



2016 LEAPFROG TOP HOSPITALS

METHODOLOGY AND DESCRIPTION

IN 2016, LEAPFROG UPDATED ITS TOP HOSPITAL METHODOLOGY TO INCLUDE A NEW CATEGORY OF HOSPITALS – TOP TEACHING HOSPITALS – AS WELL AS TO ENSURE THAT THE METHODOLOGY ACCURATELY IDENTIFIED THOSE HOSPITALS THAT OUT-PERFORMED THEIR PEERS ON THE 23 MEASURES INCLUDED IN THE 2016 LEAPFROG HOSPITAL SURVEY.

IN THE SECTION BELOW, WE DESCRIBE THE METHODOLOGY THAT WAS USED TO IDENTIFY THE 2016 TOP HOSPITALS.

In order to compare hospitals to their peers, Leapfrog first placed each reporting hospital in one of the following categories: Children’s, Rural, General, or Teaching. Teaching hospitals were separated into two groups for evaluation: Above 500 Staffed Beds and Below 500 Staffed Beds. To ascertain the number of hospitals from each category that would be included on the Top Hospital list, Leapfrog calculated the proportion of each hospital type that submitted a 2016 survey. For example, 334 out of 1,805 (or 19%) of hospitals that reported to the 2016 Survey by August 31st were rural hospitals, meaning that rural hospitals should make up about 19% of the finalized list of Top Hospitals.

Within each category, those hospitals that met the standards described below were ranked by the overall Value Score calculated in the [Leapfrog Value Based Purchasing Platform](#). The highest ranking hospitals within each category, as determined by the previously calculated proportion, were chosen to receive the Top Hospital Award. This list was then expanded to include hospitals that had the same rounded Value Score as the last hospital within each category.



TOP CHILDREN'S, GENERAL, AND TEACHING HOSPITALS

Within the Children's, General, and Teaching hospital categories, the following criteria were applied:

I. A hospital must fully meet Leapfrog's standard for Computerized Physician Order Entry (CPOE).

Research estimates that more than one million serious medication errors occur each year in U.S. hospitals, with 7,000 deaths annually from adverse drug events (ADEs)¹. In addition to the human price paid, each ADE adds \$2,000 on average to the cost of a hospitalization². This translates to more than \$7.5 billion per year nationwide in hospital costs alone³. CPOE systems can reduce the number of ADEs by up to 88%⁴, preventing three million serious medication errors in the U.S. each year³.

Leapfrog's standard for Computerized Physician Order Entry (CPOE) measures the extent to which a hospital has adopted CPOE, and whether decision-support tools in the CPOE system are working effectively. To fully meet this standard, physicians must enter at least 75% of medication orders through a CPOE system; and demonstrate via an online, timed evaluation, that their inpatient CPOE system can alert physicians to at least 50% of common, serious prescribing errors.

II. A hospital must fully meet Leapfrog's standard for ICU Physician Staffing (IPS).

Mortality rates are significantly lower in hospitals with ICUs managed exclusively by board-certified intensivists (physicians trained in critical care medicine). Research has shown that there is a 30% reduction in overall hospital mortality and a 40% reduction in ICU mortality in ICUs where intensivists manage or co-manage all patients⁵.

Hospitals fulfilling Leapfrog's standard for ICU Physician Staffing must operate adult and/or pediatric ICUs that are managed or co-managed by intensivists who: a) Are present during daytime hours and provide clinical care exclusively in the ICU and, b) When not present on site or via telemedicine, return pages at least 95% of the time, (i) within five minutes and (ii) arrange for a certified physician or physician extender to reach ICU patients within five minutes. Hospitals that do not have an ICU are not assessed on this standard in the evaluation of Top Hospitals.

¹ Birkmeyer J, Dimick J. Leapfrog safety standards: potential benefits of universal adoption. The Leapfrog Group. Washington, DC: 2004.

² Classen D, Pestotnik S, Evans R, Lloyd J, Burke J. Adverse drug events in hospitalized patients: excess length of stay, extra costs, and attributable mortality. JAMA. 1997;277:301-306.

³ Bates D, Spell N, Cullen D, et al. The costs of adverse drug events in hospitalized patients. Adverse Drug Events Prevention Study Group. JAMA. 1997;277(4):307-311.

⁴ Bates D, Teich J, Lee J, et al. The impact of computerized physician order entry on medication error prevention. JAMIA. 1999;6:313-321.

⁵ Pronovost PJ, Young T, Dorman T, Robinson K, Angus DC. Association between ICU physician staffing and outcomes: a systematic review. Crit Care Med. 1999; 27:A43.



III. A hospital must fully comply with Leapfrog's Never Events Policy.

Leapfrog utilizes the National Quality Forum's list of serious reportable events in asking hospitals to adopt a Never Events policy. Leapfrog's Never Events policy asks hospital to commit to four basic acts if a Never Event does occur: apologize to the patient and family, waive all costs related to the event and follow-up care, report the event to an external agency, and conduct a root-cause analysis of how and why the event occurred. The hospital must also make a copy of this policy available to patients. Hospitals that fully meet Leapfrog's standard have all five elements of the policy in place and are demonstrating their commitment to treating patients, purchasers, and payers with respect when a Never Event occurs.

