



**The Third Annual  
HealthGrades  
America's 50 Best  
Hospitals Report**

**February 2009**



# HEALTHGRADES®

## HealthGrades Third Annual America's 50 Best Hospitals Report February 2009

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### Executive Summary

In this third annual report, HealthGrades recognizes those hospitals that have demonstrated superior clinical quality for the most consecutive years. These hospitals have been designated by HealthGrades as America's 50 Best Hospitals (A50B). Hospitals that qualify for this designation are those U.S. hospitals that have been designated by HealthGrades as Distinguished Hospitals for Clinical Excellence™ the most consecutive times from 2003 to 2009.

Variation in quality between providers still exists in the U.S. healthcare system. Each year HealthGrades studies the impact of this variation at the hospital level and its impact on the Medicare population. This research consistently illustrates that large gaps in the quality of care continue to exist among healthcare providers, and that these differences contribute to preventable morbidity and mortality.

The HealthGrades Distinguished Hospitals for Clinical Excellence Award is given annually to those hospitals that rank among the top five percent nationally for the lowest overall risk-adjusted mortality and in-hospital complications across 26 diagnoses and procedures. Each year the Distinguished Hospitals for Clinical Excellence analysis is based on outcomes from a three-year period. A50B hospitals are those hospitals that have been in the top five percent nationally and have been Distinguished Hospitals for Clinical Excellence Award recipients for a minimum of six consecutive years.

To assess what it means to be a Distinguished Hospital for Clinical Excellence, HealthGrades recently released the *HealthGrades Seventh Annual Hospital Quality and Clinical Excellence Study* (released January 27, 2009). In this clinical excellence study, HealthGrades compared the clinical outcomes for Distinguished Hospitals for Clinical Excellence hospitals to all other U.S. hospitals for the years 2005, 2006, and 2007. Using 41 million Medicare patient records from almost 5,000 acute-care, non-federal hospitals, HealthGrades evaluated how these 270 hospitals compared to all other U.S. hospitals in terms of clinical quality.

### Summary of Findings

In the 2009 study, Distinguished Hospitals for Clinical Excellence outperformed all other hospitals across all 26 procedures and diagnoses studied. During 2005 - 2007 they had on average:

- A **27 percent overall lower in-hospital risk-adjusted mortality** rate associated with the 17 procedures and diagnoses where mortality was the outcome of study.
- An **eight percent overall lower in-hospital risk-adjusted complications** rate associated with the nine procedures where in-hospital major complications were the outcome of study.



If all hospitals performed at the level of DH-CE hospitals across the 17 procedures and conditions, 152,666 Medicare lives could have potentially been saved.

Among the Medicare beneficiaries admitted to U.S. hospitals during 2005 - 2007, **152,666 lives may have been saved** if all hospitals performed at the level of Distinguished Hospitals for Clinical Excellence.

For the same time period, **11,772 major complications may have been avoided** if all hospitals performed at the level of Distinguished Hospitals for Clinical Excellence.

HealthGrades America's 50 Best Hospitals are those hospitals that have consistently ranked among the top five percent in the nation for clinical quality. These elite organizations represent the best of the best and set the quality standard for American hospitals.

### Three-Step Methodology

In order to evaluate overall hospital performance and to identify the 50 best-performing hospitals in clinical excellence across the U.S., HealthGrades uses a three-step methodology:

- 1 Mortality and Complication Based Outcomes Methodology
- 2 Distinguished Hospital Award – Clinical Excellence™ Methodology
- 3 HealthGrades America's 50 Best Hospitals Methodology

The *HealthGrades Seventh Annual Hospital Quality and Clinical Excellence Study* concentrated on the 26 procedures and diagnoses for which HealthGrades has developed a predictive logistic regression model. The 26 procedures and diagnoses are as follows.

Mortality Based	Complication Based
<ul style="list-style-type: none"> <li>• Bowel Obstruction</li> <li>• Chronic Obstructive Pulmonary Disease (COPD)</li> <li>• Coronary Bypass Surgery</li> <li>• Coronary Interventional Procedures (Angioplasty/Stent)</li> <li>• Diabetic Acidosis and Coma</li> <li>• Gastrointestinal Bleed</li> <li>• Gastrointestinal Surgeries and Procedures</li> <li>• Heart Attack</li> <li>• Heart Failure</li> <li>• Pancreatitis</li> <li>• Pneumonia</li> <li>• Pulmonary Embolism</li> <li>• Resection / Replacement of Abdominal Aorta</li> <li>• Respiratory Failure</li> <li>• Sepsis</li> <li>• Stroke</li> <li>• Valve Replacement Surgery</li> </ul>	<ul style="list-style-type: none"> <li>• Back and Neck Surgery (with Spinal Fusion)</li> <li>• Back and Neck Surgery (without Spinal Fusion)</li> <li>• Carotid Surgery</li> <li>• Cholecystectomy</li> <li>• Hip Fracture Repair</li> <li>• Peripheral Vascular Bypass</li> <li>• Prostatectomy</li> <li>• Total Hip Replacement</li> <li>• Total Knee Replacement</li> </ul>



