Fall 2023 Hospital Safety Grade
Town Hall Call

The slides and recording will be posted after the presentation at: https://www.hospitalsafetygrade.org/for-hospitals/key-dates-and-information

September 28, 2023

THE LEAPFROG GROUP
What is the Leapfrog Hospital Safety Grade?

The Leapfrog Hospital Safety Grade is an A, B, C, D, or F letter grade reflecting how safe hospitals are for patients.

The Leapfrog Hospital Safety Grade launched in June 2012.

The Grade is issued two times per year: Spring and Fall. This fall will be the 24th release.

More information is available at www.HospitalSafetyGrade.org
Who is eligible for a Leapfrog Hospital Safety Grade?

General acute care hospitals with enough publicly reported data

- Hospitals missing measure scores for more than 6 process/structural measures OR more than 5 outcome measures or PSI 90 do not receive a grade. A measure score for PSI 90 is required.

The Leapfrog Group is not able to calculate a Hospital Safety Grade for certain types of hospitals due to missing data:

- Critical access hospitals
- PPS-exempt hospitals (i.e., cancer)
- VA Hospitals
- Indian Health Services
- Specialty hospitals
Measures used in the Leapfrog Hospital Safety Grade
Measure Selection Criteria

Measures are publicly-reported from national data sources, which reflect individual hospital performance, including:

- Leapfrog Hospital Survey
- Centers for Medicare and Medicaid Services data sets

Measures are endorsed or in use by a national measurement entity

Measures are linked to patient safety ("freedom from harm")

- Directly quantifying patient safety events
- Assessing processes that lead to better outcomes
- Identified by experts as important to patient safety
## Fall 2023 Process and Structural Measures

<table>
<thead>
<tr>
<th>Measure Name</th>
<th>Primary Data Source</th>
<th>Reporting Period</th>
<th>Secondary Data Source</th>
<th>Reporting Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computerized Physician Order Entry (CPOE)</td>
<td>2023 Leapfrog Hospital Survey</td>
<td>2023</td>
<td>Imputation Model Applied</td>
<td>N/A</td>
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<tr>
<td>Bar Code Medication Administration (BCMA)</td>
<td>2023 Leapfrog Hospital Survey</td>
<td>2023</td>
<td>Imputation Model Applied</td>
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<td>Imputation Model Applied</td>
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<td>Safe Practice 1: Culture of Leadership Structures and Systems</td>
<td>2023 Leapfrog Hospital Survey</td>
<td>2023</td>
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<td>N/A</td>
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<td>Safe Practice 2: Culture Measurement, Feedback &amp; Intervention</td>
<td>2023 Leapfrog Hospital Survey</td>
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<td>Total Nursing Care Hours per Patient Day</td>
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<td>Hand Hygiene</td>
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<td>N/A</td>
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<td>H-COMP-6: Discharge Information</td>
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## Fall 2023 Outcome Measures

<table>
<thead>
<tr>
<th>Measure Name</th>
<th>Primary Data Source</th>
<th>Reporting Period</th>
<th>Secondary Data Source</th>
<th>Reporting Period</th>
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<tbody>
<tr>
<td>Foreign Object Retained</td>
<td>CMS</td>
<td>07/01/2019 - 12/31/2019 AND 07/01/2020 - 06/30/2021</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Air Embolism</td>
<td>CMS</td>
<td>07/01/2019 - 12/31/2019 AND 07/01/2020 - 06/30/2021</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Falls and Trauma</td>
<td>CMS</td>
<td>07/01/2019 - 12/31/2019 AND 07/01/2020 - 06/30/2021</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>CLABSİ</td>
<td>2023 Leapfrog Hospital Survey</td>
<td>01/01/2022 - 12/31/2022</td>
<td>CMS</td>
<td>10/01/2021 - 09/30/2022</td>
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<td>CAUTI</td>
<td>2023 Leapfrog Hospital Survey</td>
<td>01/01/2022 - 12/31/2022</td>
<td>CMS</td>
<td>10/01/2021 - 09/30/2022</td>
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<tr>
<td>SSI: Colon</td>
<td>2023 Leapfrog Hospital Survey</td>
<td>01/01/2022 - 12/31/2022</td>
<td>CMS</td>
<td>10/01/2021 - 09/30/2022</td>
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<tr>
<td>MRSA</td>
<td>2023 Leapfrog Hospital Survey</td>
<td>01/01/2022 - 12/31/2022</td>
<td>CMS</td>
<td>10/01/2021 - 09/30/2022</td>
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<tr>
<td>C. Diff.</td>
<td>2023 Leapfrog Hospital Survey</td>
<td>01/01/2022 - 12/31/2022</td>
<td>CMS</td>
<td>10/01/2021 - 09/30/2022</td>
</tr>
<tr>
<td>PSI 4: Death rate among surgical inpatients with serious treatable conditions</td>
<td>CMS</td>
<td>07/01/2019 - 12/31/2019 AND 07/01/2020 - 06/30/2021</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>CMS Medicare PSI 90: Patient safety and adverse events composite*</td>
<td>CMS</td>
<td>07/01/2019 - 12/31/2019 AND 07/01/2020 - 06/30/2021</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*Note: CMS calculates PSI 90 using the ten (10) component PSIs listed above. While scores for each of the 10 component PSIs are NOT used to calculate Hospital Safety Grades, they will be publicly reported on the Hospital Safety Grade [website](https://www.hospitalqualitygrade.org).
Fall 2023 Reporting Periods