IV. A hospital must report on all measures, and fully meet Leapfrog's standard on at least 50% of applicable measures.

The Leapfrog Hospital Survey uses 23 national performance measures to evaluate individual facilities in five domains: inpatient care management, medication safety, maternity care, high risk procedures, and infections and injuries. The measures included on the Survey are predicated on the latest science and are selected with guidance from scientific advisors at the Armstrong Institute for Patient Safety as well as Leapfrog's volunteer Expert Panels. Hospitals are evaluated only on the services or procedures performed in their facility. Fully meeting on at least half of measures demonstrates a strong commitment to safety, quality, and resource use.

V. Hospitals eligible for a Leapfrog Hospital Safety Grade must receive an A on the letter grades publicly reported at the time of the Top Hospital public announcement.

The Leapfrog Hospital Safety Grade assesses how safe hospitals are for patients. Each A, B, C, D or F score comes from expert analysis of publicly available data consumers can use to protect their families from harm or death during a hospital stay. Some hospitals are exempted from receiving a Safety Grade, including specialty hospitals like children's or surgical, Critical Access Hospitals, and hospitals in the state of Maryland. Hospitals that are eligible for a grade, which includes general acute-care hospitals in all other states, must receive an A on the current Leapfrog Hospital Safety Grade (Fall 2016) in order to qualify for Top Hospitals.

VI. Hospitals must be ranked in the top of their peer group based on the Value Score.

Hospitals within each of the three categories were ranked from best performing to worse performing based on the Leapfrog Value-Based Purchasing Platform Value Score.



VII. Hospitals must satisfy the Top Hospital Selection Committee that in general the hospital embodies the highest standards of excellence worthy of the Leapfrog Top Hospital designation.

Hospitals that satisfy the quantitative criteria outlined above must also meet the Committee's qualitative requirements for overall excellence, which includes a review of data from the Centers for Medicare & Medicaid Services (CMS) and other publicly available information pertaining to the hospital. Hospitals that perform worse than the national average on CMS' mortality measures for heart attack, heart failure or pneumonia are excluded from receiving a Top Hospital award.



TOP RURAL HOSPITALS

Within the Rural hospital category, the following criteria were applied:

I. A hospital must fully meet Leapfrog's standard for Computerized Physician Order Entry (CPOE).

Research estimates that more than one million serious medication errors occur each year in U.S. hospitals, with 7,000 deaths annually from adverse drug events (ADEs)¹. In addition to the human price paid, each ADE adds \$2,000 on average to the cost of a hospitalization². This translates to more than \$7.5 billion per year nationwide in hospital costs alone³. CPOE systems can reduce the number of ADEs by up to 88%⁴, preventing three million serious medication errors in the U.S. each year².

Leapfrog's standard for Computerized Physician Order Entry (CPOE) measures the extent to which a hospital has adopted CPOE, and whether decision-support tools in the CPOE system are working effectively. To fully meet this standard, physicians must enter at least 75% of medication orders through a CPOE system; and demonstrate via an online, timed evaluation, that their inpatient CPOE system can alert physicians to at least 50% of common, serious prescribing errors.

II. A hospital must fully comply with Leapfrog's Never Events Policy.

Leapfrog utilizes the National Quality Forum's list of serious reportable events in asking hospitals to adopt a Never Events policy. Leapfrog's Never Events policy asks hospital to commit to four basic acts if a Never Event does occur: apologize to the patient and family, waive all costs related to the event and follow-up care, report the event to an external agency, and conduct a root-cause analysis of how and why the event occurred. The hospital must also make a copy of this policy available to patients. Hospitals that fully meet Leapfrog's standard have all five elements of the policy in place and are demonstrating their commitment to treating patients, purchasers, and payers with respect when a Never Event occurs.

III. A hospital must report on all measures, and fully meet Leapfrog's standard on at least 50% of applicable measures.

The Leapfrog Hospital Survey uses 23 national performance measures to evaluate individual facilities in five domains: inpatient care management, medication safety, maternity care, high risk procedures, and infections and injuries. The measures included on the Survey are predicated on the latest science and are selected with guidance from scientific advisors at the Armstrong Institute for Patient Safety as well as Leapfrog's volunteer Expert Panels. Hospitals are evaluated only on the services or procedures performed in their facility. Fully meeting on at least half of measures demonstrates a strong commitment to safety, quality, and resource use.



IV. Hospitals eligible for a Leapfrog Hospital Safety Grade must receive an A on the letter grades publicly reported at the time of the Top Hospital public announcement.

The Leapfrog Hospital Safety Grade assesses how safe hospitals are for patients. Each A, B, C, D or F score comes from expert analysis of publicly available data consumers can use to protect their families from harm or death during a hospital stay. Some hospitals are exempted from receiving a Safety Grade, including specialty hospitals like children's or surgical, Critical Access Hospitals, and hospitals in the state of Maryland. Hospitals that are eligible for a grade, which includes general acute-care hospitals in all other states, must receive an A on the current Leapfrog Hospital Safety grade (Fall 2016) in order to qualify for Top Hospitals.

V. Hospitals must be ranked in the top of their peer group based on the Value Score.

Hospitals within each of the three categories were ranked from best performing to worse performing based on the Leapfrog Value-Based Purchasing Platform Value Score.

VI. Hospitals must satisfy the Top Hospital Selection Committee that in general the hospital embodies the highest standards of excellence worthy of the Leapfrog Top Hospital designation.

Hospitals that satisfy the quantitative criteria outlined above must also meet the Committee's qualitative requirements for overall excellence, which includes a review of Centers for Medicare & Medicaid Services (CMS) and other publicly available information pertaining to the hospital. Hospitals that perform worse than the national average on CMS' mortality measures for heart attack, heart failure or pneumonia are excluded from receiving a Top Hospital award.