LEAPFROG
HOSPITAL
SAFETY GRADE

Review Instructions and Scoring Methodology

SPRING SAFETY GRADE REVIEW PERIOD (FEBRUARY 21 – MARCH 12, 2023)

CONTENTS

WHAT IS THE HOSPITAL SAFETY GRADE?

Leapfrog Hospital Safety Grades are assigned to nearly 3,000 general acute-care hospitals across the nation twice annually. The Safety Grade uses up to 22 national patient safety measures from the Centers for Medicare & Medicaid Services (CMS) and the Leapfrog Hospital Survey, and information from other supplemental data sources, to produce a single letter grade representing a hospital's overall performance in keeping patients safe from preventable harm and medical errors. The Safety Grade methodology has been peer reviewed and published in the Journal of Patient Safety.[1]

With the Safety Grade, The Leapfrog Group aims to educate and encourage consumers to consider safety when selecting a hospital for themselves or their families. In addition, we believe the Safety Grade will foster strong market incentives for hospitals to make safety a priority. Safety Grades are publicly reported at www.HospitalSafetyGrade.org.

ELIGIBLE HOSPITALS

Due to the limited availability of public data, Leapfrog is not able to calculate a Safety Grade for every hospital in the U.S., including the following types of hospitals:

- Critical access hospitals (CAH)
- Long-term care and rehabilitation facilities
- Mental health facilities
- Federal hospitals (e.g., Veterans Affairs, Indian Health Services, etc.)
- Some specialty hospitals, such as surgery centers and cancer hospitals
- Free-standing pediatric hospitals
- Hospitals in U.S. territories
- Hospitals that are missing scores for **more than six** (6) process/structural measures, or **more than five** (5) outcome measures, or **missing PSI 90**

---

[1] The Leapfrog Hospital Safety Grade uses the below-described data and reflects expert opinion as to the relative importance of each category.

LEAPFROG
HOSPITAL
SAFETY GR**A**DE

MEASURES

The Safety Grade utilizes up to 22 national patient safety measures from the Centers for Medicare & Medicaid Services (CMS) and the Leapfrog Hospital Survey, and information from other supplemental data sources.

The measure set is divided into two domains: (1) Process/Structural Measures and (2) Outcome Measures. Each domain represents 50% of the Safety Grade. The following table lists the 22 measures included in the Safety Grade, as well as the data source and reporting period for each measure. In some cases where a hospital's information is not available for a certain measure, Leapfrog uses a secondary data source (as indicated in the table). In cases where a hospital's information is not available from any data source, Leapfrog has outlined a methodology for dealing with the missing data.

PROCESS/STRUCTURAL MEASURES (12)

Measure Name	Primary Data Source	Reporting Period	Secondary Data Source	Reporting Period
Computerized Physician Order Entry (CPOE)	2022 Leapfrog Hospital Survey	2022	Imputation Model Applied*	N/A
Bar Code Medication Administration (BCMA)	2022 Leapfrog Hospital Survey	2022	Imputation Model Applied*	N/A
ICU Physician Staffing (IPS)	2022 Leapfrog Hospital Survey	2022	Imputation Model Applied*	N/A
Safe Practice 1: Culture of Leadership Structures and Systems	2022 Leapfrog Hospital Survey	2022	N/A	N/A
Safe Practice 2: Culture Measurement, Feedback & Intervention	2022 Leapfrog Hospital Survey	2022	N/A	N/A

LEAPFROG
HOSPITAL
SAFETY GRADE

PROCESS/STRUCTURAL MEASURES (12)				
Measure Name	**Primary** **Data Source**	**Reporting Period**	**Secondary** **Data Source**	**Reporting Period**
Safe Practice 9: Nursing Workforce	2022 Leapfrog Hospital Survey	2022	N/A	N/A
Hand Hygiene	2022 Leapfrog Hospital Survey	2022	Imputation Model Applied*	N/A
H-COMP-1: Nurse Communication	CMS	04/01/2021 - 03/31/2022	N/A	N/A
H-COMP-2: Doctor Communication	CMS	04/01/2021 - 03/31/2022	N/A	N/A
H-COMP-3: Staff Responsiveness	CMS	04/01/2021 - 03/31/2022	N/A	N/A
H-COMP-5: Communication about Medicines	CMS	04/01/2021 - 03/31/2022	N/A	N/A
H-COMP-6: Discharge Information	CMS	04/01/2021 - 03/31/2022	N/A	N/A

*See Leapfrog's Imputation Method for CPOE, BCMA, IPS and Hand Hygiene for more information on Leapfrog's imputation methodology for hospital's missing measure scores for CPOE, BCMA, IPS, and/or Hand Hygiene.

