America's Best Hospitals for Specialized Care 2025 - Methodology -

Table of contents

| 1 Introd | uction | 1 |
|------------------|--|----|
| 2 Study | design | 2 |
| 2.1 N | ew features and changes in the 2025 edition | 2 |
| 2.2 El | igibility | 2 |
| 2.3 G | eneral methodology | 2 |
| 2.3.1. | Hospital quality metrics | 3 |
| 2.3.2. | Hospital recommendations from peers | 7 |
| 2.3.3. | Patient experience | 8 |
| 2.3.4. implem | Patient-reported outcome measures (PROMs) entation | 9 |
| 2.4. Q | uality metrics and recommendations models: specialty-centric scoring | 11 |
| 2.4.1. | Cardiac Care | 12 |
| 2.4.2. | Cancer Care | 16 |
| 2.4.3. | Endocrine Care | 21 |
| 2.4.4. | Neurological Care | 24 |
| 2.4.5. | Orthopedic Care | 27 |
| 2.4.6. | Pulmonary Care | 31 |
| Literature | | 37 |
| Appendix A | | 38 |
| Appendix B | | 39 |
| Appendix C | | 40 |
| Appendix D | | 42 |
| Appendix E | | 44 |
| Appendix F | | 46 |
| Appendix G | | 47 |

1 Introduction

High-quality specialized care is essential to ensuring the long-term health and well-being of patients. General hospitals are tasked with delivering care for the most common diagnoses and illnesses; however, the more specialized hospitals are, the more they can treat increasingly complex and rare cases. These hospitals are often at the forefront of scientific development in their fields and are known for excelling in complex surgeries and procedures, thus becoming a primary destination in the event that other hospitals or doctors recommend transferring their patients to these facilities ensuring access to the highest standard of care. Specialized hospitals can be leading general hospitals that excel in certain fields or hospitals that focus mostly on a few or even just one area of expertise where they excel.

For patients, the decision in choosing the right hospital for their specific condition is often driven mainly by the hospital's reputation and expertise in the medical field they require, while the overall reputation of the hospital is only of secondary importance. Thus, *America's Best Hospitals for Specialized Care* by Statista and Newsweek is a comprehensive and data-driven resource for patients to find leading specialized hospitals in the medical field of their need. This is the first edition of the composite ranking, which has unified the previous standalone rankings under one single publication:

- America's Best Cancer Hospitals
- America's Best Cardiac Hospitals,
- America's Best Orthopedic Hospitals
- America's Best Neurological Hospitals

This edition ranks the best hospitals providing comprehensive care to adults across six medical fields:

- Cancer Care Top 200 Hospitals
- Cardiac Care Top 200 Hospitals
- Endocrine Care [new] Top 175 Hospitals
- Orthopedic Care Top 200 Hospitals
- Neurological Care Top 200 Hospitals
- Pulmonary Care [new] Top 175 Hospitals

While top hospitals are represented in multiple fields of care, leading specialized hospitals that are highly renowned in one or two specific medical fields or treatments are featured on the lists as well. A small number of hospitals that are either not accessible to the public and/or are very small were not eligible due to the different scope of services offered.

Over 400 unique hospitals and 1150 medical departments for specialized centers in the U.S. are featured in total across the six medical fields.



2 Study design

The following sections provide an overview of the study design and the underlying methodology used to determine the various rankings. First, the newly implemented features and changes in this year's edition, as compared to the previous standalone editions, are described (see chapter 2.1). Second, the eligibility is outlined in chapter 2.2, followed by the general approach (see chapter 2.3) and the scoring model for each of the medical fields (see chapter 2.4).

2.1 New features and changes in the 2025 edition

The following list provides a brief overview of the major changes in this year's composite edition compared to the standalone editions¹ published in 2024:

- Increase in weighting of the quality metrics and patient-reported outcome measurements (PROMs) implementation pillars within the scoring model.
- New data source: Performance benchmark data based on Medicare Fee-for-Service claims sourced from Arcadia (see chapter 2.3.1).
- Inclusion of additional hospital quality metrics data points:
 - Data on hospital commitment to health equity and PROs from CMS (see chapter 2.3.1.1).
 - o Inclusion of additional general and specialty-centric accreditations, certifications, and designations (see chapter 2.3.1.4).
- **Inclusion of previous year's recommendation data:** To account for reputational continuity, recommendation data from last year was factored into the reputation pillar (see chapter 2.3.2).
- **Expansion across two new medical fields:** This year, the medical fields of Endocrinology and Pulmonology have been added to the ranking.

2.2 Eligibility

Hospitals that are not accessible to the public and/or are very small were excluded from the ranking, as they are not comparable in the range of services provided.

To be eligible for the analysis, hospitals must report their performance data and receive at least a 2-star rating from CMS.

2.3 General methodology

The 2025 America's Best Hospitals for Specialized Care ranking is based on four pillars:

¹ In 2024, four separate ranking lists were published for Cancer, Cardiology & Cardiac Surgery, Orthopedics, and Neurology & Neurosurgery. This year, they all now fall under a single composite publication.

- Hospital quality metrics with a focus on indicators relevant to each of the areas
 of care
- **Hospital recommendations from peers** (doctors, hospital managers, healthcare professionals) via a nationwide online survey
- Results from patient experience surveys
- Patient-Reported Outcome Measures (PROMs) Implementation



The four pillars will be described in general terms which apply to all rankings below. Particularities of weightings and measures will be described in the specialty-centric section of chapter 2.4.

2.3.1. Hospital quality metrics

Hospital quality metrics for each of the specialty rankings were utilized from four different data sources:

- Centers for Medicare & Medicaid Services (CMS)
- Performance benchmark data based on Medicare Fee-for-Service claims sourced from Arcadia
- American Hospital Association
- Accreditations and certifications from various renowned organizations

A general description of the data sources is as follows:

2.3.1.1. Centers for Medicare & Medicaid Services (CMS)

Data provided by the Centers for Medicare & Medicaid Services (CMS) is available for over 4,600 hospitals publicly reporting quality information on the Hospital Compare platform. It includes information on hospital characteristics, quality measures, patient satisfaction, performance metrics, and Medicare reimbursements (Centers for Medicare & Medicaid Services, 2025). The *America's Best Hospitals for Specialized Care* ranking evaluates both general and specialty-centric indicators relevant to each of the six specialties.

The publicly available data is sourced from the following category groups²:

- Mortality
- Safety of Care
- Readmissions
- Timeliness and Effective Care
- Patient Experience

The measures were divided into two groups: general and specific (e.g., the complications for hip replacement would fall under the specific subgroup for the Orthopedics ranking, while vaccination rates of staff would be considered general for all rankings).

Scores for each measure were calculated using the following approach:

All measures with a categorical designation according to CMS (e.g., with each hospital performing better than, same as, or worse than the national average) had points assigned according to their designation, with a maximum of 1 point allotted for individual measures better than average, 0.75 points to measures same as average, and 0.5 points to measures worse than average.

For all measures with a numerical score assigned by CMS, the percentile position of each hospital was calculated (i.e., the percentile into which the hospital falls compared to all other hospitals nationwide), and points were allotted according to the logic of the measure's distribution. For measures where lower scores indicate better performance (e.g., mortality rates), hospitals received a maximum of 1 point if they were in 10th percentile or lower. For measures where higher scores are better (e.g., vaccination rates of staff), hospitals in the 90th percentile or higher received a maximum of one point. To allow for variance and nuance across hospital performance, the remaining percentile positions were scaled between the values of 0.5 and 0.9 in a continuous manner. The points were then averaged separately for the two variable groups: general and specific. The subweights of these two scores vary across specialties.

For the patient experience measures, percentiles were calculated on a national level for each metric within the measure groups. In the next step, scores were compared on a national level for each metric and then points were assigned to each hospital based on the percentile into which their score fell relative to national performance. Patient satisfaction indicators were included in the hospital quality metrics to capture all aspects of quality, similar to the CMS Star Rating approach.

 $^{^{2}}$ Additionally, data from the PPS-Exempt Cancer Hospital Quality Reporting (PCHQR) Program is included for the Cancer Care ranking.



Patient-centric CMS metrics

For the first time in *America's Best Hospitals for Specialized Care*, CMS data on health equity and Patient-Reported Outcomes (PROs) were factored into the analysis. Hospitals that have submitted PRO data to CMS and that participate in the health equity program received a score within each of these subpillars.

Hospitals that participated in the PRO reporting received 1 point. Hospitals that participated in the health equity program received an additional score, with a maximum of 1 point, based on how many of the five domains of health equity are assessed in the hospital.

The subweights of individual CMS score components (i.e. general, specific, patient experience, and patient-centric) vary across the specialties. The most recent data, published in February 2025, was used to determine the CMS quality score.

2.3.1.2. Performance benchmark data based on Medicare Fee-for-Service claims sourced from Arcadia

In this year's edition, performance benchmark data based on Medicare Fee-for-Service claims sourced from Arcadia was incorporated into each of the specialty scoring models. In this analysis, facilities' performance was evaluated based on two types of data

- **Population level:** A variety of measures relating to hospitals' quality performance, such Percent of Knee Arthroscopy Before Knee Replacement and Percent of Questionable PCI, were taken into consideration.
- **Episode of care data**: For each medical episode, the following volume measures were taken into consideration wherever possible:
 - o Average LOS (Days) of Institutional Long-term Stay
 - o ER Visits per 1,000 Episodes
 - Mortality Rate
 - Complications by Episode
 - Unplanned Readmissions per 1,000 Episodes

The scoring process was the same as with the CMS variables; for each variable the percentile position of each hospital relative to all other hospitals in the nation was calculated. Hospitals that were in the 10th percentile received a maximum of 1 point. The points across all measures were then averaged into one composite episode score for each hospital.

