rochester, Minn.	100.0	5	5	5	541	2.7	Yes	5	9	1	12.3	Yes
2	Cleveland Clinic	91.4	5	2	5	273	2.3	Yes	5	9	1	9.4	Yes
3	Memorial Sloan Kettering Cancer Center, New York	87.4	5 5	5 5	5 4	571 506	2.2	Yes	5 5	8	1	5.1	Yes
5	New York-Presbyterian Hospital-Columbia and Cornell, N.Y. Beaumont Hospital-Royal Oak, Mich.	87.1 82.1	5	5	3	290	2.9	Yes Yes	5	9	1	6.9 0.5	Yes Yes
	Massachusetts General Hospital, Boston	80.5	5	3	5	312	2.4	Yes	5	9	1	5.4	Yes
7	Cedars-Sinai Medical Center, Los Angeles	80.2	5	5	4	337	2.7	Yes	5	9	1	1.5	Yes
8	Brigham and Women's Hospital, Boston	79.4	4	5	4	397	2.2	Yes	5	9	1	10.3	Yes
9 10	Inova Fairfax Hospital, Falls Church, Va. Long Island Jewish Medical Center, New Hyde Park, N.Y.	79.3 78.1	5 5	5 5	4 3	647 696	2.0	Yes Yes	5 5	9	0	0.4 1.8	Yes Yes
11	Stanford Health Care-Stanford Hospital, Palo Alto, Calif.	78.0	4	5	4	238	2.7	Yes	5	9	1	3.0	Yes
	University of Chicago Medical Center	77.5	5	3	4	243	2.3	Yes	5	9	1	1.6	Yes
13	Rush University Medical Center, Chicago	77.3	5	5	4	254	2.1	Yes	5	9	1	0.9	Yes
14 15	University of Texas MD Anderson Cancer Center, Houston University of Alabama at Birmingham Hospital	77.2 76.1	5 4	5 5	5 4	485 474	1.8	Yes Yes	5 5	8	1	5.0 2.1	Yes Yes
	UCI Medical Center, Orange, Calif.	75.3	5	4	4	189	2.1	Yes	5	9	1	1.3	Yes
17	Johns Hopkins Hospital, Baltimore	74.2	3	5	5	191	2.2	Yes	5	9	1	8.6	Yes
	Northside Hospital-Atlanta	73.2	4	5	4	391	3.3	Yes	5	7	0	1.8	Yes
18	University of North Carolina Hospitals, Chapel Hill Hospitals of the Univ. of Pennsylvania-Penn Presbyterian, Philadelphia	73.2 72.5	3 4	5 3	4 4	344 255	1.7	Yes Yes	5 5	9	1	5.7 2.9	Yes Yes
21	UCSF Medical Center, San Francisco	72.3	4	3	5	146	2.6	Yes	5	9	1	3.8	Yes
	Barnes-Jewish Hospital, Saint Louis	71.2	3	5	3	626	2.4	Yes	5	9	1	3.7	Yes
23		71.1	4	3	5	278	2.2	Yes	5	9	1	3.3	Yes
24 24	Baylor University Medical Center, Dallas	70.8 70.8	4	3 5	3	313 550	2.0	Yes Yes	5 5	9	1	0.4	Yes Yes
	Christiana Care Hospitals, Newark, Del. Houston Methodist Hospital	70.8	5	3	4	167	2.0	Yes	5	8	1	0.4	Yes
26	UCLA Medical Center, Los Angeles	70.2	3	3	5	297	3.2	Yes	5	9	1	2.8	Yes
	Mayo Clinic-Phoenix	69.5	3	5	5	64	3.1	Yes	5	8	1	2.2	Yes
29	University of Wisconsin Hospitals, Madison NYU Langone Hospitals, New York, N.Y.	69.1 68.8	4 3	3 5	4	521 243	2.1	Yes	5 5	9	1 1	1.0	Yes Yes
31	Scripps La Jolla Hospitals, La Jolla, Calif.	68.0	3	3	4	301	3.0	Yes	5	8	1	1.3	Yes
	Morristown Medical Center, Morristown, N.J.	67.8	5	1	4	348	2.0	Yes	5	9	1	0.2	Yes
33	John Muir Health-Walnut Creek Medical Center, Walnut Creek, Calif.	67.5	4	4	4	299	2.2	Yes	5	8	1	0.0	Yes
34 35	University of Iowa Hospitals and Clinics, Iowa City MUSC Health-University Medical Center, Charleston, S.C.	67.4 66.9	4 3	2 5	3 4	372 338	1.9 2.0	Yes Yes	5 5	9	1	1.2 1.4	Yes Yes
	H. Lee Moffitt Cancer Center and Research Institute, Tampa	66.2	4	5	5	224	1.3	Yes	5	8	1	0.2	Yes
37	Advocate Lutheran General Hospital, Park Ridge, Ill.	64.4	4	2	3	159	1.8	Yes	5	8	1	0.2	Yes
	Hoag Memorial Hospital Presbyterian, Newport Beach, Calif.	64.4	3	5	4	260	2.6	Yes	5	9	1	0.4	Yes
39	University of Michigan Hospitals-Michigan Medicine, Ann Arbor Pennsylvania Hospital, Philadelphia	63.6 63.3	3	4 4	5 4	288 182	2.8	Yes Yes	5 5	9	1 1	4.9 0.4	Yes Yes
41	AdventHealth Orlando	63.0	4	3	4	634	2.2	Yes	5	8	0	0.4	Yes
41	University of Virginia Medical Center, Charlottesville	63.0	3	3	4	247	2.2	Yes	5	9	1	0.7	Yes
43	Prisma Health Greenville Memorial Hospital, Greenville, S.C.	62.3	3	4	3	276	1.3	Yes	5	9	1	0.3	Yes
43 45	Vanderbilt University Medical Center, Nashville, Tenn. Mayo Clinic-Jacksonville, Fla.	62.3 62.0	3	3 5	4 5	172 76	2.2	Yes	5 5	9	1	3.8	Yes
	UC San Diego Health-Jacobs Medical Center	61.7	3	5	4	163	2.9	Yes Yes	5	9	1	1.2 2.8	Yes Yes
47	UPMC Magee-Womens Hospital, Pittsburgh	60.6	3	3	4	595	1.0	Yes	5	9	1	4.9	Yes
	Avera McKennan Hospital and Univ. Health Center, Sioux Falls, S.D.	60.5	3	3	3	214	2.4	Yes	5	8	1	0.1	Yes
49 50	Indiana University Health Medical Center, Indianapolis Baptist Medical Center Jacksonville, Fla.	59.8 59.7	3	3 5	3 4	244 382	2.0	Yes Yes	5 5	9	1 1	0.7	Yes Yes
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	Best Hospitals 2020-21:											<u>_</u>		
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Rank	Hospital		30		Ра	Ž	ž	152	A	Ъа	Ë	2	Ä	
