2023 LEAPFROG TOP HOSPITALS

TOP GENERAL HOSPITALS

METHODOLOGY AND DESCRIPTION

For the purposes of determining Top Hospitals, hospitals are first placed into one of the following categories: Children's, Rural, General, Large Teaching (500 or more staffed beds), or Small Teaching (less than 500 staffed beds). Criteria for Top Hospital recognition is specific to each category but substantially similar across all categories.

Within the **General Hospital** category, the following criteria were applied:

I. A hospital must achieve Leapfrog's Computerized Physician Order Entry (CPOE) Standard.

To achieve Leapfrog's Computerized Physician Order Entry (CPOE) standard, prescriber must enter at least 85% of inpatient medication orders through a CPOE system *and* demonstrate via a timed evaluation that their CPOE system alerts prescribers to at least 60% of common, serious medication ordering errors.

CPOE systems can reduce the number of adverse drug events by up to 88%[1], preventing three million serious medication errors in the U.S. each year[2].

II. A hospital must achieve Leapfrog's ICU Physician Staffing (IPS) Standard.

To achieve Leapfrog's IPS Standard, hospitals operating adult or pediatric general medical and/or surgical ICUs and neuro ICUs must ensure that all ICU patients are managed or co-managed by physicians who are board certified in critical care medicine ("intensivists") and dedicated to the ICU for at least 8 hours a day, 7 days a week, and at other times ensures the intensivists are immediately available by phone and have another highly trained clinician able to reach the patient and carry out their orders. Alternatively, hospitals can achieve the standard using a qualified 24/7 tele-intensivist service, with some daily on-site intensivist presence.

Hospitals that do not operate adult or pediatric general medical and/or surgical ICU or neuro ICUs are not assessed on this standard for the purposes of determining Top Hospitals.

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 patients[3].

III. A hospital must achieve Leapfrog's Never Events Policy Standard.

To achieve Leapfrog's Never Events Policy Standard, hospitals must have a written policy that outlines nine basic acts the hospital will take if one of the National Quality Forum's serious reportable events, otherwise known as "never events," occurs: apologize to the patient and family, waive all costs related to the event, report the event to an external agency, conduct a root-cause analysis, interview patients/families to inform the root cause analysis, inform patient/families of actions taken by hospital to prevent similar never events in the future, have a protocol to provide support for caregivers involved in never events, make a copy of this policy available to patients and payers, and perform an annual review to ensure compliance with the policy for each Never Event that occurred.

IV. A hospital must achieve Leapfrog's Adult and Pediatric Complex Surgery Standards.
(Hospitals must achieve the standard or earn "Considerable Achievement" for at least 70% of applicable procedures.)

To achieve Leapfrog's Adult and Pediatric Complex Surgery Standards, hospitals must ensure they are meeting Leapfrog's minimum facility volume standards, and that as part of their process for privileging surgeons, surgeons are required to meet Leapfrog's minimum surgeon volume standards for the following procedures: Carotid Endarterectomy, Mitral Valve Repair and Replacement, Open Aortic Procedures, Lung Resection for Cancer, Esophageal Resection for Cancer, Pancreatic Resection for Cancer, Rectal Cancer Surgery, Bariatric Surgery for Weight Loss, Total Hip Replacement, and Total Knee Replacement. Additionally, Leapfrog incorporates outcomes for Mitral Valve Repair and Replacement and registry participation for Norwood procedures.

Three decades of research have consistently demonstrated that patients that have their high-risk surgery at a hospital and by a surgeon that have more experience with the procedure have better outcomes, including lower mortality rates, lower complication rates, and a shorter length of stay than for patients who have their surgery done at a hospital or by a surgeon with less experience.

V. A hospital must report on all applicable measures and achieve Leapfrog's standards on at least 60% of applicable measures.

Forty-one measures from the 2023 Leapfrog Hospital Survey were used to determine Top Hospitals. See Appendix I for the list of measures.

The measures on the Survey are predicated on the latest science and are selected with guidance from scientific advisors at the Johns Hopkins' Armstrong Institute for Patient Safety as well as Leapfrog's volunteer Expert Panels. Hospitals are only assessed on measures related to services and procedures they perform. Reporting on all measures and achieving Leapfrog's standards on at least 60% of the measures demonstrates a strong commitment to transparency on safety and quality.

VI. If a hospital is eligible for a Leapfrog Hospital Safety Grade, they must have an A grade at the time of the Top Hospital public announcement.

The Leapfrog Hospital Safety Grade uses up to 30 national performance measures from the Centers for Medicare & Medicaid Services (CMS), the Leapfrog Hospital Survey and information from other supplemental data sources. Taken together, those performance measures produce a single letter grade representing a hospital's overall

performance in keeping patients safe from preventable harm and medical errors. Currently, we are unable to calculate Safety Grades for certain hospitals including military or VA hospitals, critical access hospitals, specialty hospitals, or children's hospitals. Hospital Safety Grades are publicly reported at www.HospitalSafetyGrade.org.