The subweights of the quality and episode data, as well as the detailed list of variables incorporated for each of the specialties, are detailed within each scoring model in chapter 2.4.



2.3.1.3. American Hospital Association (AHA) data

The AHA Annual Survey Database was included in the scoring model. The database contains data provided by more than 6,200 hospitals and 400 health care systems featuring over 1,300 hospital data points.

Structural and organizational data of hospital facilities was included in the hospital quality metrics score. The data of the AHA Annual Survey Database 2022 was grouped into three indicator categories for the analysis:

- Specialty-related indicators
- General indicators
- Health equity

For each available indicator, a hospital received one point as part of their AHA score. For indicators based on a unit care level (e.g., trauma centers), the points were awarded in an increasing manner, with the highest level of care receiving the maximum number of points.

Information on the AHA database can be found here:

https://www.ahadata.com/aha-annual-survey-database

2.3.1.4. Accreditations and certifications

Several accreditations, certifications, and center designations were included in the hospital quality metrics score, reflecting the commitment to excellence in overall healthcare as well as within the specific medical fields. These were grouped into two categories:

- General accreditations
- Specialty-centric accreditations

General accreditations

The following accreditations and certifications that are relevant for all specialty rankings were included:

- American Nurses Credentialing Center (ANCC) Magnet recognition: A
 prestigious recognition for nursing excellence and high-quality patient care.
- **Planetree certification**: recognizes hospitals and healthcare organizations that demonstrate excellence in person-centered care.
- The Joint Commission's (TJC) hospital accreditation: Accreditation by The Joint Commission (TJC), a worldwide leader in advancing quality improvement and patient safety in healthcare, signifies a healthcare organization's dedication to achieving high standards of quality and patient safety.



Specialty-centric accreditations and certifications

The following array of accreditations, certifications, and designations that are relevant for specific medical fields were also included in the analysis:

- **Det Norske Veritas (DNV)**: compliance with international quality and patient safety standards, as well as alignment with ISO 9001 certification principles.
- Accreditation Commission for Health Care (ACHC): indicator of adherence to nationally recognized standards for quality, safety, and performance across various healthcare services.
- Foundation for the Accreditation of Cellular Therapy (FACT): recognition for hospitals offering high levels of stem cell transplant
- **National Association of Epilepsy Centers (NAEC):** recognition of hospitals with advanced capabilities in the treatment of epilepsy
- National Cancer Institute (NCI)-Designated Cancer Centers: recognition of leading institutions with comprehensive cancer care and research programs
- National Institute on Aging (NIA) Alzheimer's Disease Research Centers: recognition of leading institutions with comprehensive Alzheimer care
- The Joint Commission's (TJC) hospital certifications
- The Joint Commission's (TJC) hospital advanced certifications

2.3.2. Hospital recommendations from peers

From January to February 2025, Statista conducted a **nationwide online survey** among medical professionals, including doctors and hospital managers, with expertise in the relevant medical fields. During the survey, participants were asked to recommend top hospitals in their field of specialization. The survey was accessible to participants on Newsweek.com, and invitations were also sent via email.

The recommendations were weighted based on the order of preference indicated, and the professional experience of each participant was also taken into account. The reputation score for each hospital was determined by the total number of weighted recommendations received.

The hospital with the highest number of weighted recommendations was allotted a recommendation score of 100%. The next best hospitals received a score proportional to their number of weighted recommendations (e.g., if hospital *A* received the most votes with 100, then hospital *B* with 80 votes was assigned a score of $\frac{80}{100}$ = 80%).

This year, the recommendations from the previous year³ were also taken into account. Recommendations from the 2024 survey period were given less weight relative to those from 2025.

³ In the case of Endocrine and Pulmonary Care, there was no historical recommendation data to incorporate.

For each recommended hospital, participants were asked to assess the quality across both general and specialty-centric factors; for example, patient education was a quality dimension across all specialties, whereas palliative care was a dimension specific to Cancer care). The quality dimensions examined for each medical field are detailed in chapter 2.4. The quality scale ranged from 1 ("Poor") to 10 ("Excellent"). A quality score was assigned to each hospital based on the average of its ratings across all quality dimensions.

2.3.3. Patient Experience

For all ranking lists, the patient experience score is based on Medicare HCAHPS data. The Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey is a standardized survey of hospital patients in the U.S. regarding their experiences during a recent inpatient hospital stay (HCAHPS, 2024). While many hospitals in the U.S. already collected information on patient satisfaction prior to HCAHPS, there was no national standard for collecting or publicly reporting information on patients' perspectives of care that would enable valid comparisons to be made across all hospitals.

The most recent dataset available is the February 2025 edition and is based on surveys from patients discharged in 2023. Based on the collected survey data, CMS reports 11 HCAHPS Star Ratings on Hospital Compare: 10 for the publicly reported HCAHPS measures, as well as an HCAHPS Summary Star Rating. The specific measures are derived from certain items in the HCAHPS survey as shown below:

| HCA | HPS Composite Measures | Questions |
|-----|-------------------------------------|------------|
| 1. | Communication with Nurses | 1, 2, 3 |
| 2. | Communication with Doctors | 5, 6, 7 |
| 3. | Responsiveness of Hospital Staff | 4, 11 |
| 4. | Communication about Medicines | 13, 14 |
| 5. | Discharge Information | 16, 17 |
| 6. | Care Transition | 20, 21, 22 |
| HCA | HPS Individual Items | Questions |
| 7. | Cleanliness of Hospital Environment | 8 |
| 8. | Quietness of Hospital Environment | 9 |
| HCA | HPS Global Items | Questions |
| 9. | Hospital Rating | 18 |



10. Recommend the Hospital

Hospitals had to have at least 100 completed HCAHPS surveys over a given four-quarter period to receive a Star Rating.

The HCAHPS Summary Star Rating is the average of the Star Ratings. It is constructed from the Star Ratings from the six HCAHPS Composite Measures, a single Star Rating for the two HCAHPS Individual Items listed above, and a single Star Rating for the two HCAHPS Global Items (also listed above). The Star Ratings for the HCAHPS Individual Items and HCAHPS Global Items are constructed by calculating the average of the Star Rating for the two individual items contained in these composite measures. The resulting eight Star Ratings are combined into a simple average and rounded using normal rounding rules:

| HCAHPS Summary Star Rating | Rounded Star Rating |
|----------------------------|---------------------|
| ≥1.00 and <1.50 | 1 Star |
| ≥1.50 and <2.50 | 2 Stars |
| ≥2.50 and <3.50 | 3 Stars |
| ≥3.50 and <4.50 | 4 Stars |
| ≥4.50 and ≤5.00 | 5 Stars |

To avoid the loss of information on individual measures, the patient experience score is based on the more precise individual measures described above rather than the simple Summary Star Rating. This approach also allows for a more precise differentiation of hospitals that are at the upper or lower boundaries of their respective Summary Star Rating category.

The full methodology for the HCAHPS Star Rating is published at: https://hcahpsonline.org/en/hcahps-star-ratings/

2.3.4. Patient-reported outcome measures (PROMs) implementation

Patient-reported outcome measures (PROMs) are defined as standardized, validated questionnaires completed directly by patients to reflect their perception of their health status. Health status is defined beyond simply surviving disease following treatment—it also covers symptom burden, impact on functioning (physical, mental, and social), and quality of life. In recent years, PROMs measurement and the pursuit for patient-centered and value-based care has become a key topic in healthcare systems worldwide.

With the guidance of a global board of medical experts, Newsweek and Statista have updated the *PROMs Implementation Survey* for the 2025 ranking cycle. The survey was sent

out to hospitals in fall/winter 2024, and participation was also possible on newsweek.com and r.statista.com.

The overall purpose of this survey is to determine the status quo of implementation of generic and condition-specific PROMs in hospital settings, as well as the hospital's efforts towards reporting and using the data both internally and externally for the purpose of improving healthcare delivery. For this, the global board of medical experts provided methodological input and guidance regarding the importance and development of the PROMs topic in a clinical setting. Furthermore, the board provided feedback on each of the questions within the survey to capture the most relevant PROMs information from the hospitals.

Since 2024, Statista has partnered with the International Consortium for Health Outcomes Measurement (ICHOM) as a knowledge partner. ICHOM is the world's leading non-profit organization dedicated to transforming healthcare through the applied use of standardized patient-centered outcomes measurement. ICHOM convenes and empowers patients and clinical leaders to identify and standardize the most important clinical, quality of life, function, and experience results for healthcare, and enables transparent, large-scale use by various stakeholders to achieve patient-centric health system transformation. By working with partners around the world, ICHOM builds evidencebased, patient co-created resources—the standardized sets of patient-centered outcome measures—that help all actors in healthcare design, deliver, and evaluate care based on outcomes that matter to patients. ICHOM sets of patient-centered outcome measures cover a large variety of medical conditions and account for nearly 60% of the global burden of disease. They have been implemented in over 500 care settings across more than 42 countries. Drawing from their widely recognized expertise and experience in the field of clinical and patient-reported outcome measures, ICHOM is contributing to the future development of the PROMs Implementation Survey and to the wider advancement of value-based care worldwide.