1	Mayo Clinic, Rochester, Minn.	100.0	5	5	5	1,879	2.7	Yes	7	8	Yes	1	24.9	Yes
2	New York-Presbyterian Hospital-Columbia and Cornell, N.Y.	89.0	5	5	4	3,703	2.9	Yes	7	8	Yes	1	14.9	Yes
3	UCLA Medical Center, Los Angeles	88.9	5	5	5	1,153	3.2	Yes	7	8	Yes	1	8.6	Yes
4 5	Johns Hopkins Hospital, Baltimore Cleveland Clinic	88.2 86.1	5 5	5	5	1,246 2,223	2.2	Yes	7	8	Yes No	1 1	14.4	Yes
6	Brigham and Women's Hospital, Boston	78.6	5	5	4	1,209	2.3	Yes	7	8	Yes	1	9.1	Yes
7	Massachusetts General Hospital, Boston	77.8	5	5	5	1,478	2.4	Yes	7	8	Yes	1	11.4	Yes
8	UCSF Medical Center, San Francisco	77.4	5	5	5	912	2.6	Yes	7	8	Yes	1	9.8	Yes
9	Cedars-Sinai Medical Center, Los Angeles	76.0	5	5	4	1,701	2.7	Yes	7	8	Yes	1	3.2	Yes
	Vanderbilt University Medical Center, Nashville, Tenn.	72.7	5	5	4	1,484	2.2	Yes	7	8	Yes	1	8.8	Yes
11	Rush University Medical Center, Chicago Mount Sinai Hospital, New York	71.3 71.1	5 5	5 5	4	822 1,802	2.1	Yes	7	8	Yes Yes	1	2.2 4.7	Yes Yes
13	Northwestern Memorial Hospital, Chicago	68.8	5	5	4	1,657	1.9	Yes	7	8	Yes	1	2.5	Yes
	Stanford Health Care-Stanford Hospital, Palo Alto, Calif.	68.1	5	5	4	876	2.7	Yes	7	8	Yes	1	5.2	Yes
	Hospitals of the Univ. of Pennsylvania-Penn Presbyterian, Philadelphia	68.0	5	5	4	1,309	2.6	Yes	7	8	Yes	1	5.6	Yes
	NYU Langone Hospitals, New York, N.Y.	67.9	5	5	3	1,808	2.5	Yes	7	8	Yes	1	2.8	Yes
17	University of Michigan Hospitals-Michigan Medicine, Ann Arbor	67.3	5	5	5	1,461	2.8	Yes	7	8	Yes	1	3.2	Yes
18	UT Southwestern Medical Center, Dallas	65.2 64.5	5 5	5 5	4	1,502 1,332	2.0	Yes	7	8	No Yes	1	1.8 5.1	Yes
	Duke University Hospital, Durham, N.C. Houston Methodist Hospital	64.5	5	5	4	1,502	2.1	Yes	7	8	No	1	1.1	Yes
21	Keck Medical Center of USC, Los Angeles	64.3	5	5	4	1,095	3.2	Yes	7	8	Yes	1	2.4	Yes
	Beaumont Hospital-Royal Oak, Mich.	61.7	5	5	3	2,340	2.0	Yes	7	8	Yes	1	0.5	Yes
23	University of Chicago Medical Center	61.4	5	5	4	1,108	2.3	Yes	7	8	Yes	1	2.8	Yes
24	Barnes-Jewish Hospital, Saint Louis	61.2	5	5	3	1,689	2.4	Yes	7	8	Yes	1	4.2	Yes
25	University Hospitals Cleveland Medical Center	60.3	5	3	3	1,035	2.5	Yes	7	8	Yes	1	1.9	Yes
26 27	Mount Sinai Morningside and Mount Sinai West Hospitals, New York Memorial Sloan Kettering Cancer Center, New York	59.9 59.8	5 5	5	3 5	1,185 1,484	2.0	Yes	7 6	8	Yes No	0	0.8	Yes
	Emory University Hospital, Atlanta	59.5	5	5	4	1,319	2.2	Yes	7	8	No	1	1.6	Yes
29	University of Alabama at Birmingham Hospital	59.4	4	5	4	1,049	2.1	Yes	7	8	Yes	1	4.9	Yes
	Parkland Health and Hospital System-Dallas	59.1	5	5	4	368	1.8	Yes	7	7	Yes	0	0.2	Yes
30	UC Davis Medical Center, Sacramento, Calif.	59.1	5	5	4	896	2.6	Yes	7	8	Yes	1	0.8	Yes
	Ohio State University Wexner Medical Center, Columbus	59.0	5	5	3	1,648	2.2	Yes	7	7	Yes	1	3.5	Yes
33 34	UF Health Shands Hospital, Gainesville, Fla. UC San Diego Health-Jacobs Medical Center	58.6 58.3	5 5	5 5	4	1,380 713	2.0	Yes Yes	7 7	8	Yes Yes	1	2.5	Yes Yes
35	Mayo Clinic-Phoenix	58.2	5	5	5	1,095	3.1	Yes	7	8	No	1	2.2	Yes
	Yale-New Haven Hospital, New Haven, Conn.	58.2	5	5	3	2,621	2.0	Yes	7	8	Yes	1	3.0	Yes
37	Loyola University Medical Center, Maywood, Ill.	58.1	5	5	3	943	2.5	Yes	7	8	Yes	1	1.1	Yes
38	University of Kansas Hospital, Kansas City	57.4	5	5	5	1,320	2.2	Yes	7	8	Yes	1	0.9	Yes
39	University of North Carolina Hospitals, Chapel Hill	57.0	3	5	4	1,079	1.7	Yes	7	8	Yes	1	5.2	Yes
	NYU Winthrop Hospital, Mineola, N.Y. UPMC Presbyterian Shadyside, Pittsburgh	56.4 56.4	5 3	5	3	1,055 2,195	2.0	Yes	6 7	8	Yes	1 1	0.7 3.4	Yes Yes
	Montefiore Medical Center, Bronx, N.Y.	56.3	5	5	2	2,193	2.4	Yes	7	8	Yes	0	0.7	Yes
	UCI Medical Center, Orange, Calif.	56.0	5	5	4	589	2.0	Yes	7	8	Yes	1	1.1	Yes
44	Tampa General Hospital	55.9	5	5	4	1,315	2.5	Yes	7	8	Yes	1	0.6	Yes
	UCHealth University of Colorado Hospital, Aurora	55.8	5	5	4	873	2.0	Yes	7	8	Yes	1	2.2	Yes
	AdventHealth Orlando	55.1	5	5	4	5,166	2.2	Yes	7	8	No	0	0.1	Yes
46	DMC Harper University Hospital, Detroit North Shore University Hospital, Manhasset, N.Y.	55.1	5	5	2	600	1.5	Yes	7	8	No	1	0.0	Yes
48	University of Washington Medical Center, Seattle	55.0 54.9	5 4	5	3 5	1,601 763	2.1	Yes Yes	7	8	Yes No	1	1.0	Yes Yes
50	Beaumont Hospital-Grosse Pointe, Mich.	54.8	5	5	4	569	1.5	Yes	6	8	No	1	0.0	Yes
	John Muir Health-Walnut Creek Medical Center, Walnut Creek, Calif.	54.8	5	5	4	666	2.2	Yes	6	8	Yes	1	0.1	Yes

