

# 15 TOP HEALTH SYSTEMS METHODOLOGY HIGHLIGHTS

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# 15 TOP HEALTH SYSTEMS

## ABOUT THE STUDY

The Thomson Reuters 15 Top Health Systems is an annual, quantitative study identifying the 15 health systems setting the highest benchmarks on a modified *100 Top Hospitals*<sup>®</sup> Balanced Scorecard focused on clinical quality and efficiency.

## HOW WE SELECT THE AWARD WINNERS

The main steps we take in selecting the health system winners are:

### 1. Building the database of hospitals, including special selection and exclusion criteria

This study focuses on short-term, acute care, nonfederal U.S.; and cardiac, orthopedic, and critical access hospitals that are members of health systems and treat a broad spectrum of patients. The data come from public sources including the Medicare Provider Analysis and Review (MedPAR) dataset and the Centers for Medicare and Medicaid Services (CMS) Hospital Compare dataset.

### 2. Identifying health systems

To be included in the study, a health system must contain at least two short-term, general, acute care or critical access hospitals, as identified using the *100 Top Hospitals* specialty algorithm and after hospital exclusions have been applied. We identified the “parent” system by finding the “home office” or “related organization,” as reported on the hospital’s 2010 Medicare Cost Reports. In all, 321 health systems were included in this study.

### 3. Aggregating patient-level data into health systems

To analyze health system performance, we aggregate data from all of a system’s included hospitals, using a methodology that accounts for hospital size and teaching status, and then we calculate a set of performance measures at the system level.

### 4. Classifying health systems into comparison groups

To develop more actionable benchmarks for like health systems, we divide them into three comparison groups based on total operating expense of the member hospitals. The three comparison groups we use are:

Health System Comparison Group	Total Operating Expense	Number of Systems in Study	Number of Winners
Large	> \$1.5 billion	85	5
Medium	\$750 million – \$1.5 billion	103	5
Small	< \$750 million	133	5
Total Systems	n/a	321	15

**5. Scoring health systems on a set of eight performance measures centered on quality of care, efficiency, and consumer satisfaction**

- Risk-adjusted mortality index (in-hospital)
- Risk-adjusted complications index
- Risk-adjusted patient safety index
- Core measures mean percent
- 30-day risk-adjusted mortality rate for heart attack, heart failure, and pneumonia
- 30-day risk-adjusted readmission rate for heart attack, heart failure, and pneumonia
- Severity-adjusted average length of stay
- Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) score (patient rating of overall hospital performance)

**6. Determining 15 top performers by ranking health systems overall based on their aggregate performance (sum of individual measure ranks)**

We ranked health systems on their performance on each of the measures relative to the other included systems. We then summed each system's individual performance-measure rankings and re-ranked overall to arrive at a final rank for the system. The top 15 health systems with the best final rank were selected as the winners. All measures except the 30-day mortality rate and 30-day readmission rate received a weight of one in the final ranking process. For the 30-day mortality and readmission rate measures, we give the rates for each of the conditions (heart attack, heart failure, and pneumonia) a weight of one-sixth in the final 10 Top Health Systems ranking process for winner selection.

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