More information about ICHOM is available at: www.ichom.org

An outline of the questions covered in the PROMs Implementation Survey can be found below, and the full questionnaire can be accessed via this <u>link</u>.

Examples of PROMs questions4:

- Status of PROMs implementation within the hospital. (Yes/No)
- Designated team to measure PROMs (Yes/No)
- Number of standardized PROM instruments measured and the departments for which they are being measured

⁴ In the questions pertaining to external reporting, optimization of care processes, therapeutic decisions, shared decision making, and sharing and comparing of PROMs data, examples were either listed or asked of participants if participants selected yes.

- The condition and/or departments measuring PROMs, whether case-mix adjustment is taken into account, whether the instruments are scientifically validated, and the percentage of patients that complete the PROMs questionnaire for each condition
- o Internal reporting of PROMs data to hospital staff (Yes/No)
- Internal reporting of PROMs data to patients (Yes/No)
- External reporting of PROMs results (Yes/No)
- o Auditing of the data prior to publishing (Internal/External/Both)
- Use of PROMs data to optimize care processes (Yes/No)
- o Use of PROMs data to support therapeutic decisions in real time (Yes/No)
- Use of PROMs data for shared decision-making (Yes/No)
- Sharing and comparing of PROMs data with other institutions to learn from each other (Yes/No)

To determine the PROMs implementation score, the PROMs grading system is applied. For hospitals to qualify for this pillar within the scoring model (as shown in the scoring model in 2.4), they must achieve a minimum of 50% (of the maximum 100% score). To further highlight PROMs implementation efforts of participating hospitals and their level of excellence in this category, a range of 1-3 ribbons is displayed. The criteria for the ribbons are determined by the number of points accrued throughout the PROMs Implementation Survey in the following way:

• Checkmark: PROMs measurement that does not meet the 50% threshold

1 Ribbon: 50% - <70%2 Ribbons: 70% - <87.5%

• 3 Ribbons: ≥87.5%

Hospitals that filled out the survey but do not measure PROMs do not receive a checkmark. Furthermore, ranked hospitals only received the score if they indicated that PROMs are measured within the relevant medical fields; for example, a hospital that indicated PROMs measurement for cardiology and neurology would only receive the scores if ranked in those two specialties. For an overview of the grading scale, please refer to Appendix A.

The national recommendation score, the patient satisfaction score, the hospital quality metrics score, and the PROMs implementation score were used to calculate a **hospital score**.

2.4. Quality metrics and recommendations models: specialtycentric scoring

The hospital quality metrics score for each of the six medical fields is derived from the four aforementioned data sources. Each data source has its own weight within the quality

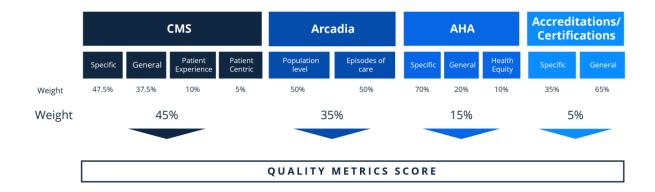
metrics pillar of the overall scoring model. Furthermore, within each of the data sources, the measures and indicators were sorted into groups with subweights. As each of the medical fields had varying number of indicators and measures, the weights and subweights of the four data sources vary and are detailed below.

Lastly, within the surveys completed by medical professionals, participants were asked to assess the hospitals they recommended in their field of expertise across an array of quality dimensions. They were additionally prompted to indicate a standout treatment or diagnosis for each of their recommended hospitals.

Both the quality metrics model and the recommendations model are detailed below for each of the medical fields.

2.4.1. Cardiac Care

The quality metrics model for Cardiac Care is as follows:



A detailed overview of the specific measures considered from each data source can be found below.

Centers for Medicare & Medicaid Services (CMS)

The following indicators from the respective CMS datasets were used in the evaluation:

| Mortality (Complications and deaths) | Measure code | Measure group |
|---------------------------------------|--------------|------------------|
| Death rate for heart attack patients | MORT-30-AMI | Specific |
| Death rate for CABG surgery patients | MORT-30-CABG | Specific |
| Death rate for heart failure patients | MORT-30-HF | Specific |

| Postoperative respiratory failure rate | PSI 11 | Specific |
|--|-------------------------|----------|
| Postoperative hemorrhage or hematoma rate | PSI 09 | Specific |
| Perioperative pulmonary embolism or deep vein thrombosis rate | PSI 12 | General |
| Pressure ulcer rate | PSI 03 | General |
| Death rate among surgical inpatients with serious treatable complications | PSI 04 | General |
| Postoperative sepsis rate | PSI 13 | General |
| Postoperative wound dehiscence rate | PSI 14 | General |
| Safety of care (Healthcare-associated infections) | | |
| Methicillin-resistant <i>Staphylococcus aureus</i> (or MRSA) blood laboratory-identified events (bloodstream infections) | HAI-5 | General |
| CLABSI - Central line-associated bloodstream infections | HAI-1 | General |
| CAUTI - Catheter-associated urinary tract infections | HAI-2 | General |
| Clostridium difficile (C.diff.) laboratory identified events (intestinal infections) | HAI-6 | General |
| Timely and effective care (Timely and effective care, or | utpatient imaging) | |
| Percentage of ED patients with a diagnosis of STEMI who received timely delivery of guideline-based reperfusion therapies appropriate for the care setting and delivered in the absence of contraindications | OP-40 | Specific |
| Discharged on Antithrombotic Therapy | STK-02 | Specific |
| Anticoagulation Therapy for Atrial Fibrillation/Flutter | STK-03 | Specific |
| Antithrombotic Therapy by End of Hospital Day 2 | STK-05 | Specific |
| Discharged on Statin Medication | STK-06 | Specific |
| Venous Thromboembolism Prophylaxis | VTE-1 | Specific |
| Intensive Care Unit Venous Thromboembolism Prophylaxis | VTE-2 | Specific |
| Outpatients who got cardiac imaging stress tests before low-risk outpatient surgery | OP-13 | Specific |
| Healthcare workers given influenza vaccination | IMM-3 | General |
| Percentage of healthcare personnel who are up to date with COVID-19 vaccinations | HCP COVID-19 | General |
| Severe Sepsis and Septic Shock | SEP-1 | General |
| Safe Use of Opioids - Concurrent Prescribing | SAFE_USE_ OF_OPIOIDS | General |
| Readmissions (Unplanned hospital visits) | | |
| Hospital return days for heart attack patients | EDAC-30-AMI | Specific |
| Hospital return days for heart failure patients | EDAC-30-HF | Specific |
| Acute Myocardial Infarction (AMI) 30-Day Readmission Rate | READM-30-AMI | Specific |
| Rate of readmission for CABG | READM-30-CABG | Specific |



| Heart failure (HF) 30-Day Readmission Rate | READM-30-HF | Specific |
|---|----------------|----------|
| Rate of readmission after discharge from hospital | READM-30-HOSP- | General |
| (hospital-wide) | WIDE | |
| Ratio of unplanned hospital visits after hospital | OP-36 | General |
| outpatient surgery | | |

Information on each of the variables and the dataset can be found on the CMS website:

https://www.medicare.gov/care-compare/

Performance benchmark data based on Medicare Fee-for-Service claims sourced from Arcadia

To evaluate a hospital's performance, the following population-level measures and episodes of care were considered:

Population-level performance:

- CMS Preventive Care and Screening: Screening for High Blood Pressure and Follow-Up Documented
- Percent of Underuse FFR or IFR During Percutaneous Coronary Intervention
- Percent of Arterial Duplex and CT Angiography Before First Time Infrainguinal Peripheral Vascular Intervention
- Percent of Questionable PCI
- Percent of Patients undergoing CEA or CAS
- Use of Arteriovenous Fistula vs. Graft for First-time Permanent Hemodialysis Access

Episode of care performance:

- Atherosclerosis
- Circulation problems except heart attack
- Circulatory problems in extremities
- Chest pain
- Congestive heart failure
- Heart attack
- Inpatient high blood pressure
- Irregular heartbeat
- Pulmonary embolism
- Syncope & collapse

American Hospital Association data

The following indicator groups from the AHA Annual Survey of Hospitals Database 2022 were used as part of the quality metrics score:

Cardiology-specific indicators

- Cardiac interventional care
- Cardiac intensive care
- Cardiac surgery
- Catheterization
- Cardiac Electrophysiology
- Cardiac rehabilitation
- Heart transplant
- Advanced technological equipment (e.g. Electron Beam Computed tomography)

General indicators

- Hospital research & screening
- Technological equipment
- Trauma center/certification
- · Workforce strategic planning

Health equity

- Health equity goals
- DEI disaggregated data
- · Health equity strategic plan

Accreditations and specialized programs

Additionally, the following specialty-centric accreditations and certifications were taken into consideration:

- The Joint Commission Acute myocardial infection certification
- The Joint Commission Chest pain certification
- The Joint Commission Heart failure certification
- The Joint Commission Acute heart attack ready advanced certification
- The Joint Commission Advanced comprehensive heart attack center
- The Joint Commission Comprehensive cardiac center
- The Joint Commission Heart failure advanced certification
- The Joint Commission Primary heart attack center advanced certification
- The Joint Commission Ventricular assist device advanced certification
- DNV Cardiac center of excellence designation
- DNV Advanced chest pain certification
- DNV Heart failure advanced certification
- DNV Ventricular assist device facility credential program

Hospital recommendation from peers

Participants of the recommendation survey were asked to name the top hospitals for Cardiac Care based on their professional expertise. Within this survey, participants had to state at least one condition/surgery that the hospital performs best and to rate the quality dimensions of the hospital across five areas of care. The standout conditions/surgeries and quality assessment categories are as follows:

Standout categories

- Ischemic heart diseases
- Coronary artery disease
- Heart bypass surgery (CABG)
- Heart valve surgery
- Heart transplant
- Coronary angioplasty & stent placement

Hospitals that received recommendations in the top decile for a standout category had this displayed alongside their rank.