## Mortality and Complication Based Outcomes 2009 Methodology Brief

To help consumers evaluate and compare hospital performance, HealthGrades purchases and analyzes patient outcome data for virtually every hospital in the country that reports data to the Centers for Medicare and Medicaid Services (CMS). The Medicare data (MedPAR file) from CMS contain the 41 million inpatient records for Medicare patients. The ratings for 26 procedures and diagnoses are based upon the HealthGrades methodology.

The purpose of risk adjustment is to obtain fair statistical comparisons among disparate populations or groups. Significant differences in demographic and clinical risk factors are found among patients treated in different hospitals. Risk adjustment of the data is needed to make accurate and valid comparisons of clinical outcomes at different hospitals. This is important because in healthcare, patients differ from one another with respect to their health status, demographics, and type of procedure performed. Risk factors include gender, age, specific procedure performed, and current health conditions such as hypertension, diabetes, and congestive heart failure. The risk adjustment used by HealthGrades takes these factors into consideration to make fair and accurate comparisons of hospitals based upon the types of patients treated.

Developing ratings involves two steps:

- First, the **predicted** value for a specific outcome is calculated.
- Second, the predicted outcome is compared to the **actual outcome**.

HealthGrades determines if the difference between the predicted outcome and the actual outcome was statistically significant.

The following rating system was applied to the data for all procedures and diagnoses:

- ★★★★★ Actual performance was better than predicted and the difference was statistically significant.
- ★★★ Actual performance was not statistically different from what was predicted.
- ★ Actual performance was worse than predicted and the difference was statistically significant.

In general, 70 percent to 80 percent of hospitals in each procedure/diagnosis are classified as three stars, with actual results statistically the same as predicted results. Approximately 10 percent to 15 percent were one-star hospitals and 10 percent to 15 percent were five-star hospitals.

Visit [www.HealthGrades.com](http://www.HealthGrades.com) to view hospital ratings and to read the complete methodology *Hospital Report Cards™ Mortality and Complication Based Outcomes 2009 Methodology*.



## Distinguished Hospital Award – Clinical Excellence™ 2009 Methodology

To be considered for HealthGrades' Distinguished Hospital Award for Clinical Excellence™ (DHA-CE), a hospital must have star ratings in at least 19 of the 26 HealthGrades procedures and diagnoses ratings using MedPAR data.

After creating a list of hospitals that met the above criteria, HealthGrades took the following steps to determine the DHA-CE recipients:

- 1 Calculated the average star rating for each hospital by averaging all of their MedPAR-based ratings.
- 2 Ranked hospitals in descending order by their average star rating.

- 3 Selected the hospitals whose average star was greater than 3.42.
- 4 Designated these hospitals as 2009 Distinguished Hospital Award-Clinical Excellence™ recipients.



### HealthGrades America's 50 Best Hospitals 2009 Methodology

HealthGrades' America's 50 Best Hospitals Award recognizes hospitals for consistent excellence by identifying those hospitals that have received HealthGrades' Distinguished Hospital Award for Clinical Excellence™ (DHA-CE) designation for the most consecutive years. To identify America's 50 Best Hospitals, HealthGrades uses a two-step process:

- 1 Hospitals who were DHA-CE recipients for all of the seven years that HealthGrades has awarded the DHA-CE were identified.
- 2 Hospitals who were DHA-CE recipients for all of the last six years that HealthGrades has awarded the DHA-CE were identified.
  - The six-year recipients were sorted by z-score, using the average z-score from the most recent DHP-CE analysis. The average z-score is a statistical measure of hospital quality outcomes.
  - The top hospitals from this list were then added to the list from step 1 to create a list of America's 50 Best Hospitals.

### Interpretation of Results

The HealthGrades America's 50 Best Hospitals designation recognizes hospitals that demonstrated superior and sustained clinical quality over a nine-year time period, based upon an analysis of more than 110 million Medicare patient records from 1999 through 2007 (the most current year available).