2023 Leapfrog Hospital Results

- CPOE, BCMA, IPS, the 2 NQF Safe Practices, Total Nursing Care Hours per Patient Day, and Hand Hygiene will be displayed as “2023”
- CLABSI, CAUTI, MRSA, C. Diff, and SSI Colon will be: 01/01/2022 - 12/31/2022

CMS Data

- 5 Patient Experience measures and 5 infection measures (for hospitals that did not report via the Leapfrog Hospital Survey): 10/01/2021 - 09/30/2022
- 3 HAC measures, PSI 4, and PSI 90 (same data used in spring 2023 Safety Grade): 07/01/2019 - 12/31/2019 and 07/01/2020 - 06/30/2021
Imputation Model as a Secondary Data Source
Overview

• Imputation Method for CPOE, BCMA, Hand Hygiene, and IPS
  
  • **STEP 1:** Use A Hospital’s Most Recent Score on the Measure from past four rounds of Safety Grade (i.e., spring 2023, fall 2022, spring 2022, fall 2021)
  
  • **STEP 2:** Use the Mean of the Scores Assigned to Other Similar Hospitals in the U.S. (does not apply to IPS)
Step 1: Impute the hospital’s most recent score on the measure
Applies to CPOE, BCMA, HH and IPS

If the hospital had a score assigned by Leapfrog in the previous four rounds of grades, the hospital is assigned the most recent score on that measure in the current Hospital Safety Grade.

Example of Step 1 (from fall 2023):
A hospital did not submit a 2023 Leapfrog Hospital Survey by the Data Snapshot Date. The hospital’s most recent measure scores for the three measures come from the fall 2021 Hospital Safety Grade, where the hospital’s scores for CPOE, BCMA, HH, and IPS were assigned by Leapfrog based on their 2021 Leapfrog Survey. In the spring 2022 Hospital Safety Grade, the hospital’s CPOE score was 45, BCMA score was 45, Hand Hygiene was 100, and IPS score was 85. For the fall 2023 Hospital Safety Grade, the score of 45 is used for CPOE, 45 is used for BCMA, 100 is used for Hand Hygiene and 85 is used for IPS.
Step 2: Use of the mean of the scores assigned to similar hospitals
Applies to CPOE, BCMA, and HH (not IPS)

The hospital is assigned to a cohort of other similar hospitals using three or four hospital characteristics obtained from the most recent CMS Impact File and Leapfrog Hospital Survey:

1. Urban/rural status (CMS Impact File)
2. Safety net status (CMS Impact File)
3. Number of beds (CMS Impact File)
4. Teaching status (only used for urban cohorts; Leapfrog Hospital Survey Results are the primary data source and CMS Impact File is the secondary data source)
Step 2 (continued)

The hospital is then assigned the lower of two possible mean scores based on their cohort’s performance:

• Mean of current and recent scores
• Mean of scores obtained in each hospital’s first year of reporting via the Leapfrog Hospital Survey

The mean current and recent scores are calculated based on hospitals that have a score in the current round (i.e., fall 2023) from either Leapfrog’s publicly reported Survey Results or Step 1 of the imputation model. The first means score only includes past and current performance on the Leapfrog Hospital Survey, without imputation.

Example of Step 2 (from fall 2023):
The hospital is missing scores for CPOE, BCMA, HH, and IPS because they have never submitted a Leapfrog Hospital Survey. In fact, due to missing HCAHPS measures and the IPS measure in past rounds, they have never been eligible for a Hospital Safety Grade in past rounds. Therefore, in the fall 2023 Hospital Safety Grade, the hospital will be assigned scores based on the mean CPOE, HH and BCMA scores of other similar hospitals in the U.S. and may receive a Hospital Safety Grade for the first time.
Mean scores for each of the 12 cohorts are published in the Safety Grade Methodology document each round (spring 2023 example in the table below – all cohort scores will be updated for fall 2023).