Quality assessment

- Provision of care and patient safety
- Patient education and counselling
- Cardiac rehabilitation
- Overall nurse staffing
- Technical equipment

Participants were prompted to select values between 1 and 10 to assess the hospitals across these five quality dimensions. The values were then averaged for each hospital, and the quality assessment was factored into the recommendation score.

2.4.2. Cancer Care

The quality metrics model for Cancer Care is as follows:



For hospitals reporting data into the PCH Cancer Exempt program, the General pillar is no longer relevant. Instead, it is replaced by the Palliative care pillar with a weight of 32.5%. The specific pillar is weighted 52.5%



A detailed overview of the specific measures considered from each data source can be found below.

Centers for Medicare & Medicaid Services (CMS)

The following indicators from the respective CMS datasets were used in the evaluation:

| Safety of Care (Healthcare-associated infections) | Measure code | Measure group |
|--|-------------------------|------------------|
| Methicillin-resistant <i>Staphylococcus aureus</i> (or MRSA) blood laboratory-identified events (bloodstream infections) | HAI-5 | General |
| CLABSI - Central line-associated bloodstream infections | HAI-1 | General |
| CAUTI - Catheter-associated urinary tract infections | HAI-2 | General |
| Clostridium difficile (C.diff.) laboratory identified events (intestinal infections) | HAI-6 | General |
| SSI Colon - Surgical Site Infection from colon surgery | HAI-3 | General |
| SSI Abdominal Hysterectomy - Surgical Site Infection from abdominal hysterectomy | HAI-4 | General |
| Timely and effective care (Timely and effective care, outpa | tient imaging) | |
| Abdomen CT Use of Contrast Material | OP-10 | Specific |
| Breast Cancer Screening Recall Rates | OP-39 | Specific |
| Endoscopy/polyp surveillance: appropriate follow-up interval for normal colonoscopy in average risk patients | OP-29 | Specific |
| Severe Sepsis and Septic Shock | SEP-1 | General |
| Safe Use of Opioids - Concurrent Prescribing | SAFE_USE_ OF_OPIOIDS | General |
| Healthcare workers given influenza vaccination | IMM-3 | General |
| Percentage of healthcare personnel who are up to date with COVID-19 vaccinations | HCP COVID-19 | General |
| Readmission (Unplanned hospital visits) | | |
| Rate of unplanned hospital visits after colonoscopy (per 1,000 colonoscopies) | OP-32 | Specific |
| Rate of inpatient admissions for patients receiving outpatient chemotherapy | OP-35-ADM | Specific |
| Rate of emergency department (ED) visits for patients receiving outpatient chemotherapy | OP-35-ED | Specific |

For the Cancer Care ranking, data reported to the PPS-Exempt Cancer Hospitals (PCH) was taken into consideration. For these hospitals, the general measures no longer applied to the quality metrics model; instead, measures on palliative care were taken into consideration.

| Healthcare-associated infections | Measure code | Measure group |
|--|-----------------|--------------------|
| Methicillin-resistant <i>Staphylococcus aureus</i> (or MRSA) blood laboratory-identified events (bloodstream infections) | HAI-5 | Specific |
| CLABSI - Central line-associated bloodstream infections | HAI-1 | Specific |
| CAUTI - Catheter-associated urinary tract infections | HAI-2 | Specific |
| Clostridium difficile (C.diff.) laboratory identified events (intestinal infections) | HAI-6 | Specific |
| SSI Colon - Surgical Site Infection from colon surgery | HAI-3 | Specific |
| SSI Abdominal Hysterectomy - Surgical Site Infection from abdominal hysterectomy | HAI-4 | Specific |
| Palliative care | | |
| Proportion of patients who died from cancer receiving chemotherapy in the last 14 days of life. | PCH-32 | Palliative Care |
| Proportion of patients who died from cancer admitted to the ICU in the last 30 days of life. | PCH-33 | Palliative Care |
| Proportion of patients who died from cancer not admitted to hospice | PCH-34 | Palliative Care |
| Proportion of patients who died from cancer admitted to hospice for less than 3 days. | PCH-35 | Palliative Care |
| Readmission (PCH complications and unplanned hospital visits) | ; | |
| Admissions for Patients Receiving Outpatient Chemotherapy | PCH-30 | Specific |
| Emergency Department (ED) Visits for Patients Receiving Outpatient Chemotherapy | PCH-31 | Specific |
| 30-Day Unplanned Readmission for Cancer Patients | PCH-36 | Specific |
| Surgical treatment complications for localized prostate cancer | PCH-37 | Specific |

Performance benchmark data based on Medicare Fee-for-Service claims sourced from Arcadia

To evaluate a hospital's performance, the following measures and episodes of care were considered:

Population-level performance:

- CMS Colorectal Cancer Screening
- Percentage of Breast Core Needle Biopsy within 3 Months Prior Breast Surgery
- Percentage of Patients Underwent a Re-Excision after the Initial Breast-Conserving Therapy
- Percentage of Patients with Multiple Myeloma and No Kidney Dysfunction who were Administered Denosumab

 Performing Cystoscopy at the Time of Hysterectomy for Pelvic Organ Prolapse to Detect Lower Urinary Tract Injury

Episode of care performance:

- Breast cancer
- Chronic leukemia
- Lung cancer
- Lymphoma
- Multiple myeloma
- Prostate cancer
- Small intestine/colorectal cancer

American Hospital Association data

The following indicator groups from the AHA Annual Survey of Hospitals Database 2022 were used as part of the quality metrics score:

Cancer-specific indicators

- Cancer screenings
- Bone marrow transplants
- Hospice program
- Palliative care
- Pain management
- Radiation therapy
- Advanced technological equipment (e.g. full field digital mammography)

General indicators

- Hospital research & screening
- Technological equipment
- Workforce strategic planning

Health equity

- Health equity goals
- DEI disaggregated data
- Health equity strategic plan

Accreditations and specialized programs

Additionally, the following specialty-centric accreditations and certifications, as well as national institute designations, were taken into consideration:

• The Joint Commission – Palliative Care

- The Joint Commission Brain Tumor Certification
- The Joint Commission Lung Cancer Certification
- FACT accreditation
- National Cancer Institute Designated Cancer Centers

Hospital recommendation from peers

Participants of the recommendation survey were asked to name the top hospitals for Cancer Care based on their professional expertise. Within this survey, participants had to state at least one condition/surgery that the hospital performs best and to rate the quality dimensions of the hospital across eight areas of care. The standout treatments and quality assessment categories are as follows:

Standout categories

- Prostate cancer
- Lung cancer
- Cervical cancer
- Breast cancer
- Colon & rectal cancer
- Leukemia

Hospitals that received recommendations in the top decile for a standout category had this displayed alongside their rank.

Quality assessment

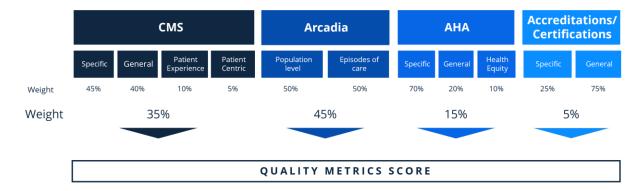
- Social work program/supportive care services
- Psycho-oncological/psychosocial support
- Outpatient palliative care
- Inpatient palliative care
- Multidisciplinary care teams
- Cancer rehabilitation programs
- Patient education & counselling
- Clinical trials & research

Participants were prompted to select values between 1 and 10 to assess the hospitals across these eight quality dimensions. The values were then averaged for each hospital, and the quality assessment was factored into the recommendation score.



2.4.3. Endocrine Care

The quality metrics model for Endocrine Care is as follows:



A detailed overview of the specific measures considered from each data source can be found below.