Recipients of the HealthGrades America's 50 Best Hospitals Award were selected by identifying those hospitals that have received the HealthGrades Distinguished Hospital Award for Clinical Excellence™ (DHA-CE) the most consecutive times from 2009 and previous years. Hospitals that are recognized by HealthGrades' Distinguished Hospital Award for Clinical Excellence™ rank among the top five percent nationally for quality. As presented in *HealthGrades Sixth Annual Hospital Quality and Clinical Excellence Study*, Distinguished Hospitals for Clinical Excellence outperformed all other hospitals across all procedures and diagnoses studied. During 2005 - 2007, they had on average:

- A **27 percent overall lower in-hospital risk-adjusted mortality** rate associated with the 17 procedures and diagnoses studied where mortality was studied as the outcome (bowel obstruction, chronic obstructive pulmonary disease (COPD), coronary bypass surgery, coronary interventional procedures (angioplasty/stent), diabetic acidosis and coma, gastrointestinal bleed, gastrointestinal surgeries and procedures, heart attack, heart failure, pancreatitis, pneumonia, pulmonary embolism, resection/replacement of abdominal aorta, respiratory failure, sepsis, stroke, and valve replacement surgery). The top four areas associated with the greatest relative reduction in risk-adjusted in-hospital mortality associated with Distinguished Hospitals, as compared to all other hospitals, were noted in:

Diabetic Acidosis and Coma	39.67% lower risk-adjusted mortality
Chronic Obstructive Pulmonary Disease	37.51% lower risk-adjusted mortality
Pulmonary Embolism	36.27% lower risk-adjusted mortality
Pneumonia	35.54% lower risk-adjusted mortality

DHA-CE hospitals have 27% lower risk-adjusted mortality and 8% lower risk-adjusted complications compared to all other hospitals.

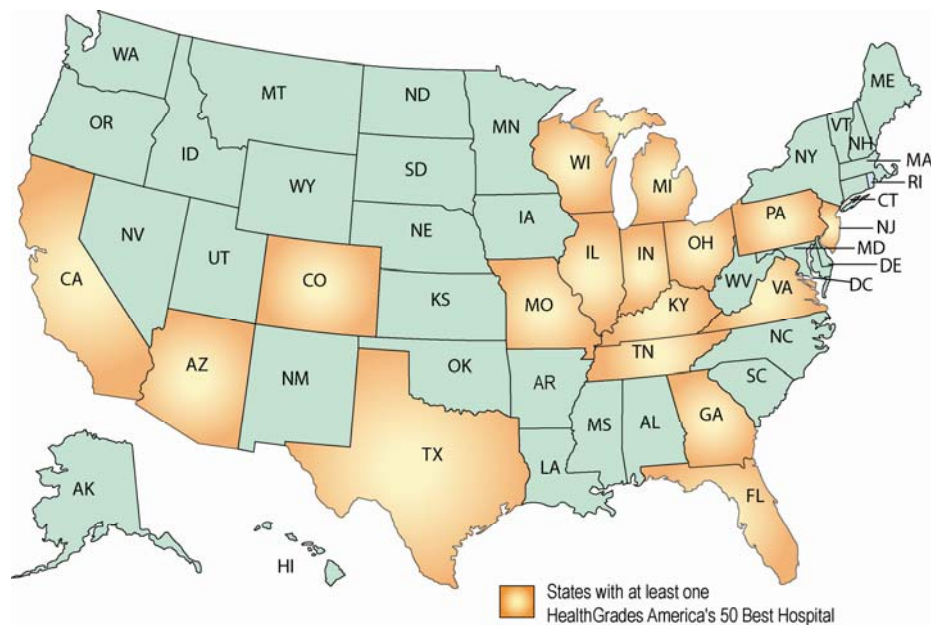
- An **eight percent overall lower in-hospital risk-adjusted complications** rate associated with the nine procedures studied where major in-hospital complications were the outcome studied (total knee replacement, total hip replacement, hip fracture repair, back and neck surgery, spinal fusion, carotid surgery, peripheral vascular bypass, prostatectomy, and cholecystectomy). The top three areas associated with the greatest relative reduction in risk-adjusted in-hospital complications associated with Distinguished Hospitals, as compared to all other hospitals, were noted in:

Prostatectomy	14.14% fewer risk-adjusted in-hospital major complications
Hip Fracture Repair	12.60% fewer risk-adjusted in-hospital major complications
Total Hip Replacement	12.54% fewer risk-adjusted in-hospital major complications

- Seventeen states have at least one HealthGrades America's 50 Best Hospital. This year four states joined the list of states—Georgia, Missouri, Texas and Wisconsin—had at least one America's 50 Best Hospital. Additionally, North Carolina no longer has at least one America's 50 Best Hospital.

**States with at least one HealthGrades America's 50 Best Hospital**

Seventeen states have at least one HealthGrades America's 50 Best Hospital.