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	Hospital	100.0	ო 5	5	5	2 ,903	2.2		⋖ 5	9		1			1		
2	Johns Hopkins Hospital, Baltimore UCSF Medical Center, San Francisco	100.0 98.9	5	5	5	2,382	2.6	Yes	5	9	Yes Yes	1	Yes	Yes Yes	1	23.8	Yes Yes
3	New York-Presbyterian Hospital-Columbia and Cornell, N.Y.	96.1	5	5	4	9,204	2.9	Yes	5	9	Yes	1	Yes	Yes	1	13.2	Yes
4	Rush University Medical Center, Chicago	94.0	5	5	4	2,807	2.1	Yes	5	9	Yes	1	Yes	Yes	1	2.0	Yes
5 6	Northwestern Memorial Hospital, Chicago NYU Langone Hospitals, New York, N.Y.	93.6 93.5	5 5	5 5	4	2,878 4,320	1.9 2.5	Yes	5 5	9	Yes Yes	1	Yes Yes	Yes Yes	1	3.0	Yes Yes
7	Mayo Clinic, Rochester, Minn.	92.0	5	5	5	4,773	2.7	Yes	5	9	Yes	1	Yes	Yes	1	31.7	Yes
	UCLA Medical Center, Los Angeles	90.3	5	5	5	2,987	3.2	Yes	5	9	Yes	1	Yes	No	1	8.7	Yes
9 10	Cleveland Clinic Cedars-Sinai Medical Center, Los Angeles	89.7 86.7	5 5	5 5	5 4	4,002 3,967	2.3	Yes	5 5	9	No Yes	1	Yes	Yes No	1	15.7 1.5	Yes Yes
11	Stanford Health Care-Stanford Hospital, Palo Alto, Calif.	83.7	5	5	4	2,449	2.7	Yes	5	9	Yes	1	Yes	Yes	1	5.9	Yes
12	Mount Sinai Hospital, New York	82.7	5	5	3	3,429	2.2	Yes	5	9	Yes	1	Yes	Yes	1	2.5	Yes
	Massachusetts General Hospital, Boston	80.4	4	5	5	5,005	2.4	Yes	5	9	Yes	1	Yes	Yes	1	21.0	Yes
	Brigham and Women's Hospital, Boston University of Michigan Hospitals-Michigan Medicine, Ann Arbor	79.5 78.7	5 5	5 5	5	4,213 2,812	2.2	Yes	5 5	9	Yes Yes	1 1	Yes	Yes	1	5.2 4.9	Yes Yes
	Barnes-Jewish Hospital, Saint Louis	76.5	5	5	3	4,817	2.4	Yes	5	9	Yes	1	Yes	Yes	1	7.3	Yes
	UT Southwestern Medical Center, Dallas	76.3	5	5	4	2,460	2.0	Yes	5	9	No	1	Yes	No	1	2.6	Yes
18	Hospitals of the Univ. of Pennsylvania-Penn Presbyterian, Philadelphia Keck Medical Center of USC, Los Angeles	75.4 75.1	5 5	1 5	4	3,998 973	2.6 3.2	Yes	5 5	9	Yes Yes	1	Yes	Yes Yes	1	7.8	Yes Yes
	Emory University Hospital, Atlanta	74.0	5	5	4	2,698	2.2	Yes	5	9	No	1	Yes	Yes	1	4.3	Yes
21	Baylor St. Luke's Medical Center, Houston	73.6	5	5	3	2,761	1.8	Yes	5	8	No	1	Yes	No	1	1.7	Yes
	UC San Diego Health-Jacobs Medical Center Houston Methodist Hospital	72.7 72.5	5 5	5 5	4	1,812 4,008	2.0	Yes	5 5	9	Yes No	1	Yes	Yes No	1	1.7	Yes Yes
	UPMC Presbyterian Shadyside, Pittsburgh	72.1	5	5	4	7,513	2.2	Yes	5	9	Yes	1	Yes	Yes	1	3.6	Yes
	Mayo Clinic-Jacksonville, Fla.	71.5	5	5	5	1,763	2.9	Yes	5	9	No	1	Yes	Yes	0	3.9	Yes