Centers for Medicare & Medicaid Services (CMS)

The following indicators from the respective CMS datasets were used in the evaluation:

| Mortality (Complications and deaths) | Measure code | Measure group |
|--|--------------|------------------|
| Postoperative acute kidney injury requiring dialysis rate | PSI 10 | Specific |
| Pressure ulcer rate | PSI 03 | General |
| Postoperative hemorrhage or hematoma rate | PSI 09 | General |
| Death rate among surgical inpatients with serious treatable complications | PSI 04 | General |
| Perioperative pulmonary embolism or deep vein thrombosis rate | PSI 12 | General |
| Postoperative sepsis rate | PSI 13 | General |
| Postoperative wound dehiscence rate | PSI 14 | General |
| Safety of Care (Healthcare-associated infections) | | |
| Methicillin-resistant <i>Staphylococcus aureus</i> (or MRSA) blood laboratory-identified events (bloodstream infections) | HAI-5 | General |
| CLABSI - Central line-associated bloodstream infections | HAI-1 | General |
| CAUTI - Catheter-associated urinary tract infections | HAI-2 | General |
| Clostridium difficile (C.diff.) laboratory identified events (intestinal infections) | HAI-6 | General |
| Timely and effective care (Timely and effective care, outpatier | nt imaging) | |
| Discharged on Statin Medication | STK-06 | Specific |
| Severe Sepsis and Septic Shock | SEP-1 | General |
| Healthcare workers given influenza vaccination | IMM-3 | General |



| Percentage of healthcare personnel who are up to date with COVID-19 vaccinations | HCP COVID-19 | General |
|--|-------------------------|---------|
| Safe Use of Opioids - Concurrent Prescribing | SAFE_USE_ OF_OPIOIDS | General |
| Readmission (unplanned hospital visits) | | |
| Ratio of unplanned hospital visits after hospital outpatient surgery | OP-36 | General |
| Rate of readmission after discharge from hospital (hospital-wide) | READM-30- HOSP-WIDE | General |

Performance benchmark data based on Medicare Fee-for-Service claims sourced from Arcadia

To evaluate a hospital's performance, the following measures and episodes of care were considered:

Population-level performance:

- CMS Diabetes: Hemoglobin A1C Poor Control
- CMS Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up Plan

Episode of care performance:

- Imbalances of body fluids and minerals
- Inpatient diabetes
- Thyroid and parathyroid surgery

American Hospital Association data

The following indicator groups from the AHA Annual Survey of Hospitals Database 2022 were used as part of the quality metrics score:

Endocrine-specific indicators

- Wound management
- Advanced technological equipment (e.g. positron emission tomography)

General indicators

- Hospital research & screening
- Trauma center/certification
- Technological equipment
- Workforce strategic planning



Health equity

- Health equity goals
- DEI disaggregated data
- Health equity strategic plan

Accreditations and specialized programs

Additionally, the following specialty-centric certification was taken into consideration:

• The Joint Commission – Inpatient diabetes certification

Hospital recommendation from peers

Participants of the recommendation survey were asked to name the top hospitals for Endocrine Care based on their professional expertise. Within this survey, participants had to state at least one condition/surgery that the hospital performs best and to rate the quality dimensions of the hospital across five areas of care.

The standout treatments/conditions and quality assessment categories are as follows:

Standout categories

- Diabetes
- Thyroid disorder
- Metabolic & calcium disorders
- Reproductive endocrinology (e.g., hypogonadism or PCOS)
- Pituitary & adrenal disorder
- Endocrine surgery

Hospitals that received recommendations in the top decile for a standout category had this displayed alongside their rank.

Quality assessment

- Provision of care and patient safety
- Patient education and counselling
- Chronic care
- Overall nurse staffing
- Technical equipment

Participants were prompted to select values between 1 and 10 to assess the hospitals across these five quality dimensions. The values were then averaged for each hospital and the quality assessment was factored into the recommendation score.



2.4.4. Neurological Care

The quality metrics model for Neurological Care is as follows:



A detailed overview of the specific measures considered from each data source can be found below.

Centers for Medicare & Medicaid Services (CMS)

The following indicators from the respective CMS datasets were used in the evaluation:

| Mortality (Complications and deaths) | Measure code | Measure group |
|--|--------------|------------------|
| Death rate for stroke patients | MORT-30-STK | Specific |
| Pressure ulcer rate | PSI 03 | General |
| Death rate among surgical inpatients with serious treatable complications | PSI 04 | General |
| Latrogenic pneumothorax rate | PSI 06 | General |
| Postoperative hemorrhage or hematoma rate | PSI 09 | General |
| Perioperative pulmonary embolism or deep vein thrombosis rate | PSI 12 | General |
| Postoperative sepsis rate | PSI 13 | General |
| Postoperative wound dehiscence rate | PSI 14 | General |
| Safety of Care (Healthcare-associated infections) | | |
| Methicillin-resistant <i>Staphylococcus aureus</i> (or MRSA) blood laboratory-identified events (bloodstream infections) | HAI-5 | General |
| CLABSI - Central line-associated bloodstream infections | HAI-1 | General |
| CAUTI - Catheter-associated urinary tract infections | HAI-2 | General |
| Clostridium difficile (C.diff.) laboratory identified events (intestinal infections) | HAI-6 | General |
| Timely and effective care (Timely and effective care, ou | | |
| Discharged on Antithrombotic Therapy | STK-02 | Specific |
| Antithrombotic Therapy by End of Hospital Day 2 | STK-05 | Specific |



| Discharged on Statin Medication | STK-06 | Specific |
|--|------------------------|----------|
| Head CT results | OP23 | Specific |
| MRI Lumbar Spine for Low Back Pain | OP8 | Specific |
| Venous Thromboembolism Prophylaxis | VTE1 | General |
| Intensive Care Unit Venous Thromboembolism Prophylaxis | VTE2 | General |
| Healthcare workers given influenza vaccination | IMM-3 | General |
| Percentage of healthcare personnel who are up to date with COVID-19 vaccinations | HCP COVID-19 | General |
| Safe Use of Opioids – Concurrent Prescribing | Safe Use of Opioids | General |
| Severe Sepsis and Septic Shock Management Bundle | SEP-1 | General |
| Readmission (Unplanned hospital visits) | | |
| Ratio of unplanned hospital visits after hospital outpatient surgery | OP-36 | General |
| Rate of readmission after discharge from hospital (hospital-wide) | READM-30- HOSP-WIDE | General |

Performance benchmark data based on Medicare Fee-for-Service claims sourced from Arcadia

To evaluate a hospital's performance, the following measures and episodes of care were considered:

Population-level performance:

- Percent of Cervical Spinal Surgery without Prior Epidural Steroid Injection
- Percent of Lumbar Spinal Surgery without Prior Steroid Injection
- Percent of Patients undergoing CEA or CAS
- Percent of Physical Therapy before Lumbar Surgery

Episode of care performance:

- Headaches
- Inpatient mini-stroke (TIA)
- Seizures
- Stroke

American Hospital Association data

The following indicator groups from the AHA Annual Survey of Hospitals Database 2022 were used as part of the quality metrics score:



Neurology-specific indicators

- Neurological services
- Advanced technological equipment (e.g. Magnetoencephalography)
- Pain management
- · Telehealth stroke care

General indicators

- Hospital research & screening
- Technological equipment
- Trauma center/certification
- Workforce strategic planning

Health equity

- · Health equity goals
- DEI disaggregated data
- Health equity strategic plan

Accreditations and specialized programs

Additionally, the following specialty-centric accreditations and certifications were taken into consideration:

- The Joint Commission Acute stroke ready hospital advanced certification
- The Joint Commission Spine surgery advanced certification
- The Joint Commission Advanced comprehensive stroke center
- The Joint Commission Primary stroke center advanced certification
- The Joint Commission Thrombectomy capable stroke center advanced certification
- The Joint Commission Spine surgery certification
- The Joint Commission Spinal fusion certification
- NAEC Epilepsy Center
- DNV Acute stroke ready certification
- DNV Primary stroke center certification
- DNV Comprehensive stroke center certification
- NIA Designated Alzheimer center

Hospital recommendation from peers

Participants of the recommendation survey were asked to name the top hospitals for Neurological Care based on their professional expertise. Within this survey, participants had to state at least one condition/surgery that the hospital performs best and to rate the

quality dimensions of the hospital across five areas of care. The standout treatments and quality assessment categories are as follows:

Standout categories

- Alzheimer's disease
- Multiple sclerosis
- Parkinson's disease
- Epilepsy
- Neurological infections (e.g., meningitis)
- Brain tumor surgery
- Spinal fusion

Hospitals that received recommendations in the top decile for a standout category had this displayed alongside their rank.

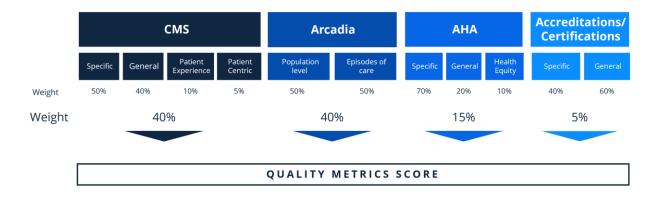
Quality assessment

- Provision of care and patient safety
- Patient education and counselling
- Neurological rehabilitation
- Overall nurse staffing
- Technical equipment

Participants were prompted to select values between 1 and 10 to assess the hospitals across these five quality dimensions. The values were then averaged for each hospital, and the quality assessment was factored into the recommendation score.

2.4.5. Orthopedic Care

The quality metrics model for Orthopedic Care is as follows:



A detailed overview of the specific measures considered from each data source can be found below.