<table>
<thead>
<tr>
<th>Cohort #</th>
<th>Urban/Rural Status</th>
<th>Safety Net Status</th>
<th>Number of Beds</th>
<th>Teaching Status</th>
<th>Step 2 CPOE Score (Mean of Cohort)</th>
<th>Step 2 BCMA Score (Mean of Cohort)</th>
<th>Step 2 Hand Hygiene Score (Mean of Cohort)</th>
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<tbody>
<tr>
<td>Cohort 1</td>
<td>Rural</td>
<td>Non-Safety Net</td>
<td>Fewer than 100 beds</td>
<td>N/A</td>
<td>75</td>
<td>79</td>
<td>50</td>
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<tr>
<td>Cohort 2</td>
<td>Rural</td>
<td>Non-Safety Net</td>
<td>100 or more beds</td>
<td>N/A</td>
<td>79</td>
<td>83</td>
<td>53</td>
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<tr>
<td>Cohort 3</td>
<td>Rural</td>
<td>Safety Net</td>
<td>Fewer than 100 beds</td>
<td>N/A</td>
<td>80</td>
<td>79</td>
<td>48</td>
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<tr>
<td>Cohort 4</td>
<td>Rural</td>
<td>Safety Net</td>
<td>100 or more beds</td>
<td>N/A</td>
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<td>77</td>
<td>56</td>
</tr>
<tr>
<td>Cohort 5</td>
<td>Urban</td>
<td>Non-Safety Net</td>
<td>Fewer than 100 beds</td>
<td>Non-Teaching</td>
<td>85</td>
<td>85</td>
<td>57</td>
</tr>
<tr>
<td>Cohort 6</td>
<td>Urban</td>
<td>Non-Safety Net</td>
<td>100 or more beds</td>
<td>Non-Teaching</td>
<td>86</td>
<td>84</td>
<td>57</td>
</tr>
<tr>
<td>Cohort 7</td>
<td>Urban</td>
<td>Non-Safety Net</td>
<td>Fewer than 100 beds</td>
<td>Teaching</td>
<td>78</td>
<td>85</td>
<td>65</td>
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<tr>
<td>Cohort 8</td>
<td>Urban</td>
<td>Non-Safety Net</td>
<td>100 or more beds</td>
<td>Teaching</td>
<td>88</td>
<td>85</td>
<td>56</td>
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<tr>
<td>Cohort 9</td>
<td>Urban</td>
<td>Safety Net</td>
<td>Fewer than 100 beds</td>
<td>Non-Teaching</td>
<td>84</td>
<td>78</td>
<td>70</td>
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<td>Cohort 10</td>
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<td>100 or more beds</td>
<td>Non-Teaching</td>
<td>76</td>
<td>80</td>
<td>62</td>
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<td>Cohort 11</td>
<td>Urban</td>
<td>Safety Net</td>
<td>Fewer than 100 beds</td>
<td>Teaching</td>
<td>77</td>
<td>78</td>
<td>43</td>
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<tr>
<td>Cohort 12</td>
<td>Urban</td>
<td>Safety Net</td>
<td>100 or more beds</td>
<td>Teaching</td>
<td>90</td>
<td>80</td>
<td>55</td>
</tr>
</tbody>
</table>
New in fall 2023: Step 2 Imputation for IPS

• The CMS Cost Report will be used as a secondary data source for the ICU Physician Staffing (IPS) measure among hospitals eligible for Step 2 Imputation

• This applies to hospitals that have not submitted a 2023, 2022, or 2021 Leapfrog Hospital Survey

• ICU designation (i.e., operating a medical ICU, surgical ICU, or pediatric ICU) will be determined by Leapfrog based on the number of medical, surgical and/or pediatric ICU beds reported in Worksheet S-3 Part 1 of the hospital’s most recent CMS Cost Report. Hospitals that are determined to have one or more medical, surgical, and/or pediatric ICU beds will be assigned the same point value (5 points) as those hospitals that earned Limited Achievement on Leapfrog’s IPS Standard.
Scoring Overview
Calculating Z-Scores

- Standardizes data from individual measures with different scales to allow for comparisons (e.g., a linear mean score of 90 on H-COMP-1: Nurse Communication and a CLABSI SIR of 0.870).
- Indicate to a hospital whether their measure score is above, below, or equal to the average hospital.
- To calculate each measure’s Z-Score:
  - **Process/structural measures:**
    \[
    \text{Hospital’s Measure Score} - \text{Mean} \over \text{Standard Deviation}
    \]
  - **Outcome Measures:**
    \[
    \text{Mean} - \text{Hospital’s Measure Score} \over \text{Standard Deviation}
    \]
Calculating Standard Measure Weights

Each measure included in the Safety Grade is assigned a standard measure weight using four criteria:

- **Strength of evidence** (rating of 1 or 2)
- **Opportunity** (rating of 1-3), based on coefficient of variation
- **Impact** (rating of 1, 2, 3) based on:
  - number of patients possibly affected by the event (0, 1, 2, 3)
  - severity of harm to individual patients (1, 2, 3)
- **Number of measures** (number of measures equals 1 for all measures except for PSI 90 where the number of measures equals 10)

Measure Weight Score = [Evidence + (Opportunity x Impact x Number of Measures)]
Dealing with Missing Data

If a hospital is missing a measure score for any measure, the standard weight of that measure is redistributed to the other measures in the same measure domain. The new weight for each measure within the domain is calculated by re-apportioning the standard weight assigned to the measure with the missing score to other measures within the same domain.