OUTCOME MEASURES (10)

Measure Name	Primary Data Source	Reporting Period	Secondary Data Source	Reporting Period
Foreign Object Retained	CMS	07/01/2019 - 12/31/2019 AND 07/01/2020 - 6/30/2021	N/A	N/A
Air Embolism	CMS	07/01/2019 - 12/31/2019 AND 07/01/2020 - 6/30/2021	N/A	N/A
Falls and Trauma	CMS	07/01/2019 - 12/31/2019 AND 07/01/2020 - 6/30/2021	N/A	N/A
CLABSI	2022 Leapfrog Hospital Survey	07/01/2021 - 06/30/2022	CMS	04/01/2021 - 03/31/2022
CAUTI	2022 Leapfrog Hospital Survey	07/01/2021 - 06/30/2022	CMS	04/01/2021 - 03/31/2022
SSI: Colon	2022 Leapfrog Hospital Survey	07/01/2021 - 06/30/2022	CMS	04/01/2021 - 03/31/2022
MRSA	2022 Leapfrog Hospital Survey	07/01/2021 - 06/30/2022	CMS	04/01/2021 - 03/31/2022
C. Diff.	2022 Leapfrog Hospital Survey	07/01/2021 - 06/30/2022	CMS	04/01/2021 - 03/31/2022
PSI 4: Death rate among surgical inpatients with serious treatable conditions	CMS	07/01/2019 - 12/31/2019 AND 07/01/2020 - 6/30/2021	N/A	N/A

LEAPFROG
HOSPITAL
SAFETY GR**A**DE

OUTCOME MEASURES (10)				
Measure Name	**Primary Data Source**	**Reporting Period**	**Secondary Data Source**	**Reporting Period**
CMS Medicare PSI 90: Patient safety and adverse events composite*	CMS	07/01/2019 - 12/31/2019 AND 07/01/2020 - 6/30/2021	N/A	N/A

* CMS calculates PSI 90 using the ten (10) component PSIs. While scores for each of the 10 component PSIs will not be used to calculate fall 2022 Hospital Safety Grades, they will be publicly reported on the Hospital Safety Grade website.

LEAPFROG
HOSPITAL
SAFETY GRA**DE**

**COMPONENT PSIs (SCORES NOT USED TO CALCULATE THE HOSPITAL SAFETY GRADE)

Component PSI	Primary Data Source	Reporting Period	Secondary Data Source	Reporting Period
PSI 3: Pressure ulcer rate	CMS	07/01/2019 - 12/31/2019 AND 07/01/2020 - 6/30/2021	N/A	N/A
PSI 6: Iatrogenic pneumothorax rate	CMS	07/01/2019 - 12/31/2019 AND 07/01/2020 - 6/30/2021	N/A	N/A
PSI 8: In-hospital fall with hip fracture rate	CMS	07/01/2019 - 12/31/2019 AND 07/01/2020 - 6/30/2021	N/A	N/A
PSI 9: Perioperative hemorrhage and hematoma rate	CMS	07/01/2019 - 12/31/2019 AND 07/01/2020 - 6/30/2021	N/A	N/A
PSI 10: Postoperative acute kidney injury rate	CMS	07/01/2019 - 12/31/2019 AND 07/01/2020 - 6/30/2021	N/A	N/A
PSI 11: Postoperative respiratory failure rate	CMS	07/01/2019 - 12/31/2019 AND 07/01/2020 - 6/30/2021	N/A	N/A
PSI 12: Perioperative pulmonary embolism or deep vein thrombosis rate	CMS	07/01/2019 - 12/31/2019 AND 07/01/2020 - 6/30/2021	N/A	N/A
PSI 13: Postoperative sepsis rate	CMS	07/01/2019 - 12/31/2019 AND 07/01/2020 - 6/30/2021	N/A	N/A
PSI 14: Postoperative wound dehiscence rate	CMS	07/01/2019 - 12/31/2019 AND 07/01/2020 - 6/30/2021	N/A	N/A
PSI 15: Unrecognized abdominopelvic accidental puncture/laceration rate	CMS	07/01/2019 - 12/31/2019 AND 07/01/2020 - 6/30/2021	N/A	N/A

Note: CMS calculates PSI 90 using the ten (10) component PSIs listed above. While 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.