Centers for Medicare & Medicaid Services (CMS)

The following indicators from the respective CMS datasets were used in the evaluation:

| Mortality (Complications and Deaths) | Measure code | Measure group |
|--|-------------------------|------------------|
| Rate of complications for hip/knee replacement patients | COMP-HIP-KNEE | Specific |
| In-hospital fall with hip fracture rate | PSI 08 | Specific |
| Pressure ulcer rate | PSI 03 | General |
| Death rate among surgical inpatients with serious treatable complications | PSI 04 | General |
| Postoperative hemorrhage or hematoma rate | PSI 09 | General |
| Perioperative pulmonary embolism or deep vein thrombosis rate | PSI 12 | General |
| Postoperative sepsis rate | PSI 13 | General |
| Postoperative wound dehiscence rate | PSI 14 | General |
| Safety of Care (Healthcare-associated infections) | | |
| Methicillin-resistant <i>Staphylococcus aureus</i> (or MRSA) blood laboratory-identified events (bloodstream infections) | HAI-5 | General |
| CLABSI - Central line-associated bloodstream infections | HAI-1 | General |
| CAUTI - Catheter-associated urinary tract infections | HAI-2 | General |
| Clostridium difficile (C.diff.) laboratory identified events (intestinal infections) | HAI-6 | General |
| Timely and effective care (Timely and effective care, out | patient imaging) | |
| MRI Lumbar Spine for Low Back Pain | OP-8 | Specific |
| Severe Sepsis and Septic Shock | SEP-1 | General |
| Safe Use of Opioids - Concurrent Prescribing | SAFE_USE_ OF_OPIOIDS | General |
| Healthcare workers given influenza vaccination | IMM-3 | General |
| Percentage of healthcare personnel who are up to date with COVID-19 vaccinations | HCP COVID-19 | General |
| Venous Thromboembolism Prophylaxis | VTE-1 | General |
| Intensive Care Unit Venous Thromboembolism Prophylaxis | VTE-2 | General |
| Readmission (Unplanned hospital visits) | | |
| Rate of readmission after hip/knee replacement | READM-30-HIP-KNEE | Specific |
| Ratio of unplanned hospital visits after hospital outpatient surgery | OP-36 | General |
| Rate of readmission after discharge from hospital (hospitalwide) | READM-30-HOSP- WIDE | General |



Performance benchmark data based on Medicare Fee-for-Service claims sourced from Arcadia

To evaluate a hospital's performance, the following measures and episodes of care were considered:

Population-level performance:

- Opioid Prescribing for Arthroscopic Rotator Cuff Repair
- Percent of Knee Arthroscopy Before Knee Replacement
- Radiofrequency Ablation Procedures for Low Back Pain
- Ultrasound Guided Intra Articular Injections of the Knee
- Cervical Spinal Surgery without Prior Epidural Steroid Injection
- Percent of Lumbar Spinal Surgery without Prior Steroid Injection
- Percent of Physical Therapy before Lumbar Surgery

Episode of care performance:

- Back and neck pain treatment without fusion
- Bone infection
- Fracture/dislocation treatment arm/wrist/hand
- Fracture/dislocation treatment knee
- Fracture/dislocation treatment lower leg/ankle/foot
- Fracture/dislocation treatment pelvis/hip/femur
- Hip replacement
- Injection for back pain
- Knee arthroscopy
- Knee replacement
- Leg/arm surgery
- Multiple severe injuries due to trauma
- Non-surgical back problems
- Repeat hip or knee replacement surgery
- Shoulder arthroscopy/rotator cuff repair
- Spinal fusion
- Surgery to replace ankle joint
- Total shoulder replacement

American Hospital Association data

The following indicator groups from the AHA Annual Survey of Hospitals Database 2022 were used as part of the quality metrics score:

Orthopedic-specific indicators

· Arthritis treatment

- Orthopedic services
- Computer assisted orthopedic surgery
- Prosthetic and orthotic services
- Physical rehabilitation
- · Sports medicine

General indicators

- Hospital research & screening
- Trauma center/certification
- Technological equipment
- Workforce strategic planning

Health equity

- · Health equity goals
- DEI disaggregated data
- · Health equity strategic plan

Accreditations and specialized programs

Additionally, the following specialty-centric accreditations and certifications were taken into consideration:

- The Joint Commission Hip fracture certification
- The Joint Commission Joint replacement shoulder certification
- The Joint Commission Joint replacement hip and knee certification
- The Joint Commission Spine surgery advanced certification
- The Joint Commission Total hip and total knee replacement advanced certification
- DNV Orthopedic center of excellence
- DNV Orthopedic center of excellence designation
- DNV Hip & knee replacement certification
- DNV Advanced shoulder surgery certification
- DNV Advanced foot & ankle surgery certification

Hospital recommendation from peers

Participants of the recommendation survey were asked to recommend the top hospitals for Orthopedic Care based on their professional expertise. Within this survey, participants had to state at least one condition/surgery that the hospital performs best and to rate the quality dimensions of the hospital across four areas of care. The standout treatments and quality assessment categories are as follows:



Standout categories

- Hip replacement surgery
- Knee replacement surgery
- Ankle surgery
- Shoulder replacement surgery
- ACL reconstruction surgery
- Nonsurgical orthopaedic treatments

Hospitals that received recommendations in the top decile for a standout category had this displayed alongside their rank.

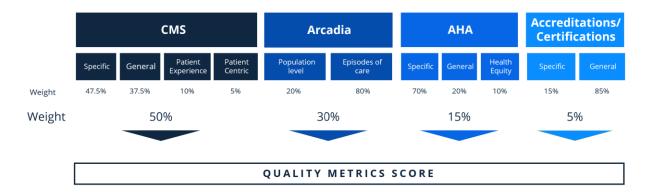
Quality assessment

- Provision of care and patient safety
- Patient education and counselling
- Overall nurse staffing
- Technical equipment

Participants were prompted to select values between 1 and 10 to assess the hospitals across these four quality dimensions. The values were then averaged for each hospital, and the quality assessment was factored into the recommendation score.

2.4.6. Pulmonary Care

The quality metrics model for Pulmonary Care is as follows:



A detailed overview of the specific measures considered from each data source can be found below.

Centers for Medicare & Medicaid Services (CMS)

The following indicators from the respective CMS datasets were used in the evaluation:

| Mortality (Complications and deaths) | Measure code | Measure group | |
|--|-------------------------|------------------|--|
| Death rate for COPD patients | MORT-30- COPD | Specific | |
| Death rate for pneumonia patients | MORT-30- PN | Specific | |
| latrogenic pneumothorax rate | PSI_06 | Specific | |
| Postoperative respirature failure rate | PSI_11 | Specific | |
| Perioperative pulmonary embolism or deep vein thrombosis rate | PSI_12 | Specific | |
| Pressure ulcer rate | PSI_03 | General | |
| Death rate among surgical inpatients with serious treatable complications | PSI_04 | General | |
| Postoperative hemorrhage or hematoma rate | PSI_09 | General | |
| Postoperative sepsis rate | PSI_13 | General | |
| Postoperative wound dehiscence rate | PSI_14 | General | |
| Safety of care (Healthcare-associated infections) | | | |
| Methicillin-resistant <i>Staphylococcus aureus</i> (or MRSA) blood laboratory-identified events (bloodstream infections) | HAI-5 | General | |
| CLABSI - Central line-associated bloodstream infections | HAI-1 | General | |
| CAUTI - Catheter-associated urinary tract infections | HAI-2 | General | |
| Clostridium difficile (C.diff.) laboratory identified events (intestinal infections) | HAI-6 | General | |
| Timely and effective care (Timely and effective care, outpatient imaging) | | | |
| Venous Thromboembolism Prophylaxis | VTE-1 | Specific | |
| Intensive Care Unit Venous Thromboembolism Prophylaxis | VTE-2 | Specific | |
| Severe Sepsis and Septic Shock | SEP-1 | General | |
| Healthcare workers given influenza vaccination | IMM-3 | General | |
| Percentage of healthcare personnel who are up to date with COVID-19 vaccinations | HCP COVID- 19 | General | |
| Safe Use of Opioids - Concurrent Prescribing | SAFE_USE_ OF_OPIOIDS | General | |
| Readmission (Unplanned hospital visits) | | | |
| Hospital return days for pneumonia patients | EDAC-3-PN | Specific | |
| Rate of readmission for chronic obstructive pulmonary disease (COPD) patients | READM-30- COPD | Specific | |
| Pneumonia (PN) 30-Day Readmission Rate | READM-30- PN | Specific | |
| Ratio of unplanned hospital visits after hospital outpatient surgery | OP-36 | General | |
| Rate of readmission after discharge from hospital (hospital-wide) | READM-30- HOSP-WIDE | General | |



Performance benchmark data based on Medicare Fee-for-Service claims sourced from Arcadia

To evaluate a hospital's performance, the following measures and episodes of care were considered:

Population-level performance:

- CMS Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention Condition 1
- CMS Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention Condition 2
- CMS Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention Condition 3

Episode of care performance:

- Acute respiratory failure
- Collapsed lung
- Inpatient lung disease
- Major chest trauma
- Pneumonia and respiratory infections
- Surgical Removal of Lung

American Hospital Association data

The following indicator groups from the AHA Annual Survey of Hospitals Database 2022 were used as part of the quality metrics score:

Pulmonology-specific indicators

- Chronic care management
- Advanced technological equipment (e.g. diagnostic radioisotope)
- Urgent and intensive care

General indicators

- Hospital research & screening
- Trauma center/certification
- Technological equipment
- Workforce strategic planning

Health equity

- Health equity goals
- DEI disaggregated data



• Health equity strategic plan

Accreditations and specialized programs

Additionally, the following specialty-centric accreditations and certifications were taken into consideration:

- The Joint Commission Asthma pediatric certification
- The Joint Commission Pneumonia certification
- The Joint Commission Respiratory failure certification
- The Joint Commission Chronic obstructive pulmonary disease advanced certification
- The Joint Commission Lung volume reduction surgery advanced certification

Participants of the recommendation survey were asked to name the top hospitals for Pulmonary Care based on their professional expertise. Within this survey, participants had to state at least one condition/surgery that the hospital performs best and to rate the quality dimensions of the hospital across six areas of care. The standout treatments/conditions and quality assessment categories are as follows:

Standout categories

- Asthma
- Chronic Obstructive Pulmonary Disease (COPD)
- Pulmonary hypertension
- Respiratory infections (e.g., bronchitis, pneumonia & tuberculosis)
- Pleural diseases (e.g., pleurisy, pleural effusion)
- Lung cancer surgery
- Advanced pulmonary surgical interventions (e.g., minimally invasive thoracic surgery, lung transplant)

Hospitals that received recommendations in the top decile for a standout category had this displayed alongside their rank.

Quality assessment

- Provision of care and patient safety
- Patient education and counselling
- Chronic care
- Pulmonary rehabilitation
- Overall nurse staffing
- Technical equipment

Participants were prompted to select values between 1 and 10 to assess the hospitals across these six quality dimensions. The values were then averaged for each hospital, and the quality assessment was factored into the recommendation score.



As a result, the *Best Hospitals for Specialized Care* in the U.S. within the six medical fields were awarded, including the top 200 hospitals for Cancer, Cardiac, Neurological, and Orthopedic Care, and the top 175 for Endocrine and Pulmonary Care.

Hospitals within each specialty's list are sorted by rank as follows:

$\langle \cdot \rangle$

Hospitals for Cardiac Care

| Rank | Hospital | City | State | Notable Treatment | PROMS Survey |
|------|--|-----------|---------------|---|--------------|
| 1 | Mayo Clinic - Rochester | Rochester | Minnesota | Chronic ischemic heart disease, Coronary artery disease, Heart bypass surgery (CABG), Heart valve surgery, Heart transplant, Coronary Angioplasty & Stent Placement | |
| 2 | Cleveland Clinic / Sydell and Arnold Miller Family Heart, Vascular & Thoracic Institute | Cleveland | Ohio | Chronic ischemic heart disease, Coronary artery disease, Heart bypass surgery (CABG), Heart valve surgery, Heart transplant, Coronary Angioplasty & Stent Placement | |
| 3 | Massachusetts General Hospital / Corrigan Minehan Heart Center | Boston | Massachusetts | Chronic ischemic heart disease, Coronary artery disease, Heart bypass surgery (CABG), Heart valve surgery, Heart transplant, Coronary Angioplasty & Stent Placement | |
| 4 | NYU Langone Hospitals - Tisch Hospital | New York | New York | Coronary artery disease, Heart bypass surgery (CABG), Heart valve surgery, Heart transplant, Coronary Angioplasty & Stent Placement | |
| 5 | Stanford Health Care - Stanford Hospital | Stanford | California | Coronary artery disease, Heart bypass surgery (CABG), Heart valve surgery, Heart transplant, Coronary Angioplasty & Stent Placement | |

[...]

Disclaimer

The rankings are comprised exclusively of hospitals that are eligible regarding the scope described in this document. A mention in the ranking is a positive recognition based on peer recommendations and publicly available data sources at the time. The ranking is the result of an elaborate process which, due to the interval of data collection and analysis, is a reflection of the last calendar year. Furthermore, events preceding or following the pertaining 04/23/2024-04/22/2025 and/or period to individual persons affiliated/associated to the facilities were not included in the metrics. As such, the results of this ranking should not be used as the sole source of information for future deliberations. The information provided in this ranking should be considered in conjunction with other available information about hospitals or, if possible, accompanied by a visit to a facility. The quality of hospitals that are not included in the rankings is not disputed.



Literature

Accreditation Commission for Health Care (2025). Available online: https://www.achc.org/ (accessed April 1st, 2025)

American Hospital Association (2024): *AHA Hospital Statistics 2024*, available online: https://www.aha.org/statistics/fast-facts-us-hospitals (accessed March 6th, 2025)

American Nurses Credentialing Center (2025). Available online: https://www.nursingworld.org/ancc/ (accessed April 1st, 2025)

Arcadia (2025): Performance benchmark data based on Medicare Fee-for-Service claims sourced from Arcadia, information about Arcadia available online: https://arcadia.io/(accessed April, 22nd, 2025)

Centers for Medicare & Medicaid Services (2025): CMS Provider Characteristics & Initiatives, available online: https://data.cms.gov/ (accessed March 4th, 2025)

Det Norske Veritas (DNV) (2025): Accredited hospitals, available online: https://www.dnv.com/supplychain/healthcare/XXX_accredited-hospitals/ (accessed April 1st, 2025)

Foundation for the Accreditation of Cellular Therapy (2025). Available online: https://accredited.factglobal.org/ (accessed March 12th, 2025)

HCAHPS (2024): HCAHPS Star Ratings Technical Notes. Hospital Consumer Assessment of Healthcare Providers and Systems, available online:

https://hcahpsonline.org/en/hcahps-star-ratings/ (accessed: March 3rd, 2025)

National Association of Epilepsy Centers (2025). Available online: https://naecepilepsy.org/ (accessed April 1st, 2025)

National Cancer Institute (2025), available online: https://www.cancer.gov/ (accessed April 1st, 2025)

National Institute on Aging (NIA) Alzheimer's Centers (2025). Available online: https://www.nia.nih.gov/health/clinical-trials-and-studies/find-alzheimers-disease-research-center (accessed April 1st, 2025)

Planetree (2025). Available online: https://www.planetree.org/partners/locations/united-states#topAccreditations (accessed April 1st, 2025)



The Joint Commission (2025). Available online: https://www.jointcommission.org/ (accessed April 1st, 2025)

Appendix A

| PROMs Implementation Survey Section | Weight |
|--|--------|
| PROMs Status Assessment | 5% |
| PROMs team | 5% |
| Number of Standardized PROMs | 6.5% |
| Condition Specific PROMs - Case Mix adjustment | 6% |
| Condition Specific PROMs - Scientifically validated | 4% |
| Condition Specific PROMs - Response rate | 7.5% |
| Reporting PROMs results internally to clinicians | 5% |
| Reporting PROMs results internally to management board | 5% |
| Reporting PROMs results internally to patients | 5% |
| Provide patients individual reports of PROMs data | 5% |
| Reporting PROMs results to the public | 10% |
| Audit before publishing the data | 6% |
| Using PROMs data to optimize care processes | 7.5% |
| Using PROMs data to support therapeutic decisions in real-time | 7.5% |
| Using PROMs data for shared decision making | 7.5% |
| Sharing and comparing PROMs data with other institutions | 7.5% |



Appendix B

The following 2022 AHA Annual Survey indicators were used within the Cancer Care ranking:

- 1. Total hospital beds (calculated)⁵
- 2. Health research hospital
- 3. Health screenings hospital
- 4. Breast cancer screening/mammograms hospital
- 5. Chemotherapy hospital
- 6. Hospice program hospital
- 7. Oncology services hospital
- 8. Pain management program hospital
- 9. Palliative care program hospital
- 10. Inpatient palliative care unit hospital
- 11. Full-field digital mammography (FFDM) hospital
- 12. Image-guided radiation therapy hospital
- 13. Intensity-modulated radiation therapy (IMRT) hospital
- 14. Shaped beam radiation system hospital
- 15. Stereotactic radiosurgery hospital
- 16. Bone marrow transplant hospital
- 17. Incorporating workforce as part of strategic planning conduct needs assessment
- 18. Incorporating workforce as part of strategic planning talent development plan
- 19. Incorporating workforce as part of strategic planning recruitment & retention planning
- 20. Accountable for meeting health equity goals CEO
- 21. Accountable for meeting health equity goals designated senior executive
- 22. Accountable for meeting health equity goals committee or task force
- 23. Accountable for meeting health equity goals division/department leaders
- 24. DEI disaggregated data to inform decisions patient outcomes
- 25. DEI disaggregated data to inform decisions training
- 26. DEI disaggregated data to inform decisions professional development
- 27. Health equity strategic planning equitable and inclusive organizational policies
- 28. Health equity strategic planning systematic and shared accountability for health equity
- 29. Health equity strategic planning diverse representation in hospital and health care system leadership
- 30. Health equity strategic planning diverse representation in hospital and health care system governance

⁵ The number of beds was used as a feasibility check and had no impact on the scoring model

Appendix C

The following 2022 AHA Annual Survey indicators were used within the Cardiac Care ranking:

- 1. Total hospital beds (calculated)⁶
- 2. Certified trauma center hospital
- 3. Level of trauma center
- 4. Hospital owns trauma certification
- 5. Health research hospital
- 6. Health screenings hospital
- 7. Computed tomography (CT) scanner hospital
- 8. Magnetic resonance imaging (MRI) hospital
- 9. Multi-slice spiral computed tomography < 64 slice hospital
- 10. Multi-slice spiral computed tomography + 64 slice hospital
- 11. Positron emission tomography (PET) hospital
- 12. Positron emission tomography/CT (PET/CT) hospital
- 13. Ultrasound hospital
- 14. Basic interventional radiology hospital
- 15. Cardiac intensive care hospital
- 16. Pediatric diagnostic catheterization hospital
- 17. Adult interventional cardiac catheterization hospital
- 18. Adult cardiac surgery hospital
- 19. Adult cardiac electrophysiology hospital
- 20. Certified trauma center hospital
- 21. Level of trauma center
- 22. Hospital owns trauma certification
- 23. Health research hospital
- 24. Health screenings hospital
- 25. Computed tomography (CT) scanner hospital
- 26. Magnetic resonance imaging (MRI) hospital
- 27. Multi-slice spiral computed tomography < 64 slice hospital
- 28. Multi-slice spiral computed tomography + 64 slice hospital
- 29. Positron emission tomography (PET) hospital
- 30. Positron emission tomography/CT (PET/CT) hospital
- 31. Ultrasound hospital
- 32. Basic interventional radiology hospital
- 33. Cardiac intensive care hospital
- 34. Pediatric diagnostic catheterization hospital
- 35. Adult interventional cardiac catheterization hospital

⁶ The number of beds was used as a feasibility check and had no impact on the scoring model

- 36. Adult cardiac surgery hospital
- 37. Adult cardiac electrophysiology hospital

Appendix D

The following 2022 AHA Annual Survey indicators were used within the Endocrine care ranking:

- 1. Total hospital beds (calculated)⁷
- 2. Basic interventional radiology hospital
- 3. Certified trauma center hospital
- 4. Level of trauma center
- 5. Hospital owns trauma certification
- 6. Health research hospital
- 7. Health screenings hospital
- 8. Closed unit medical surgical intensive care
- 9. Closed unit other intensive care
- 10. Computed tomography (CT) scanner hospital
- 11. Diagnostic radioisotope facility hospital
- 12. Magnetic resonance imaging (MRI) hospital
- 13. Primary care department hospital
- 14. Other telehealth hospital
- 15. Positron emission tomography (PET) hospital
- 16. Positron emission tomography/CT (PET/CT) hospital
- 17. Telehealth remote patient monitoring: ongoing chronic care management hospital
- 18. Telehealth consultation and office visits hospital
- 19. Telehealth eICU hospital
- 20. Basic interventional radiology hospital
- 21. Certified trauma center hospital
- 22. Level of trauma center
- 23. Hospital owns trauma certification
- 24. Health research hospital
- 25. Health screenings hospital
- 26. Closed unit medical surgical intensive care
- 27. Closed unit other intensive care
- 28. Computed tomography (CT) scanner hospital
- 29. Diagnostic radioisotope facility hospital
- 30. Magnetic resonance imaging (MRI) hospital
- 31. Primary care department hospital
- 32. Other telehealth hospital
- 33. Positron emission tomography (PET) hospital
- 34. Positron emission tomography/CT (PET/CT) hospital

 $^{^{7}}$ The number of beds was used as a feasibility check and had no impact on the scoring model

- 35. Telehealth remote patient monitoring: ongoing chronic care management hospital
- 36. Telehealth consultation and office visits hospital
- 37. Telehealth elCU hospital



Appendix E

The following 2022 AHA Annual Survey indicators were used within the Neurological care ranking:

- 1. Total hospital beds (calculated)⁸
- 2. Certified trauma center hospital
- 3. Level of trauma center
- 4. Hospital owns trauma certification
- 5. Health research hospital
- 6. Health screenings hospital
- 7. Neurological services hospital
- 8. Pain management program hospital
- 9. Telehealth stroke care hospital
- 10. Single photon emission computerized tomography (SPECT) hospital
- 11. Intraoperative magnetic resonance imaging hospital
- 12. Magnetoencephalography (MEG) hospital
- 13. Magnetic resonance imaging (MRI) hospital
- 14. Computed Tomography (CT) scanner hospital
- 15. Positron emission tomography (PET) hospital
- 16. Positron emission tomography/CT (PET/CT) hospital
- 17. Ultrasound hospital
- 18. Accountable for meeting health equity goals CEO
- 19. Accountable for meeting health equity goals designated senior executive
- 20. Accountable for meeting health equity goals committee or task force
- 21. Accountable for meeting health equity goals division/department leaders
- 22. DEI disaggregated data to inform decisions patient outcomes
- 23. DEI disaggregated data to inform decisions training
- 24. DEI disaggregated data to inform decisions professional development
- 25. Health equity strategic planning equitable and inclusive organizational policies
- 26. Health equity strategic planning systematic and shared accountability for health equity
- 27. Health equity strategic planning diverse representation in hospital and health care system leadership
- 28. Health equity strategic planning diverse representation in hospital and health care system governance
- 29. Incorporating workforce as part of strategic planning conduct needs assessment
- 30. Incorporating workforce as part of strategic planning talent development plan

⁸ The number of beds was used as a feasibility check and had no impact on the scoring model

31. Incorporating workforce as part of strategic planning - recruitment & retention planning



Appendix F

The following 2022 AHA Annual Survey indicators were used within the Orthopedic care ranking:

- 1. Total hospital beds (calculated)⁹
- 2. Certified trauma center hospital
- 3. Level of trauma center
- 4. Hospital owns trauma certification
- 5. Health research hospital
- 6. Health screenings hospital
- 7. Magnetic resonance imaging (MRI) hospital
- 8. Computed Tomography (CT) scanner hospital
- 9. Ultrasound hospital
- 10. Arthritis treatment center hospital
- 11. Computer assisted orthopedic surgery (CAOS) hospital
- 12. Orthopedic services hospital
- 13. Physical rehabilitation outpatient services hospital
- 14. Prosthetic and orthotic services hospital
- 15. Sports medicine hospital
- 16. Accountable for meeting health equity goals CEO
- 17. Accountable for meeting health equity goals designated senior executive
- 18. Accountable for meeting health equity goals committee or task force
- 19. Accountable for meeting health equity goals division/department leaders
- 20. DEI disaggregated data to inform decisions patient outcomes
- 21. DEI disaggregated data to inform decisions training
- 22. DEI disaggregated data to inform decisions professional development
- 23. Health equity strategic planning equitable and inclusive organizational policies
- 24. Health equity strategic planning systematic and shared accountability for health equity
- 25. Health equity strategic planning diverse representation in hospital and health care system leadership
- 26. Health equity strategic planning diverse representation in hospital and health care system governance
- 27. Incorporating workforce as part of strategic planning conduct needs assessment
- 28. Incorporating workforce as part of strategic planning talent development plan
- 29. Incorporating workforce as part of strategic planning recruitment & retention planning

⁹ The number of beds was used as a feasibility check and had no impact on the scoring model



Appendix G

The following 2022 AHA Annual Survey indicators were used within the Pulmonary care ranking:

- 1. Total hospital beds (calculated)¹⁰
- 2. Certified trauma center hospital
- 3. Level of trauma center
- 4. Hospital owns trauma certification
- 5. Health research hospital
- 6. Health screenings hospital
- 7. Patient education center hospital
- 8. Closed unit medical surgical intensive care
- 9. Closed unit other intensive care
- 10. Computed tomography (CT) scanner hospital
- 11. Diagnostic radioisotope facility hospital
- 12. Intensivist FTE Medical-surgical intensive care
- 13. Imaging centers
- 14. Magnetic resonance imaging (MRI) hospital
- 15. Multi-slice spiral computed tomography < 64 slice hospital
- 16. Multi-slice spiral computed tomography + 64 slice hospital
- 17. Other intensive care hospital
- 18. Positron emission tomography (PET) hospital
- 19. Positron emission tomography/CT (PET/CT) hospital
- 20. Single photon emission computerized tomography (SPECT) hospital
- 21. Telehealth remote patient monitoring: ongoing chronic care management hospital
- 22. Ultrasound hospital
- 23. Urgent care center hospital
- 24. Accountable for meeting health equity goals CEO
- 25. Accountable for meeting health equity goals designated senior executive
- 26. Accountable for meeting health equity goals committee or task force
- 27. Accountable for meeting health equity goals division/department leaders
- 28. DEI disaggregated data to inform decisions patient outcomes
- 29. DEI disaggregated data to inform decisions training
- 30. DEI disaggregated data to inform decisions professional development
- 31. Health equity strategic planning equitable and inclusive organizational policies
- 32. Health equity strategic planning systematic and shared accountability for health equity

¹⁰ The number of beds was used as a feasibility check and had no impact on the scoring model

- 33. Health equity strategic planning diverse representation in hospital and health care system leadership
- 34. Health equity strategic planning diverse representation in hospital and health care system governance
- 35. Incorporating workforce as part of strategic planning conduct needs assessment
- 36. Incorporating workforce as part of strategic planning talent development plan
- 37. Incorporating workforce as part of strategic planning recruitment & retention planning