For example, if a hospital is missing a measure score for ICU Physician Staffing because the hospital does not operate an adult or pediatric medical and/or surgical ICU, the standard weight will be re-apportioned to the remaining 11 measures within the process/structural measure domain.

To calculate the new weight of each of the remaining 11 measures in the process/structural measure domain, hospitals can use the formula below or use the Leapfrog Hospital Safety Grade Calculator ©, which can be found on the Safety Grade Review Website. Note that each domain contributes to 50% of the overall letter grade.

\[
\text{[Standard measure weight / (sum of standard weights for the remaining 11 measures in the process/structural measure domain)]}*50\% = \text{updated measure weight}
\]
Calculating the Overall Numerical Score

1. Multiply the z-score for each measure by the measure weight
2. Sum the weighted z-scores from step 1
3. If a measure score is missing, the weight for that measure is re-apportioned to other measures within the same domain
4. Add 3.0 to the final numerical (this step helps to avoid possible confusion with interpreting negative scores)

\[3.0 + \text{CPOE z-score} \times \text{CPOE weight} + \text{IPS z-score} \times \text{IPS weight} + \text{CLABSI z-score} \times \text{CLABSI weight} \ldots \text{etc.}\]
# Hospital Safety Grade Calculator

<table>
<thead>
<tr>
<th>Measure Domain</th>
<th>Measure</th>
<th>Enter Your Hospital’s Score Here (Do NOT leave Blanks)</th>
<th>Z-Score&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Inputs to Weighting</th>
<th>Weight&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Weighted Measure Score (Modified Z-Score x Final Weight)</th>
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<tbody>
<tr>
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<td>Computerized Physician Order Entry (CPOE)</td>
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<tr>
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<td>ICU Physician Staffing (IPS)</td>
<td>62.75</td>
<td>43.31</td>
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<td>-5.0000</td>
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<td>-5.0000</td>
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<td>Falls and Trauma</td>
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<td>1.045</td>
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<tr>
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<td>CLABSI</td>
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<td>1.2035</td>
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<td>CAUTI</td>
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<td>0.57</td>
<td>1.3160</td>
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<tr>
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<td>SSI: Colon</td>
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<td>1.2292</td>
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<td>C. Diff.</td>
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<td>1.4799</td>
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<td>PSI 4: Death rate among surgical inpatients with serious treatable conditions</td>
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<td>8.7127</td>
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<td>0.19</td>
<td>5.1983</td>
<td>5.1983</td>
<td>1</td>
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**Process Measure Domain Score:** Will populate after entering all data.

**Outcome Measure Domain Score:** Will populate after entering all data.

**Process/Outcome Domains - Combined Score:** Will populate after entering all data.

**Normalized Numerical Score:** Will populate after entering all data.

**Hospital Safety Grade (Letter Grade):** Will not be calculated until after the Safety Grade Review Period. Hospitals will be notified via email when the letter grades are posted.
Important Dates and Reviewing Data
Data Snapshot Dates

The data snapshot date is the date that Leapfrog will download the data published by CMS or submitted to Leapfrog via the Hospital Survey to calculate Leapfrog Hospital Safety Grades.

All data, including Leapfrog Hospital Survey Results, must be finalized by these dates:

- Spring Data Snapshot Date: January 31
- Fall Data Snapshot Date: August 31

Updates to any of the data published after these dates are not used to calculate the Safety Grade.

The Leapfrog Hospital Safety Grade relies on publicly available data that hospitals have had the opportunity to review for accuracy. Therefore, Leapfrog does not allow hospitals to make updates to their data following the Data Snapshot Date.
Safety Grade Timeline

Following each Data Snapshot Date:

- **Courtesy Review Period**: As a courtesy to hospitals, Leapfrog will hold a Courtesy Safety Grade Review Period before the public release of each Leapfrog Hospital Safety Grade update. The Review Period is an opportunity for hospitals to review the data for accuracy (i.e., identify recording errors, hospital name and address changes, etc.) on a secure website and review changes to the scoring algorithm.

- **Free Town Hall Call**: Hospitals and other stakeholders are invited to a free Town Hall Call to hear about changes to the measures and scoring methodology, as well as details of the Courtesy Safety Grade Review Period and important deadlines.

- **Letter Grade Embargo Period**: Following the close of the Courtesy Safety Grade Review Period, Leapfrog finalizes the data and establishes letter grade cut-points. The Safety Grade Review website is refreshed, and hospitals can participate in a Letter Grade Embargo Period in which they can preview their letter grade prior to the public announcement.

- **Public Announcement**: Following the Embargo Period, Safety Grades are published on Leapfrog’s public website.
Reviewing Data Before Data Snapshot Dates
Review Leapfrog Hospital Survey Results Prior to Each Data Snapshot Date

• The Leapfrog Hospital Survey is open from April 1 to November 30 of each year.

• Following the Submission Deadline on June 30, Survey Results are published monthly on a secure ‘Hospital Details’ page (starting July 12) and a public website (starting July 25). Hospitals are urged to review their Survey Results immediately.

