100 TOP HOSPITALS
TRUVEN HEALTH ANALYTICS

15 Top Health Systems Methodology Highlights

8th Edition | April 25, 2016

About the Study

The Truven Health 15 Top Health Systems is an annual, quantitative study identifying the 15 U.S. health systems setting the highest benchmarks on a modified Truven Health 100 Top Hospitals® balanced scorecard focused on clinical quality and efficiency. The study is produced by Truven Health Analytics,™ an IBM® company.

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. hospitals — as well as cardiac, orthopedic, women's, 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 & Medicaid Services (CMS) Hospital Compare dataset.

2. **Identify health systems.** To be included in the study, a health system must contain at least two short-term, general, acute care hospitals, as identified using the 100 Top Hospitals specialty algorithm and after hospital exclusions have been applied. In addition, we also include any cardiac, orthopedic, women's, and critical access hospitals that pass our exclusion rules. We identify the "parent" health system by finding the "home office" or "related organization," as reported on the hospitals' 2014 Medicare cost reports. In all, 338 health systems were included in the 2016 study.

3. **Aggregate patient-level data into health systems.** To analyze health system performance, we aggregate data from all of a system's included hospitals and then calculate a set of performance measures at the system level.

4. **Classify health systems into comparison groups.** To develop more actionable benchmarks for like health systems, we divide them into three comparison groups based on the 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	> $1.75 billion	101	5
Medium	$750 million – $1.75 billion	114	5
Small	< $750 million	123	5
Total Systems	n/a	338	15

5. **Score health systems on a set of nine performance measures centered on quality of care, efficiency, and patient perception of care.**
   - Risk-adjusted inpatient mortality index
   - Risk-adjusted complications index
   - Core measures mean percent (stroke care and blood clot prevention)
   - Mean 30-day risk-adjusted mortality rate (heart attack, heart failure, pneumonia, chronic obstructive pulmonary disease [COPD], and stroke)
   - Mean 30-day risk-adjusted readmission rate (heart attack, heart failure, pneumonia, hip/knee arthroplasty, COPD, and stroke)
   - Severity-adjusted average length of stay
   - Mean emergency department throughput (wait time in minutes)
   - Medicare spend per beneficiary
   - Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Score (patient rating of overall hospital performance)

6. **Determine 15 top performers by ranking health systems overall based on their aggregate performance (sum of individual measure ranks).**
   We rank health systems on their performance on each of the measures relative to the other in-study systems, by comparison group. We then weight each measure rank, sum the weighted ranks, and re-rank overall to arrive at a final rank for the system. The top five health systems with the best final rank in each of the three comparison groups are selected as the winners. All measures receive a weight of one in the final ranking process.

For More Information
Send us an email at **100tophospitals@truvenhealth.com**
or visit **100tophospitals.com**