	Barrow Neurological Institute, Phoenix Hoag Memorial Hospital Presbyterian, Newport Beach, Calif.	71.0	5 5	5 5	4	6,104 3,224	2.1	Yes	5 5	9	Yes No	1	Yes	No No	1	0.3	Yes Yes
	Long Island Jewish Medical Center, New Hyde Park, N.Y.	69.3	5	5	3	4,493	1.6	Yes	5	9	Yes	1	Yes	No	1	0.5	Yes
29	Duke University Hospital, Durham, N.C.	69.1	5	5	4	3,643	2.1	Yes	5	9	Yes	1	Yes	No	1	5.0	Yes
	Jefferson Health-Thomas Jefferson University Hospitals, Philadelphia	68.5 68.5	5 5	5 5	3 5	4,724 2,911	2.2	Yes	5 5	9	Yes Yes	1 1	Yes	No Yes	1	2.2 1.1	Yes Yes
	University of Kansas Hospital, Kansas City Yale-New Haven Hospital, New Haven, Conn.	68.2	5	5	3	5,450	2.2	Yes	5	9	Yes	1	Yes	Yes	1	2.2	Yes
33	Beaumont Hospital-Grosse Pointe, Mich.	68.0	5	5	4	887	1.5	Yes	5	9	No	1	No	No	1	0.0	Yes
	Ohio State University Wexner Medical Center, Columbus	67.9	5 5	5	3	4,443	2.2	Yes	5 5	8	Yes	1	Yes	No	1	1.2	Yes
	University Hospitals Cleveland Medical Center North Shore University Hospital, Manhasset, N.Y.	67.7 66.8	5	2 5	3	3,587 4,532	2.5 2.1	Yes	5	9	Yes Yes	1	Yes	No No	1	1.5	Yes
37	OHSU Hospital, Portland, Ore.	66.7	5	5	5	2,331	2.2	Yes	5	9	Yes	1	Yes	Yes	1	0.8	Yes
	UC Davis Medical Center, Sacramento, Calif. Kaiser Permanente Los Angeles Medical Center	66.7	5	5	4	1,897	2.6	Yes	5	9	Yes	1	Yes	Yes	1	0.9	Yes
	UCHealth University of Colorado Hospital, Aurora	65.9 65.9	5 5	5 5	4	3,042 1,855	2.5	Yes Yes	5 5	9	No Yes	0	Yes	No No	1	0.3	Yes Yes
41	Ochsner Medical Center, New Orleans	65.7	5	5	3	4,346	1.7	Yes	5	9	Yes	1	Yes	No	1	0.6	Yes
	Stony Brook University Hospital, Stony Brook, N.Y.	65.7	5	5	3	3,505	2.0	Yes	5	9	Yes	0	Yes	No	1	0.4	Yes
	Beaumont Hospital-Royal Oak, Mich. Lenox Hill Hospital, New York	65.6 65.4	5 5	5 5	3	5,124 1,726	2.0	Yes Yes	5 5	9	Yes No	0	Yes Yes	No No	0	0.1	Yes Yes
44	Montefiore Medical Center, Bronx, N.Y.	65.4	5	5	2	5,668	2.4	Yes	5	9	Yes	0	Yes	No	1	0.4	Yes
	University of Wisconsin Hospitals, Madison	65.4	5	5	4	3,162	2.1	Yes	5	9	Yes	1	Yes	Yes	1	0.3	Yes
	Cleveland Clinic Fairview Hospital, Cleveland AdventHealth Orlando	65.1 64.3	5 5	3 5	4	1,879 9,965	1.9 2.2	Yes Yes	5 5	9	Yes No	0	No Yes	No No	1	0.5	Yes Yes
48	Scripps La Jolla Hospitals, La Jolla, Calif.	64.3	5	5	4	2,748	3.0	Yes	5	7	Yes	1	No	No	1	0.1	Yes
50	Loyola University Medical Center, Maywood, Ill.	64.1	5	5	3	1,791	2.5	Yes	5	9	Yes	1	Yes	No	1	1.0	Yes