• Corrections
  • Hospitals that identify any data entry or reporting errors are instructed to log back into the Survey to submit a correction. **Corrections must be submitted prior to the Data Snapshot Date.**

• Data Verification Messages:
  • Failure to resolve Data Verification messages by August 31 may impact your Safety Grade. More information on our data verification processes is available on our website.
NHSN Data Downloads

• Leapfrog has four NHSN data download dates per Survey Cycle. We do download NHSN data outside of these dates.

• 2023 Leapfrog Hospital Survey NHSN Data Download Dates:
  • June 23
  • August 24
  • October 24
  • December 21

• Hospitals are required to complete the following to ensure Leapfrog obtains the appropriate SIRs:
  • Review and accept the Data Rights Template annually and ensure that any locations that were active during the reporting period, even if they are currently inactive, are included
  • Regenerate NHSN data and download copies of your CMS IQR reports and NHSN Annual Hospital Survey on the same dates as Leapfrog to save to your own records and to compare to the NHSN data Leapfrog uses for scoring.

Instructions for generating datasets and downloading these reports from NHSN are available here:
https://www.leapfroggroup.org/survey-materials/join-nhsn
CMS administers several hospital-based reporting and payment programs including the Inpatient Quality Reporting Program, HAC Reduction Program, the DRA HAC Program, and Value-based Purchasing Program. Several measures collected and calculated by CMS via its various hospital-based programs are used in the Leapfrog Hospital Safety Grade (HAIs, HCAHPS, HAC, and PSI measures).

CMS provides hospitals with a 30-day confidential preview period before publishing performance data at https://data.cms.gov/provider-data.

More information is available at https://qualitynet.org.
Fall 2023 Data Review Opportunities

- Survey Results have been available on the confidential Hospital Details Page since July 12 and have been publicly reported since July 25 for hospitals that submitted a Survey by June 30.
  - https://ratings.leapfroggroup.org/
- HCAHPS and HAI CMS data have been publicly available on Care Compare since July 26, 2023
  - https://data.cms.gov/provider-data
- The review period for the CMS HAC data that will be used in the fall 2023 Safety Grade was in June/July 2022
- The review period for the CMS PSI data that will be used in the fall 2023 Safety Grade was in Aug/Sep 2022
Participating in the Courtesy Review Period

Screenshots taken from spring 2023 Safety Grade Review Website

Fall 2023 Review Period
Monday, September 25, 2023, to Friday, October 13, 2023
Secure Website for Hospitals to Review their Safety Grade Data

http://www.HospitalSafetyGrade.org/data-review

Usernames and passwords are emailed to Leapfrog Hospital Survey participants and mailed to hospital CEO’s. You can also retrieve your username and password via the Help Desk.
Contact Information

- Is the hospital name and address displayed above correct?
  - Info above is correct
  - Info above is NOT correct

- Is the hospital's CMS Certification Number (CCN) 01-0139 correct?
  - CCN is correct
  - CCN is NOT correct (If the CCN is not correct, please contact the Help Desk immediately.)

- CEO First Name
- CEO Last Name
- CEO Email Address
- Contact First Name
- Contact Last Name
- Contact Title
- Contact Email Address
- Contact Phone Number
Hospital Source Data

Information About Source Data

The information in the table below represents your hospital’s performance on each of the 22 measures used in the Hospital Safety Grade as of January 31, 2023 (the Data Snapshot Date). Please review this information to ensure that Leapfrog recorded the correct measure score from each publicly available data source.

Information that you will need to complete the review process is available in the following documents:
- Review Instructions and Scoring Methodology
- Spring 2023 Hospital Safety Grade Calculator
### Source Data

<table>
<thead>
<tr>
<th>Name of the Measure</th>
<th>Type of Measure</th>
<th>Data Source/Links</th>
<th>Reporting Period</th>
<th>Measure Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computerized Physician Order Entry (CPOE)</td>
<td>Structure/Process</td>
<td>Mean of Similar Hospitals</td>
<td>Not Applicable</td>
<td>75**</td>
</tr>
<tr>
<td>Bar Code Medication Administration (BCMA)</td>
<td>Structure/Process</td>
<td>Mean of Similar Hospitals</td>
<td>Not Applicable</td>
<td>79**</td>
</tr>
<tr>
<td>ICU Physician Staffing (IFS)</td>
<td>Structure/Process</td>
<td><a href="#">2022 Leapfrog Hospital Survey</a></td>
<td>2022</td>
<td>Declined to Report</td>
</tr>
<tr>
<td>C. Diff.</td>
<td>Outcome</td>
<td><a href="#">2022 Leapfrog Hospital Survey</a></td>
<td>07/01/2021 - 06/30/2022</td>
<td>2.066*</td>
</tr>
<tr>
<td>PSI 4: Death rate among surgical inpatients with serious treatable conditions</td>
<td>Outcome</td>
<td>CMS</td>
<td>07/01/2019 - 12/31/2019 and 07/01/2020 - 06/30/2021</td>
<td>Not Available</td>
</tr>
<tr>
<td>CMS Medicare PSI 90: Patient safety and adverse events composite</td>
<td>Outcome</td>
<td>CMS</td>
<td>07/01/2019 - 12/31/2019 and 07/01/2020 - 06/30/2021</td>
<td>1.06</td>
</tr>
</tbody>
</table>

*Trim value*: The measure score has been trimmed to the 99th percentile. Refer to A Note About Extreme Values in the Review Instructions and Scoring Methodology.