VII. A hospital must demonstrate that it embodies the highest standards of excellence worthy of the Leapfrog Top Hospital designation.

A hospital that meets the quantitative criteria (I-VI) outlined above must also meet the Top Hospital Selection Committee's qualitative requirements for excellence, which includes a review of publicly reported data from the Centers for Medicare & Medicaid Services (CMS) and other publicly available information. Among those requirements, a hospital that performs worse than the national rate on CMS' mortality measures for heart attack, heart failure, stroke, COPD, or CABG are excluded from receiving a Top Hospital award (pneumonia was excluded due to Covid-19).

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

[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] 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.

Appendix I: List of Measures from the 2023 Leapfrog Hospital Survey Included in the Top Hospital's Methodology

	Survey Section	Measure
1	Section 1	Billing Ethics
2	Section 2 Medication Safety	CPOE
3	Section 2 Medication Safety	BCMA
4	Section 2 Medication Safety	Medication Reconciliation
5	Section 3 Adult and Pediatric Complex Surgery	Carotid Endarterectomy
6	Section 3 Adult and Pediatric Complex Surgery	Mitral Valve Repair and Replacement
7	Section 3 Adult and Pediatric Complex Surgery	Open Aortic Procedures
8	Section 3 Adult and Pediatric Complex Surgery	Lung Resection for Cancer
9	Section 3 Adult and Pediatric Complex Surgery	Esophageal Resection for Cancer
10	Section 3 Adult and Pediatric Complex Surgery	Pancreatic Resection for Cancer
11	Section 3 Adult and Pediatric Complex Surgery	Rectal Cancer Surgery
12	Section 3 Adult and Pediatric Complex Surgery	Bariatric Surgery for Weight Loss
13	Section 3 Adult and Pediatric Complex Surgery	Knee Replacement
14	Section 3 Adult and Pediatric Complex Surgery	Hip Replacement
15	Section 3 Adult and Pediatric Complex Surgery	Norwood Procedures
16	Section 3 Adult and Pediatric Complex Surgery	Safe Surgery Checklist for Inpatient Procedures
17	Section 4 Maternity Care	Elective Delivery
18	Section 4 Maternity Care	Cesarean Birth
19	Section 4 Maternity Care	Episiotomy
20	Section 4 Maternity Care	Newborn Bilirubin Screening Prior to Discharge
21	Section 4 Maternity Care	Appropriate DVT Prophylaxis in Women Undergoing Cesarean Section
22	Section 4 Maternity Care	High Risk Deliveries
23	Section 5 ICU Physician Staffing	ICU Physician Staffing
24	Section 6 Patient Safety Practices	NQF Safe Practice 1 Culture of Safety Leadership Structures, and Systems
25	Section 6 Patient Safety Practices	NQF Safe Practice 2 Culture Measurement, Feedback, and Interventions
26	Section 6 Patient Safety Practices	Hand Hygiene
27	Section 7 Managing Serious Errors	Never Events Policy

28	Section 7 Managing Serious Errors	Central-line Associated Blood Stream Infections (CLABSI) in ICUs and select wards
29	Section 7 Managing Serious Errors	Catheter-associated Urinary Tract Infections (CAUTI) in ICUs and select wards
30	Section 7 Managing Serious Errors	Surgical Site Infections from Colon Surgery (SSI: Colon)
31	Section 7 Managing Serious Errors	Facility-wide Inpatient Methicillin-resistant Staphylococcus aureus (MRSA) Blood Laboratory-identified Events
32	Section 7 Managing Serious Errors	Facility-wide Inpatient Clostridium difficile (CDI) Laboratory-identified Events
33	Section 8 Pediatric Care	Pediatric Patient Experience (CAHPS Child Hospital Survey)
34	Section 8 Pediatric Care	Pediatric CT Radiation Dose - Head Scans
35	Section 8 Pediatric Care	Pediatric CT Radiation Dose - Abdomen/Pelvis Scans
36	Section 9 Outpatient Procedures	Certified Clinicians Present While Adult Patients Are Recovering
37	Section 9 Outpatient Procedures	Certified Clinicians Present While Pediatric Patients Are Recovering
38	Section 9 Outpatient Procedures	Unplanned Visits After Outpatient Colonoscopy
39	Section 9 Outpatient Procedures	Safe Surgery Checklist for Outpatient Procedures
40	Section 9 Outpatient Procedures	Medication Safety for Outpatient Procedures
41	Section 9 Outpatient Procedures	Outpatient Patient Experience (OAS CAHPS)