Rank F	Orthopedics	News Specialty Score	30-day survival	patients to home					vs			as Nurse Magnet hospital		
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	Hospital for Special Surgery, New York Mayo Clinic, Rochester, Minn.	80.7	5	5	5	6,491 6,363	3.8 2.7	Yes	2	7	Yes	1	25.4 24.1	Yes
	Cedars-Sinai Medical Center, Los Angeles	78.2	5	5	4	4,710	2.7	Yes	2	7	Yes	1	2.1	Yes
	IYU Langone Orthopedic Hospital, New York Rush University Medical Center, Chicago	69.1 67.3	5 5	5	3 4	5,316 2,887	2.5 2.1	Yes Yes	2	7	Yes Yes	1	6.8	Yes Yes
	New York-Presbyterian Hospital-Columbia and Cornell, N.Y.	65.6	5	1	4	6,028	2.9	Yes	2	7	Yes	1	2.8	Yes
7 U	JCLA Medical Center, Los Angeles	65.5	5	5	5	1,884	3.2	Yes	2	7	Yes	1	3.5	Yes
	Massachusetts General Hospital, Boston Cleveland Clinic	64.5 62.3	5 5	1	5 5	3,517 3,496	2.4	Yes Yes	2	7	Yes No	1	8.5 12.1	Yes Yes
	Scripps La Jolla Hospitals, La Jolla, Calif.	62.2	5	5	4	4,411	3.0	Yes	2	6	Yes	1	1.3	Yes
	Beaumont Hospital-Royal Oak, Mich.	61.6	5	3	3	5,155	2.0	Yes	2	7	Yes	1	0.9	Yes
	Stanford Health Care-Stanford Hospital, Palo Alto, Calif. Houston Methodist Hospital	60.6	5 5	4 5	4	3,224 3,501	2.7	Yes Yes	2	7	Yes No	1	3.7 1.4	Yes Yes
	NYU Winthrop Hospital, Mineola, N.Y.	59.6	5	4	3	1,603	2.0	Yes	2	7	Yes	1	0.5	Yes
	Northwestern Memorial Hospital, Chicago	58.5	5 5	5	4	2,000	1.9	Yes	2	7	Yes	1	3.4	Yes
	JCSF Medical Center, San Francisco Rothman Institute at Thomas Jefferson Univ. Hospital, Philadelphia	58.5 58.2	3	1 3	5 3	2,937 5,545	2.6	Yes Yes	2	7	Yes Yes	1	7.0	Yes
18 N	lew England Baptist Hospital, Boston	57.9	5	1	5	3,463	1.9	Yes	2	7	No	1	1.4	Yes
	ampa General Hospital JPMC Presbyterian Shadyside, Pittsburgh	57.8 57.8	5 5	5 5	4	2,582 4,646	2.5	Yes Yes	2	7	Yes Yes	1	1.0 3.6	Yes
	Beaumont Hospital-Troy, Mich.	56.5	5	3	4	3,755	1.7	Yes	2	7	Yes	1	0.2	Yes
	Duke University Hospital, Durham, N.C.	56.3	3	5	4	2,782	2.1	Yes	2	7	Yes	1	7.4	Yes
	Mayo Clinic-Phoenix Mount Sinai Hospital, New York	56.2 55.9	5 5	5 5	5 3	1,699 2,666	3.1	Yes Yes	2	7	No Yes	1	2.4	Yes
	North Shore University Hospital, Manhasset, N.Y.	55.9	5	3	3	3,842	2.1	Yes	2	7	Yes	1	0.5	Yes
	ohn Muir Health-Walnut Creek Medical Center, Walnut Creek, Calif.	55.1	5	5	4	2,065	2.2	Yes	2	6 7	Yes	1	0.1	Yes
	Jniversity of Wisconsin Hospitals, Madison Morristown Medical Center, Morristown, N.J.	55.1 55.0	5 5	4	4	2,445 3,300	2.1	Yes Yes	2	7	Yes Yes	1	0.4	Yes
29 U	Iniversity of Michigan Hospitals-Michigan Medicine, Ann Arbor	54.9	5	2	5	1,841	2.8	Yes	2	7	Yes	1	2.0	Yes
	Keck Medical Center of USC, Los Angeles Brigham and Women's Hospital, Boston	54.7 54.5	4 5	5	4	1,438 2,831	3.2 2.2	Yes Yes	2	7	Yes Yes	1	1.6 3.9	Yes Yes
	JC Davis Medical Center, Sacramento, Calif.	54.2	5	5	4	1,791	2.6	Yes	2	7	Yes	1	1.0	Yes
	University of Chicago Medical Center	54.2	5	1	4	1,005	2.3	Yes	2	7	Yes	1	1.4	Yes
	ohns Hopkins Hospital, Baltimore Cleveland Clinic Hillcrest Hospital	54.1 53.6	3 5	5	5 4	1,735 1,643	2.2 1.7	Yes Yes	2	7	Yes Yes	1	5.9 0.4	Yes Yes
35 H	loag Orthopedic Institute, Irvine, Calif.	53.6	5	5	4	4,153	2.6	Yes	2	7	No	1	1.0	Yes
	Cleveland Clinic Fairview Hospital, Cleveland	53.4	5	1	4	1,149	1.9	Yes	2	7	Yes	1	0.1	Yes
	Northwestern Lake Forest Hospital, Lake Forest, III. JCHealth University of Colorado Hospital, Aurora	53.3	5 5	3	4	2,068	2.0	Yes Yes	2	7	Yes Yes	1	1.6	Yes Yes
40 L	ancaster General Hospital, Lancaster, Pa.	52.1	5	5	3	3,628	1.5	Yes	2	6	Yes	1	0.0	Yes
	Hospitals of the Univ. of Pennsylvania-Penn Presbyterian, Philadelphia Penn State Health Milton S. Hershey Medical Center, Hershey, Pa.	52.0 51.7	3 5	1 5	4	2,482 1,891	2.6 1.9	Yes Yes	2	7	Yes Yes	1	4.7 0.6	Yes Yes
	JC San Diego Health-Jacobs Medical Center	51.7	4	5	4	1,565	2.0	Yes	2	7	Yes	1	2.3	Yes
42 U	University of Washington Medical Center, Seattle	51.7	4	5	5	885	2.2	Yes	2	7	No	1	1.8	Yes
	JF Health Shands Hospital, Gainesville, Fla. JT Southwestern Medical Center, Dallas	51.6 51.6	5 5	3 5	4	2,393 2,059	2.0	Yes Yes	2	7	Yes No	1	0.8	Yes
	ong Island Jewish Medical Center, New Hyde Park, N.Y.	51.1	5	3	3	2,386	1.6	Yes	2	7	Yes	1	0.5	Yes
48 H	Huntington Hospital, Huntington, N.Y.	51.0	5	1	3	1,511	1.7	Yes	2	7	Yes	1	0.1	Yes
	Stony Brook University Hospital, Stony Brook, N.Y. Yale-New Haven Hospital, New Haven, Conn.	50.8 50.5	5 5	5	3	2,073 3,818	2.0	Yes Yes	2	7	Yes Yes	0	0.5	Yes Yes