**Imputed score**: The measure score has been imputed based on historical data or data from similar hospitals. Refer to Using Secondary Data Sources in the Review Instructions and Scoring Methodology.
### PSI 90 Components

**CMS calculates PSI 90 using the ten (10) component PSIs that are listed in the table below. While the scores for each of the 10 component PSIs will NOT be used to calculate spring 2023 Hospital Safety Grades, they will be publicly reported on the Hospital Safety Grade website. To verify your hospital’s PSI 90 Component scores, use the text links in the Data Source/Links column.**

<table>
<thead>
<tr>
<th>Component PSI</th>
<th>Data Source/Links</th>
<th>Reporting Period</th>
<th>Component Score (not used in numerical score)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSI 3: Pressure ulcer rate</td>
<td>CMS</td>
<td>07/01/2019 - 12/31/2019 and 07/01/2020 - 6/30/2021</td>
<td>0.42</td>
</tr>
<tr>
<td>PSI 6: Iatrogenic pneumothorax rate</td>
<td>CMS</td>
<td>07/01/2019 - 12/31/2019 and 07/01/2020 - 6/30/2021</td>
<td>0.22</td>
</tr>
<tr>
<td>PSI 8: In-hospital fall with hip fracture rate</td>
<td>CMS</td>
<td>07/01/2019 - 12/31/2019 and 07/01/2020 - 6/30/2021</td>
<td>0.07</td>
</tr>
</tbody>
</table>
What if the Measure Score Doesn’t Match the Public Report?

Hospitals must contact the Help Desk immediately if they suspect a measure score is incorrect.

However, they should double check the following information before contacting the Help Desk:

- **Data source** - the data source listed on the Safety Grade Review Website is what you are referring to when verifying your measure score. You should be using the direct links provided in your Source Data table. For example, if Leapfrog Hospital Survey is listed as the data source for the HAI measures, and you are referring to the CMS HAI data when verifying your measure score, it will not match because that data was not used.

- **Measure** - the measure listed on the Safety Grade Review Website is what you are referring to when verifying your measure score.

- **Reporting period** - the reporting period listed on the Safety Grade Review Website is what you are referring to when verifying your measure score.

When you contact the Help Desk about a potential discrepancy, you must include a copy of the public report or a screenshot that shows a different score for the measure. Please be sure the data source, measure name, and reporting period are visible in the screenshot.

If we find a recording error, we will update the measure score and numerical score before assigning a Letter Grade. You will see an updated numerical score during the Letter Grade Embargo Period.
Preview Preliminary Numerical Score

Remember that the numerical scores posted during the Safety Grade Review Period are **preliminary** as changes do occur during the Safety Grade Review Period.

Final numerical scores will be posted, along with the letter grade, at least two weeks prior to the public announcement.

Hospitals will be alerted via an email sent to the addresses provided in the Contact and Reviewer Information fields.
## Hospital Safety Grade Calculator