This year's study found that if all Medicare patients, who were admitted to U.S. hospitals between 2005 and 2007 with any of the 26 conditions studied, were treated in hospitals that performed at the level of Distinguished Hospitals for Clinical Excellence, **152,666 lives may have been saved** and **11,772 in-hospital major complications may have been avoided**. Considering that this study evaluates just 26 diagnoses and procedures and looks at the Medicare population only, it is likely that this number is a gross under-estimation of the true numbers.

In conclusion, since 1999, America's 50 Best Hospitals have consistently out-performed all other hospitals in terms of risk-adjusted mortality and in-hospital major complications. In this arena of

transparency and accountability, these hospitals set the target for clinical excellence for the U.S. healthcare delivery system. For a nation where healthcare spending constitutes 16 percent of the Gross Domestic Product<sup>1</sup>, consumers should expect this level of quality from all hospitals and all hospitals should look to and learn from America's 50 Best Hospitals.

## HealthGrades 2009 America's 50 Best Hospitals

\* Distinction cannot be used without a Licensing Agreement from Health Grades, Inc.

HealthGrades America's 50 Best Hospital*	City
<b>Arizona</b>	
Mayo Clinic Hospital	Phoenix
<b>California</b>	
Cedars-Sinai Medical Center	Los Angeles
Glendale Adventist Medical Center	Glendale
Glendale Memorial Hospital & Health Center	Glendale
Good Samaritan Hospital	Los Angeles
Saint John's Hospital Health Center	Santa Monica
<b>Colorado</b>	
Centura Health-Penrose Saint Francis Health Services	Colorado Springs
<b>Florida</b>	
Bay Medical Center	Panama City
Central Florida Regional Hospital	Sanford
Delray Medical Center	Delray Beach
Holmes Regional Medical Center	Melbourne
Lawnwood Regional Medical Center and Heart Institute	Fort Pierce
Munroe Regional Medical Center	Ocala
Ocala Regional Medical Center/West Marion Hospital	Ocala
Palm Beach Gardens Medical Center	Palm Beach Gardens
Sarasota Memorial Hospital	Sarasota
<b>Georgia</b>	
Saint Joseph's Hospital of Atlanta	Atlanta
<b>Illinois</b>	
Alexian Brothers Medical Center	Elk Grove Village
Evanston Hospital	Evanston
<i>including:</i> Highland Park Hospital	Highland Park
Rush North Shore Medical Center	Skokie
<b>Indiana</b>	
The Community Hospital	Munster

\* Distinction cannot be used without a Licensing Agreement from Health Grades, Inc. Continued...

HealthGrades America's 50 Best Hospital* continued	City
<b>Kentucky</b>	
Baptist Hospital East	Louisville
Jewish Hospital	Louisville
<i>including:</i> Sts Mary & Elizabeth Hospital	Louisville
St. Elizabeth Medical Center	Edgewood
<b>Michigan</b>	
Genesys Regional Medical Center	Grand Blanc
Munson Medical Center	Traverse City
William Beaumont Hospital	Royal Oak
<b>Missouri</b>	
St. Luke's Hospital	Chesterfield
<b>New Jersey</b>	
Hackensack University Medical Center	Hackensack
<b>Ohio</b>	
Akron General Medical Center	Akron
Christ Hospital	Cincinnati
Grandview and Southview Medical Centers	Dayton
Hillcrest Hospital	Mayfield Heights
Parma Community General Hospital	Parma
St. John West Shore Hospital	Westlake
Southwest General Health Center	Middleburg Heights
Summa Health Systems Hospitals	Akron
<b>Pennsylvania</b>	
Easton Hospital	Easton
Hamot Medical Center	Erie
Lancaster General Hospital	Lancaster
Lehigh Valley Hospital	Allentown
Main Line Health - Lankenau	Wynnewood
Mercy Hospital Scranton	Scranton
St. Luke's Hospital	Bethlehem
<i>including:</i> Horton St. Luke's Hospital-Allentown Campus	Allentown
<b>Tennessee</b>	
Memorial Healthcare System	Chattanooga
<b>Texas</b>	
CHRISTUS Santa Rosa Healthcare	San Antonio
Rio Grande Regional Hospital	McAllen

\* Distinction cannot be used without a Licensing Agreement from Health Grades, Inc. Continued...



HealthGrades America's 50 Best Hospital* continued	City
<b>Virginia</b>	
Henrico Doctors' Hospital - Forest	Richmond
<i>including:</i> Henrico Doctors' Hospital - Parham	Richmond
Inova Fairfax Hospital	Falls Church
<b>Wisconsin</b>	
Aspirus Wausau Hospital	Wausau

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## References

<sup>1</sup>Health Insurance Cost. 2008 National Coalition on Healthcare. Available at <http://www.nchc.org/facts/cost.shtml>. Accessed 1/25/2008.