	Best Hospitals 2020-21:											_		
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Rank	Hospital	5;	30	Dis	Pa	Number	Nurs	ICU	PΑ	Pa	Ta	æ	Ä	Ī
1	Mayo Clinic, Rochester, Minn.	100.0	5	5	5	8,031	2.7	Yes	6	8	Yes	1	22.6	Yes
2	National Jewish Health, Denver-Univ. of Colorado Hospital, Aurora Cedars-Sinai Medical Center, Los Angeles	95.9 91.4	5 5	5 5	4	3,744 9,072	2.0	Yes Yes	6	8	Yes Yes	1 1	36.3 2.0	Yes Yes
4	Cleveland Clinic	89.7	5	5	5	5,587	2.7	Yes	6	8	No	1	17.5	Yes
5	UCLA Medical Center, Los Angeles	89.0	5	5	5	6,877	3.2	Yes	6	8	Yes	1	7.0	Yes
6	Mayo Clinic-Phoenix	84.7 84.6	5 5	5 5	5	4,079 3,179	3.1 2.2	Yes	5	8	No	1	2.8 17.4	Yes
8	Johns Hopkins Hospital, Baltimore University of Michigan Hospitals-Michigan Medicine, Ann Arbor	83.0	5	5	5 5	4,681	2.2	Yes Yes	6	8	Yes Yes	1	5.8	Yes Yes
9	UCSF Medical Center, San Francisco	81.7	5	5	5	3,290	2.6	Yes	6	8	Yes	1	11.8	Yes
10 11	UC San Diego Health-Jacobs Medical Center	81.2 81.1	5 5	5	3	3,853 9,419	2.0	Yes Yes	6	8	Yes Yes	1	5.7 4.3	Yes Yes
	NYU Langone Hospitals, New York, N.Y. Keck Medical Center of USC, Los Angeles	80.6	5	5	4	1,063	3.2	Yes	6	8	Yes	1	1.6	Yes
13	Hospitals of the Univ. of Pennsylvania-Penn Presbyterian, Philadelphia	80.5	5	5	4	6,361	2.6	Yes	6	8	Yes	1	10.0	Yes
	Northwestern Memorial Hospital, Chicago	80.5 80.3	5 5	5	4	4,437 16,559	1.9	Yes	6	8	Yes	1	1.8 9.0	Yes
15 16	New York-Presbyterian Hospital-Columbia and Cornell, N.Y. Brigham and Women's Hospital, Boston	79.6	5	5	4	5,605	2.9 2.2	Yes Yes	6	8	Yes Yes	1	7.3	Yes Yes
17	Massachusetts General Hospital, Boston	79.2	5	5	5	7,328	2.4	Yes	6	8	Yes	1	11.4	Yes
	Stanford Health Care-Stanford Hospital, Palo Alto, Calif.	76.8	5	5	4	3,891	2.7	Yes	6	8	Yes	1	3.7	Yes
19 20	Kaiser Permanente Anaheim and Irvine Med. Centers, Anaheim, Calif. Houston Methodist Hospital	76.0 75.9	5 5	5	4	5,668 6,478	2.7 2.0	Yes Yes	5 6	8	No No	1	0.7	Yes Yes
21	Barnes-Jewish Hospital, Saint Louis	74.2	5	5	3	5,733	2.4	Yes	6	8	Yes	1	7.6	Yes
21	Beaumont Hospital-Royal Oak, Mich.	74.2	5	5	3	10,249	2.0	Yes	5	8	Yes	1	0.7	Yes
	North Shore University Hospital, Manhasset, N.Y. Memorial Sloan Kettering Cancer Center, New York	74.1 73.4	5 5	5	3 5	10,770 4,640	2.1	Yes Yes	5 5	8	Yes No	1	1.1 1.4	Yes Yes
25	Ohio State University Wexner Medical Center, Columbus	73.1	5	5	3	7,172	2.2	Yes	6	7	Yes	1	1.4	Yes
	University of Alabama at Birmingham Hospital	73.1	5	5 5	4	5,384	2.1	Yes	6	8	Yes	1	2.6	Yes
	Mount Sinai Hospital, New York Vanderbilt University Medical Center, Nashville, Tenn.	72.0 71.8	5 5	5	4	7,972 4,811	2.2	Yes Yes	5 6	8	Yes Yes	1	3.7 6.7	Yes Yes
29	UC Davis Medical Center, Sacramento, Calif.	71.7	5	5	4	3,882	2.6	Yes	5	8	Yes	1	0.7	Yes
	Rush University Medical Center, Chicago	71.3	5 5	5	4	2,902	2.1	Yes	5 5	8	Yes	1	0.6	Yes
	Yale-New Haven Hospital, New Haven, Conn. Duke University Hospital, Durham, N.C.	71.1 70.9	5	5	3	12,312 5,353	2.0 2.1	Yes Yes	6	8	Yes Yes	1	2.5 8.8	Yes Yes
33	Hoag Memorial Hospital Presbyterian, Newport Beach, Calif.	70.8	5	5	4	8,331	2.6	Yes	5	8	No	1	1.1	Yes
	UT Southwestern Medical Center, Dallas NYU Winthrop Hospital, Mineola, N.Y.	70.6	5	5	4	3,829	2.0	Yes	6	8	No	1	1.4	Yes
35 36	Jefferson Health-Thomas Jefferson University Hospitals, Philadelphia	70.3 70.1	5 5	5	3	5,768 4,933	2.0	Yes Yes	5 5	8	Yes Yes	1	1.4 1.6	Yes Yes
37	John Muir Health-Walnut Creek Medical Center, Walnut Creek, Calif.	69.8	5	5	4	4,878	2.2	Yes	5	8	Yes	1	0.0	Yes
37 37	OHSU Hospital, Portland, Ore. UF Health Shands Hospital, Gainesville, Fla.	69.8	5 5	5 5	5 4	2,113	2.2	Yes	5	8	Yes	1	0.4	Yes
	Northwestern Lake Forest Hospital, Lake Forest, Ill.	69.8 69.5	5	5	4	6,057 1,641	2.0	Yes Yes	6 5	8	Yes Yes	1	1.3	Yes Yes
41	UPMC Presbyterian Shadyside, Pittsburgh	69.3	5	5	4	7,594	2.2	Yes	6	8	Yes	1	7.7	Yes
	University of Kansas Hospital, Kansas City St. Cloud Hospital, St. Cloud, Minn.	69.2 68.9	5 5	5 5	5 4	4,420 5,838	2.2 1.9	Yes Yes	5 5	8	Yes Yes	1	1.3 0.0	Yes Yes
	Beaumont Hospital-Grosse Pointe, Mich.	68.6	5	5	4	2,997	1.5	Yes	5	8	No	1	0.0	Yes
45	Loyola University Medical Center, Maywood, Ill.	68.3	5	5	3	3,131	2.5	Yes	6	8	Yes	1	1.1	Yes
46 47	Avera McKennan Hospital and Univ. Health Center, Sioux Falls, S.D. Cleveland Clinic Hillcrest Hospital	68.0 67.4	5 5	5 5	3	3,793 5,724	2.4 1.7	Yes	5 5	8	Yes Yes	1	0.0	Yes Yes
	University of Washington Medical Center, Seattle	67.4	5	5	5	1,922	2.2	Yes Yes	6	8	No	1	4.4	Yes
49	St. Francis Hospital-Roslyn, N.Y.	67.1	5	5	5	4,208	2.0	Yes	5	8	No	1	0.3	Yes
49	University of Chicago Medical Center	67.1	5	5	4	3,025	2.3	Yes	6	8	Yes	1	2.6	Yes