REVIEW PERIOD INSTRUCTIONS

Prior to the publication of each Hospital Safety Grade, Leapfrog holds a Courtesy Hospital Safety Grade Review Period for hospitals. 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.

To participate in the Review Period, log into the Safety Grade Review Website using your hospital's username and password at: http://www.hospitalsafetygrade.org/for-hospitals/data-review/review-login. **Usernames and passwords have not changed since the fall 2022 Hospital Safety Grade**.

- **If your hospital submitted a 2022 Hospital Survey by November 30:**
  - Login credentials were sent via email from helpdesk@leapfrog-group.org to your hospital's CEO and primary Survey contact as listed in the Profile of the 2022 Leapfrog Hospital Survey.
- **If your hospital did not submit a 2022 Hospital Survey by November 30:**
  - Login credentials were sent via postal service to your hospital's CEO.
- **If you cannot locate your login credentials:**
  - Contact the Help Desk at https://leapfroghelpdesk.zendesk.com. To avoid delays, ensure that your Help Desk ticket includes the following information: (1) Your hospital's name, (2) physical address, and (3) CMS Certification Number.

1: PROVIDE CONTACT INFORMATION

Once you log into the Safety Grade Review Website, confirm your hospital's:

1. Name and physical address (to be displayed on the public reporting website)
   a. If this information is not correct, select "Info above is NOT correct" and provide the corrections in the fields that appear.
2. CMS Certification Number
   a. If your hospital's CCN is NOT correct, contact the Help Desk immediately.
3. Contact information
   a. **If your hospital submitted a 2022 Hospital Survey by November 30:**
      i. Enter contact information in the form. However, note that your hospital's CEO and primary Survey contact as listed in the Profile of the Leapfrog Hospital Survey will be notified via email from helpdesk@leapfrog-group.org of the Letter Grade Embargo Period dates after the Review Period.

b. **If your hospital <u>did not</u> submit a 2022 Hospital Survey by November 30:**

      i. Enter contact information in the form so we can notify the contact person via email from Mailchimp when the Letter Grade Embargo Period opens. Ensure that the email addresses are accurate to avoid missing important notifications. The CEO information that you enter will be used to update our database.

     ii. If your hospital does not complete the contact information form or does not complete the review process, note the Letter Grade Embargo Period dates as posted on our [website](#) as no other notification will be provided.

Once you have completed the contact information page, click on **"Click Here to Continue"** to review your hospital's measure scores.

Important Note: To ensure that your hospital receives important email announcements, we recommend that you take the following steps:

1. Add the following to your safe sender list:
   a. @leapfrog-group.org
   b. @leapfroghelpdesk.zendesk.com
   c. @em8434.leapfrog-group.org
   d. IP address of 159.183.167.150
2. Change the configuration of the receiving email server to accept mail from MailChimp's delivery IP addresses (this is the service used to send our general newsletters) by doing the following:
   a. Direct IT professional to the following link: https://mailchimp.com/about/ips/
   b. The site above provides instructions to calculate the complete range of MailChimp's IP addresses.
   c. Once the IT group has the full IP list, they'll need to allow all MailChimp IP addresses on your hospital's domain.

2: REVIEW SOURCE DATA

Once you complete the contact information webpage, review the measures scores for each of the 22 measures used to calculate your hospital's numerical score. You can verify that Leapfrog recorded the correct score by clicking the text link in the "Data Source/Links" column to view the report that Leapfrog used to obtain your measure score.

If the measure score in the table does not match the public report, ensure that you are referencing the correct <u>data source</u>, <u>measure</u>, and <u>reporting period</u> before contacting the [Help Desk](#). For example, if Leapfrog Hospital Survey is listed as the data source for the HAI measures, you should not refer to a CMS report. In addition, if there is one or two asterisks next to the measure score, review the notations underneath the table regarding trimmed values and imputed scores:

*Trim value: The measure score has been trimmed to the 99th percentile. Refer to [A Note about Extreme Values](#).

**Imputed score: The measure score has been imputed based on historical data or data from similar hospitals. Refer to Leapfrog's Imputation Method for CPOE, BCMA, IPS and Hand Hygiene If you have confirmed that Leapfrog made a recording error, contact the Help Desk with the following information: (1) measure name, (2) score from the table, (3) a screenshot from the public report linked from the table that includes the data source, measure name, reporting period, and score.