<table>
<thead>
<tr>
<th>Measure Domain</th>
<th>Measure</th>
<th>Enter Your Hospital's Score Here (Do NOT Leave Blanks)</th>
<th>Z-Score&lt;sup&gt;2&lt;/sup&gt;</th>
<th>Inputs to Weighting Individual Measures&lt;sup&gt;4&lt;/sup&gt;</th>
<th>Weight&lt;sup&gt;4&lt;/sup&gt;</th>
<th>Weighted Measure Score (Modified Z-Score x Final Weight)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Standard Deviation</td>
<td>Original Z-Score</td>
<td>Modified Z-Score</td>
<td>Evidence</td>
<td>Opportunity</td>
</tr>
<tr>
<td>Process/Structural Measures</td>
<td>Computerized Physician Order Entry (CPOE)</td>
<td>85.73</td>
<td>32.55</td>
<td>-3.8022</td>
<td>2</td>
<td>1.26</td>
</tr>
<tr>
<td></td>
<td>Bar Code Medication Administration (BCMA)</td>
<td>83.21</td>
<td>21.58</td>
<td>-3.8553</td>
<td>2</td>
<td>1.26</td>
</tr>
<tr>
<td></td>
<td>ICU Physician Staffing (IPS)</td>
<td>62.75</td>
<td>43.31</td>
<td>-1.4488</td>
<td>2</td>
<td>1.69</td>
</tr>
<tr>
<td></td>
<td>Safe Practice 1: Culture of Leadership Structures and Systems</td>
<td>116.84</td>
<td>7.46</td>
<td>-15.6501</td>
<td>2</td>
<td>1.06</td>
</tr>
<tr>
<td></td>
<td>Safe Practice 2: Culture Measurement, Feedback, &amp; Intervention</td>
<td>116.54</td>
<td>12.74</td>
<td>-9.1489</td>
<td>2</td>
<td>1.11</td>
</tr>
<tr>
<td></td>
<td>Safe Practice 3: Nursing Workforce</td>
<td>98.18</td>
<td>7.06</td>
<td>-13.9022</td>
<td>1</td>
<td>1.07</td>
</tr>
<tr>
<td></td>
<td>Hand Hygiene</td>
<td>74.37</td>
<td>32.80</td>
<td>-2.2677</td>
<td>2</td>
<td>1.44</td>
</tr>
<tr>
<td></td>
<td>H-COMP-1: Nurse Communication</td>
<td>91.11</td>
<td>2.22</td>
<td>-40.9906</td>
<td>1</td>
<td>1.02</td>
</tr>
<tr>
<td></td>
<td>H-COMP-2: Doctor Communication</td>
<td>91.00</td>
<td>2.11</td>
<td>-43.0384</td>
<td>1</td>
<td>1.02</td>
</tr>
<tr>
<td></td>
<td>H-COMP-3: Staff Responder</td>
<td>84.38</td>
<td>3.59</td>
<td>-23.4977</td>
<td>1</td>
<td>1.04</td>
</tr>
<tr>
<td></td>
<td>H-COMP-4: Communication about Medicines</td>
<td>77.67</td>
<td>3.58</td>
<td>-21.6805</td>
<td>1</td>
<td>1.05</td>
</tr>
<tr>
<td></td>
<td>H-COMP-5: Discharge Information</td>
<td>86.52</td>
<td>3.30</td>
<td>-26.1921</td>
<td>1</td>
<td>1.04</td>
</tr>
<tr>
<td>Outcome Measures</td>
<td>Foreign Object Retained</td>
<td>0.02</td>
<td>0.06</td>
<td>0.2977</td>
<td>1</td>
<td>3.00</td>
</tr>
<tr>
<td></td>
<td>Air Embolism</td>
<td>0.004</td>
<td>0.004</td>
<td>0.1071</td>
<td>1</td>
<td>3.00</td>
</tr>
<tr>
<td></td>
<td>Falls and Trauma</td>
<td>0.42</td>
<td>0.38</td>
<td>1.1045</td>
<td>2</td>
<td>1.01</td>
</tr>
<tr>
<td></td>
<td>CUBSI</td>
<td>0.81</td>
<td>0.67</td>
<td>1.2035</td>
<td>2</td>
<td>1.83</td>
</tr>
<tr>
<td></td>
<td>CAUTI</td>
<td>0.75</td>
<td>0.57</td>
<td>1.2960</td>
<td>2</td>
<td>1.79</td>
</tr>
<tr>
<td></td>
<td>SSI/Cath</td>
<td>0.80</td>
<td>0.65</td>
<td>1.2292</td>
<td>2</td>
<td>1.81</td>
</tr>
<tr>
<td></td>
<td>MRSA</td>
<td>0.84</td>
<td>0.65</td>
<td>1.2856</td>
<td>2</td>
<td>1.78</td>
</tr>
<tr>
<td></td>
<td>C. Diff.</td>
<td>0.34</td>
<td>0.36</td>
<td>1.4799</td>
<td>2</td>
<td>1.68</td>
</tr>
<tr>
<td></td>
<td>PB-1: Death rate among surgical patients with serious treatable conditions</td>
<td>150.71</td>
<td>18.33</td>
<td>8.7137</td>
<td>1</td>
<td>1.11</td>
</tr>
<tr>
<td></td>
<td>CMS Medicare PS 90: Patient safety and adverse events composite</td>
<td>1.00</td>
<td>0.10</td>
<td>5.9883</td>
<td>1</td>
<td>1.19</td>
</tr>
</tbody>
</table>

**Process Measure Domain Score:**
- Will populate after entering all data.

**Outcome Measure Domain Score:**
- Will populate after entering all data.

**Process/Outcome Domains - Combined Score:**
- Will populate after entering all data.

**Normalized Numerical Score:**
- Will populate after entering all data.

**Hospital Safety Grade (Letter Grade):**
- Will not be calculated until after the Safety Grade Review Period. Hospitals will be notified via email when the letter grades are posted.

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New in Fall 2023: Shortened Letter Grade Embargo Period

• The Letter Grade Embargo Period will be shortened from 2 weeks to 1 week

• Hospitals can log back into the Data Review Website to review their final numerical score and letter grade. Explanation of Letter Grades includes cut-points and distribution of grades.