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Rank	Hospital	_ _	3	ă	Pa	Ž	Nurs	ICO	Ā	Pa	ㅁㅁ	æ	Ä	3
1	Mayo Clinic, Rochester, Minn.	100.0	5	5	5	1,623	2.7	Yes	6	9	Yes	1	25.0	Yes
2	Memorial Sloan Kettering Cancer Center, New York Johns Hopkins Hospital, Baltimore	90.1 87.8	5 5	5 5	5 5	943 1,156	2.2	Yes Yes	6	8	No Yes	1 1	8.2 21.9	Yes Yes
4	Cleveland Clinic	86.8	5	5	5	1,516	2.3	Yes	6	9	No	1	29.6	Yes
5	New York-Presbyterian Hospital-Columbia and Cornell, N.Y.	85.9	5	5	4	2,061	2.9	Yes	6	9	Yes	1	6.2	Yes
6 7	University of Texas MD Anderson Cancer Center, Houston UCSF Medical Center, San Francisco	85.3 82.2	5 5	5 5	5 5	1,707 815	1.8 2.6	Yes Yes	6	8	No Yes	1	9.6 8.6	Yes Yes
8	UCLA Medical Center, Los Angeles	80.7	5	5	5	801	3.2	Yes	6	9	Yes	1	10.4	Yes
9	Keck Medical Center of USC, Los Angeles	80.4	5	5	4	1,275	3.2	Yes	6	9	Yes	1	7.7	Yes
	University of Michigan Hospitals-Michigan Medicine, Ann Arbor Cedars-Sinai Medical Center, Los Angeles	79.6 78.9	5 5	5 5	5 4	1,025 1,118	2.8	Yes Yes	6	9	Yes	1 1	7.6 1.1	Yes
11 12	Northwestern Memorial Hospital, Chicago	76.7	5	5	4	1,116	2.7 1.9	Yes	6	9	Yes	1	3.6	Yes
13	Mayo Clinic-Phoenix	74.3	5	5	5	750	3.1	Yes	6	8	No	1	3.0	Yes
	NYU Langone Hospitals, New York, N.Y.	71.7	5	5	3	1,070	2.5	Yes	6	9	Yes	1	4.9	Yes
14 16	Vanderbilt University Medical Center, Nashville, Tenn. Massachusetts General Hospital, Boston	71.7 71.2	4 5	4	4	1,117 1,150	2.2 2.4	Yes Yes	6	9	Yes Yes	1 1	8.3 3.7	Yes
17	UF Health Shands Hospital, Gainesville, Fla.	70.1	5	5	4	660	2.0	Yes	6	9	Yes	1	1.3	Yes
	NYU Winthrop Hospital, Mineola, N.Y.	68.7	5	5	3	677	2.0	Yes	6	9	Yes	1	0.7	Yes
19 20	Beaumont Hospital-Royal Oak, Mich. Long Island Jewish Medical Center, New Hyde Park, N.Y.	68.2 67.4	5 5	5 5	3	1,059 1,515	2.0 1.6	Yes Yes	6	9	Yes Yes	1 1	1.8 1.1	Yes
	Mount Sinai Hospital, New York	67.0	5	5	3	1,482	2.2	Yes	6	9	Yes	1	3.6	Yes
	University of Chicago Medical Center	66.9	5	5	4	967	2.3	Yes	6	9	Yes	1	2.5	Yes
	Sentara Norfolk General Hospital, Norfolk, Va. UCI Medical Center, Orange, Calif.	66.7 66.4	5 5	5	3	556 391	1.6 2.0	Yes Yes	6	9	Yes Yes	1 1	1.2	Yes
	UT Southwestern Medical Center, Dallas	66.1	5	5	4	1,211	2.0	Yes	6	9	No	1	4.6	Yes
	University Hospitals Cleveland Medical Center	65.9	5	3	3	595	2.5	Yes	6	9	Yes	1	1.2	Yes
	Hospitals of the Univ. of Pennsylvania-Penn Presbyterian, Philadelphia Stanford Health Care-Stanford Hospital, Palo Alto, Calif.	65.3 65.3	4	4 5	4	1,173 672	2.6 2.7	Yes Yes	6	9	Yes	1	3.1	Yes
29	Fox Chase Cancer Center, Philadelphia	65.1	5	5	4	630	1.4	Yes	6	9	No	1	1.0	Yes
	Montefiore Medical Center, Bronx, N.Y.	65.0	5	5	2	1,210	2.4	Yes	6	9	Yes	0	0.4	Yes
	UC Davis Medical Center, Sacramento, Calif. Emory University Hospital, Atlanta	64.9 64.8	5 5	5 5	4	591 605	2.6 2.2	Yes Yes	6	8	Yes No	1 1	1.7 1.6	Yes
	Scripps La Jolla Hospitals, La Jolla, Calif.	64.8	5	5	4	405	3.0	Yes	6	8	Yes	1	0.2	Yes
34	Duke University Hospital, Durham, N.C.	64.2	3	5	4	945	2.1	Yes	6	8	Yes	1	6.9	Yes
35 36	UPMC Presbyterian Shadyside, Pittsburgh Barnes-Jewish Hospital, Saint Louis	63.8 63.7	4	4	4	1,146 692	2.2	Yes Yes	6 6	9	Yes Yes	1 1	2.0	Yes
36	UC San Diego Health-Jacobs Medical Center	63.7	4	5	4	599	2.4	Yes	6	9	Yes	1	1.9	Yes
38	North Shore University Hospital, Manhasset, N.Y.	63.6	5	5	3	898	2.1	Yes	6	9	Yes	1	0.9	Yes
39 40	Brigham and Women's Hospital, Boston West Virginia University Hospitals, Morgantown, W.Va.	63.1	4	5 4	4	882 375	2.2	Yes Yes	6	9	Yes Yes	1	2.9	Yes
41	Mayo Clinic-Jacksonville, Fla.	62.8	4	5	5	545	2.2	Yes	6	8	No	1	2.4	Yes
42	University of Kansas Hospital, Kansas City	62.7	4	4	5	792	2.2	Yes	6	9	Yes	1	2.3	Yes
43	Beaumont Hospital-Troy, Mich. Cleveland Clinic Fairview Hospital, Cleveland	62.4	5 5	5	4	740 473	1.7	Yes	6 6	9	Yes	1	0.3	Yes
44	MemorialCare Long Beach Medical Center, Long Beach, Calif.	62.1 62.1	5	4	4	473 327	1.9 2.0	Yes Yes	6	9	Yes Yes	1 1	0.3	Yes
46	Ohio State University Wexner Medical Center, Columbus	61.9	5	4	3	810	2.2	Yes	6	8	Yes	1	1.2	Yes
	VCU Medical Center, Richmond, Va.	61.9	5	3	4	339	1.9	Yes	6	9	Yes	1	0.3	Yes
48 48	Beaumont Hospital-Grosse Pointe, Mich. Miriam Hospital, Providence, R.I.	61.7	5 5	5 5	4	302 566	1.5 1.4	Yes Yes	6 6	9	No No	1 1	0.0	Yes Yes
	Oroville Hospital, Oroville, Calif.	61.6	5	5	i	341	1.5	Yes	6	9	No	Ō	0.0	Yes