Note: CMS calculates PSI 90 using the ten (10) component PSIs that are listed in the PSI 90 Components table below the Source Data table on the Safety Grade Review website. While 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. Once you complete the review, provide contact information in the **"Reviewer Information"** fields at the bottom of the page, and then click on the **"Click Here to Continue"** button to review your preliminary numerical.

VERIFY LEAPFROG HOSPITAL SURVEY MEASURE SCORES

To verify your hospital's Survey Results that were used in the Safety Grade, log into the Survey Dashboard or use the text links in the "Data Source/Links" column. Once you log into the Survey Dashboard with your 16-digit security code, select the "View Hospital Details" button at the top of the page.

Measure	Where to Find the Measure Score
Computerized Physician Order Entry (CPOE)	See "Performance Category" in Section 2: Medication Safety – CPOE. *For the purposes of the Safety Grade, the score from the Leapfrog Hospital Survey is assigned a point value. See CPOE Measure and Scoring descriptions.*
Bar Code Medication Administration (BCMA)	See "Performance Category" in Section 8: Medication Safety – BCMA *For the purposes of the Safety Grade, the score from the Leapfrog Hospital Survey is assigned a point value. See BCMA Measure and Scoring descriptions.*
ICU Physician Staffing (IPS)	See "Performance Category" in Section 5: ICU Physician Staffing *For the purposes of the Safety Grade, the score from the Leapfrog Hospital Survey is assigned a point value. See IPS Measure and Scoring descriptions.*
Safe Practice 1, Safe Practice 2, Safe Practice 9	See "Scoring Details" in Section 6: NQF Safe Practices *For the purposes of the Safety Grade, individual scores for each NQF Safe Practice are used. See NQF Safe Practices Measure and Scoring descriptions.*

Measure	Where to Find the Measure Score
Hand Hygiene	See "Performance Category" in Section 6: Hand Hygiene *For the purposes of the Safety Grade, the score from the Leapfrog Hospital Survey is assigned a point value.* *See Hand Hygiene Measure and Scoring descriptions.*
CLABSI, CAUTI, SSI: Colon, MRSA, C. Diff.	See "Scoring Details" for Section 7: Managing Serious Errors *For the purposes of the Safety Grade, the standardized infection ratio (SIR) is used.* *See Healthcare-Associated Infections Measure and Scoring descriptions.*

VERIFY CMS MEASURE SCORES

To verify your hospital's CMS measure scores that were used in the Safety Grade, use the text links in the "Data Source/Links" column. *As a reminder, CMS was only used as the data source for the healthcare-associated infection measures if the hospital did **not** submit a Leapfrog Hospital Survey.*

Measure	CMS Measure ID	Where to Find the Measure Score
H-COMP-1: Nurse Communication	H_COMP_1_LINEAR_SCORE	After clicking on the link in the "Data Source/Links" column, an Excel file titled "HCAHPS-Hospital_01312023" will open. Use the "Instructions" tab in the file to find your hospital's score in the "HCAHPS_01312023" tab. *See HCAHPS Measure and Scoring descriptions.*
H-COMP-2: Doctor Communication	H_COMP_2_LINEAR_SCORE	
H-COMP-3: Staff Responsiveness	H_COMP_3_LINEAR_SCORE	
H-COMP-5: Communication about Medicines	H_COMP_5_LINEAR_SCORE	
H-COMP-6: Discharge Information	H_COMP_6_LINEAR_SCORE	
Foreign Object Retained, Air Embolism, Falls and Trauma	N/A	After clicking on the link in the "Data Source/Links" column, an Excel file titled "HAC-Hospital_01312023" will open. Use the "Instructions"

Measure	CMS Measure ID	Where to Find the Measure Score
		tab in the file to find your hospital's score in the "HAC_01312023" tab. *See Hospital Acquired Conditions Measure and Scoring descriptions.*
CLABSI	HAI_1_SIR	After clicking on the link in the "Data Source/Links" column, an Excel file titled "Healthcare_Associated_Infections-Hospital_01312023" will open. Use the "Instructions" tab in the file to find your hospital's score in the "HAI_01312023" tab. *See Healthcare-Associated Infections Measure and Scoring descriptions.*
CAUTI	HAI_2_SIR	
SSI: Colon	HAI_3_SIR	
MRSA	HAI_5_SIR	
C. Diff.	HAI_6_SIR	
PSI 4: Death rate among surgical inpatients with serious treatable conditions	PSI_04	After clicking on the link in the "Data Source/Links" column, an Excel file titled "Complications_and_Deaths-Hospital_01312023" will open. Use the "Instructions" tab in the file to find your hospital's score in the "Comp_01312023" tab. *See PSI Measure and Scoring descriptions.*
CMS Medicare PSI 90: Patient safety and adverse events composite*	PSI_90	After clicking on the link in the "Data Source/Links" column, an Excel file titled "Complications_and_Deaths-Hospital_01312023" will open. Use the "Instructions" tab in the file to find your hospital's score in the "Comp_01312023" tab. *See PSI Measure and Scoring descriptions.*

*CMS calculates PSI 90 using the ten (10) component PSIs that are listed in the PSI 90 Components table above. While 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.