• **Fall 2023: Late October- Early November**
Public Reporting

Screenshots taken from Safety Grade website reflect spring 2023 Safety Grades
Search by Hospital Name and Location
Hospital Details

Brigham And Women's Hospital
75 Francis Street
Boston, MA 02115-6110
Map and Directions

View this hospital's Leapfrog Hospital Survey Results

Learn how to use the Leapfrog Hospital Safety Grade
Past Grades

Brigham And Women's Hospital

75 Francis Street
Boston, MA 02115-6110
Map and Directions

View this hospital's Leapfrog Hospital Survey Results

Learn how to use the Leapfrog Hospital Safety Grade

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## Detailed Table View for Hospitals

### Brigham And Women's Hospital

75 Francis Street
Boston, MA 02115-6110
*Map and Directions*

**Outcomes measures include errors, accidents, and injuries that this hospital has publicly reported.**

<table>
<thead>
<tr>
<th>Measure</th>
<th>The Hospital's Score</th>
<th>Worst Performing Hospital</th>
<th>Avg. Performing Hospital</th>
<th>Best Performing Hospital</th>
<th>Data Source</th>
<th>Time Period Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dangerous object left in patient’s body</td>
<td>0.049</td>
<td>0.352</td>
<td>0.015</td>
<td>0.000</td>
<td>CMS</td>
<td>07/01/2019 - 12/31/2019 and 07/01/2020 - 06/30/2021</td>
</tr>
<tr>
<td>Air or gas bubble in the blood</td>
<td>0.000</td>
<td>0.358</td>
<td>0.001</td>
<td>0.000</td>
<td>CMS</td>
<td>07/01/2019 - 12/31/2019 and 07/01/2020 - 06/30/2021</td>
</tr>
<tr>
<td>Patient falls and injuries</td>
<td>0.345</td>
<td>2.229</td>
<td>0.437</td>
<td>0.000</td>
<td>CMS</td>
<td>07/01/2019 - 12/31/2019 and 07/01/2020 - 06/30/2021</td>
</tr>
<tr>
<td>Infection in the blood</td>
<td>0.666</td>
<td>4.462</td>
<td>1.077</td>
<td>0.000</td>
<td>2022 Leapfrog Hospital Survey</td>
<td>07/01/2021 - 06/30/2022</td>
</tr>
<tr>
<td>Infection in the urinary tract</td>
<td>0.882</td>
<td>3.516</td>
<td>0.862</td>
<td>0.000</td>
<td>2022 Leapfrog Hospital Survey</td>
<td>07/01/2021 - 06/30/2022</td>
</tr>
<tr>
<td>Surgical site infection after colon surgery</td>
<td>1.450</td>
<td>3.117</td>
<td>0.822</td>
<td>0.000</td>
<td>2022 Leapfrog Hospital Survey</td>
<td>07/01/2021 - 06/30/2022</td>
</tr>
<tr>
<td>MRSA Infection</td>
<td>0.509</td>
<td>3.918</td>
<td>1.095</td>
<td>0.000</td>
<td>2022 Leapfrog Hospital Survey</td>
<td>07/01/2021 - 06/30/2022</td>
</tr>
<tr>
<td>C. diff. Infection</td>
<td>0.537</td>
<td>2.066</td>
<td>0.489</td>
<td>0.000</td>
<td>2022 Leapfrog Hospital Survey</td>
<td>07/01/2021 - 06/30/2022</td>
</tr>
</tbody>
</table>
Measure Scores

Infections

Problems with Surgery

Safety Problems

Practices to Prevent Errors

Doctors, Nurses & Hospital Staff

**MRSA Infection**

Staph bacteria are common in hospitals, but Methicillin-resistant Staphylococcus aureus (MRSA) is a type of staph bacteria that is resistant to (cannot be killed by) many antibiotics. MRSA can be found in bed linens or medical equipment and can be spread if providers do not properly wash their hands between patients. MRSA can cause life-threatening bloodstream infections, pneumonia and surgical site infections.

This Hospital's Score: 0.509
Best Hospital's Score: 0.000
Average Hospital's Score: 1.095
Worst Hospital's Score: 3.918

What safer hospitals do:

Doctors and nurses should clean their hands after caring for every patient. Hospital rooms and medical equipment should be thoroughly cleaned often. Safer hospitals will also keep MRSA patients separate from other patients and require providers and visitors to wear gloves and gowns around these patients.

For details on sources, click here.
Saint John Hospital
3500 S. Fourth Street
Leavenworth, KS 66048-5043
Map and Directions

View this hospital's Leapfrog Hospital Survey Results
Important Dates for Fall 2023

August - Leapfrog finalized updates to the fall 2023 Hospital Safety Grade Methodology

August 31 - Data Snapshot Date

September 25 - October 13 - Courtesy Hospital Safety Grade Review Period

September 28 - Hospital Safety Grade Town Hall Call

Late October/November – One week Letter Grade Embargo Period

Early November - Letter grades will be published at www.HospitalSafetyGrade.org

For more information about important dates, visit:

https://www.hospitalsafetygrade.org/for-hospitals/key-dates-and-information
Questions Break

Reminder – Use the Q&A Feature:

For questions specific to your hospital or questions that come up later, please contact the Leapfrog Help Desk: [https://leapfroghelpdesk.zendesk.com](https://leapfroghelpdesk.zendesk.com)