Appendix F 2020-21 Best Hospitals Rankings, Expert Opinion-Based Specialties

Best Hospitals 2020-21: Ophthalmology

Rank	Hospital	Expert Opinion (%)
1	Bascom Palmer Eye Institute-Univ. of Miami Hospital and Clinics, Miami	49.1
2	Wills Eye Hospital, Thomas Jefferson University Hospital, Philadelphia	45.2
3	Wilmer Eye Institute, Johns Hopkins Hospital, Baltimore	35.0
4	Mass. Eye and Ear Infirmary, Mass. General Hospital, Boston	26.2
5	Stein and Doheny Eye Institutes, UCLA Medical Center, Los Angeles	20.9
6	University of Iowa Hospitals and Clinics, Iowa City	13.5
7	Duke University Hospital, Durham, N.C.	13.1
8	Kellogg Eye Center-Michigan Medicine, Ann Arbor	9.1
9	UCSF Medical Center, San Francisco	7.4
10	Cole Eye Institute, Cleveland Clinic	7.3
11	New York Eye and Ear Infirmary of Mount Sinai, N.Y.	6.3
12	USC Roski Eye Institute, Los Angeles	5.9
13	John A. Moran Eye Ctr., Univ. of Utah Hosp. and Clinics, Salt Lake City	5.7

Best Hospitals 2020-21: Psychiatry

		Evmort
		Expert
Rank	Hospital	Opinion (%)
1	Johns Hopkins Hospital, Baltimore	22.6
2	McLean Hospital, Belmont, Mass.	21.7
3	Massachusetts General Hospital, Boston	21.6
4	New York-Presbyterian Hospital-Columbia and Cornell, N.Y.	14.9
5	Mayo Clinic, Rochester, Minn.	9.3
5	Sheppard Pratt Hospital, Baltimore	9.3
7	Resnick Neuropsychiatric Hospital at UCLA, Los Angeles	8.7
8	UCSF Medical Center, San Francisco	8.4
9	Menninger Clinic, Houston	8.2
10	Yale-New Haven Hospital, New Haven, Conn.	7.1
11	NYU Langone Hospitals, New York, N.Y.	5.1

Best Hospitals 2020-21: Rehabilitation

Rank	Hospital	Expert Opinion (%)
1	Shirley Ryan AbilityLab (formerly Rehab. Inst. of Chicago), Chicago	29.6
2	Spaulding Rehabilitation Hospital, Mass. General Hospital, Boston	19.1
3	TIRR Memorial Hermann, Houston	17.2
4	Kessler Institute for Rehabilitation, West Orange, N.J.	16.9
5	University of Washington Medical Center, Seattle	14.1
6	Mayo Clinic, Rochester, Minn.	11.9
7	Rusk Rehabilitation at NYU Langone Hospitals, New York	11.0
8	Craig Hospital, Englewood, Colo.	9.8
8	Shepard Center Neurorehabilitation, Atlanta	9.8
10	New York-Presbyterian Hospital-Columbia and Cornell, N.Y.	7.5
11	MossRehab, Elkins Park, Pa.	6.6
12	Ohio State University Wexner Medical Center, Columbus	5.0

Best Hospitals 2020-21: Rheumatology

Rank	Hospital	Expert Opinion (%)
1	Johns Hopkins Hospital, Baltimore	42.2
2	Cleveland Clinic	36.4
3	Mayo Clinic, Rochester, Minn.	28.6
4	Hospital for Special Surgery, New York-Presbyterian Hospital, N.Y.	28.0
5	Brigham and Women's Hospital, Boston	19.3
6	Massachusetts General Hospital, Boston	14.7
7	UCSF Medical Center, San Francisco	13.0
8	NYU Langone Hospitals, New York	10.9
9	UCLA Medical Center, Los Angeles	9.4
10	University of Alabama at Birmingham Hospital	7.8
11	UCHealth University of Colorado Hospital, Aurora	5.7
12	UPMC Presbyterian Shadyside, Pittsburgh	5.4
13	Duke University Hospital, Durham, N.C.	5.2

Appendix G 2020-21 Best Hospitals Honor Roll

2020-21 Best Hospitals Honor Roll

Rank	Hospital	Points
1	Mayo Clinic, Rochester, Minn.	412
2	Cleveland Clinic	364
3	Johns Hopkins Hospital, Baltimore	346
4	New York-Presbyterian Hospital-Columbia and Cornell, N.Y.	340
4	UCLA Medical Center, Los Angeles	340
6	Massachusetts General Hospital, Boston	330
7	Cedars-Sinai Medical Center, Los Angeles	320
8	UCSF Medical Center, San Francisco	276
9	NYU Langone Hospitals, New York, N.Y.	269
10	Northwestern Memorial Hospital, Chicago	258
11	University of Michigan Hospitals-Michigan Medicine, Ann Arbor	254
12	Brigham and Women's Hospital, Boston	248
13	Stanford Health Care-Stanford Hospital, Palo Alto, Calif.	230
14	Mount Sinai Hospital, New York	227
15	Hospitals of the Univ. of Pennsylvania-Penn Presbyterian, Philadelphia	217
16	Mayo Clinic-Phoenix	205
17	Rush University Medical Center, Chicago	203
18	Barnes-Jewish Hospital, Saint Louis	196
18	Keck Medical Center of USC, Los Angeles	196
20	Houston Methodist Hospital	194