Component PSI	CMS Measure ID	Where to Find the Component Score
PSI 3: Pressure ulcer rate	PSI_03	
PSI 6: Iatrogenic pneumothorax rate	PSI_06	
PSI 8: In-hospital fall with hip fracture rate	PSI_08	
PSI 9: Perioperative hemorrhage and hematoma rate	PSI_09	
PSI 10: Postoperative acute kidney injury rate	PSI_10	
PSI 11: Postoperative respiratory failure rate	PSI_11	After clicking on the link in the "Data Source/Links" column, an Excel file titled "Complications_and_Deaths-Hospital_01312023" will open. Use the "Instructions" tab in the file to find your hospital's score in the "Comp_01312023" tab. *See PSI Measure and Scoring descriptions.*
PSI 12: Perioperative pulmonary embolism or deep vein thrombosis rate	PSI_12	
PSI 13: Postoperative sepsis rate	PSI_13	
PSI 14: Postoperative wound dehiscence rate	PSI_14	
PSI 15: Unrecognized abdominopelvic accidental puncture/laceration rate	PSI_15	

3: REVIEW NUMERICAL SCORE

Once you review the Source Data, you can review your hospital's **preliminary** numerical score. Following the Safety Grade Review Period, this preliminary numerical score will be finalized and then translated into a letter grade. As a reminder, only the PSI 90 score is used to calculate your spring 2023 Hospital Safety Grade.

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.

In addition to using the Safety Grade Calculator, hospitals are urged to review the details of the scoring methodology in this document.

MEASURE & SCORING DESCRIPTIONS

PROCESS/STRUCTURAL MEASURES

For Process/Structural Measures, a higher score is always better because these are measures of compliance with best practices in patient care.

COMPUTERIZED PHYSICIAN ORDER ENTRY (CPOE)

The CPOE measure is collected by The Leapfrog Group on the Leapfrog Hospital Survey. It measures a hospital's progress toward implementing a CPOE system to reduce medication ordering errors. Through participation in the Leapfrog Hospital Survey, hospitals are placed in one of several performance categories: "Achieved the Standard," "Considerable Achievement," "Some Achievement," "Limited Achievement," "Declined to Respond," or "Unable to Calculate Score." For the purposes of calculating the Safety Grade, a numerical score is assigned to each performance category:

Leapfrog Performance Category	Measure Score
Achieved the Standard	100
Considerable Achievement	70
Some Achievement	40
Limited Achievement	15
Declined to Respond	See Using Secondary Data
Unable to Calculate Score	Not Available (See Scoring Terms)

For hospitals that did not submit a 2022 Leapfrog Hospital Survey by November 30, see Using Secondary Data Sources for more information on Leapfrog's imputation methodology.

BAR CODE MEDICATION ADMINISTRATION (BCMA)

The BCMA measure is collected by The Leapfrog Group on the Leapfrog Hospital Survey. It measures a hospital's progress toward 1) implementation of BCMA throughout the hospital, 2) compliance with patient and medication scans during administration, 3) use of decision support, and 4) structures to monitor and reduce workarounds. Through participation in the Leapfrog Hospital Survey, hospitals are placed in one of several performance categories: "Achieved the Standard," "Considerable Achievement," "Some Achievement," "Limited Achievement," or "Declined to Respond. For the purposes of calculating the Safety Grade, a numerical score is assigned to each performance category:

Leapfrog Performance Category	Measure Score
Achieved the Standard	100
Considerable Achievement	75
Some Achievement	50
Limited Achievement	25
Declined to Respond	See Using Secondary Data

For hospitals that did not submit a 2022 Leapfrog Hospital Survey by November 30, see Using Secondary Data Sources for more information on Leapfrog's imputation methodology.

ICU PHYSICIAN STAFFING (IPS)

The IPS measure is collected by The Leapfrog Group on the Leapfrog Hospital Survey. It measures a hospital's use of intensivists in ICUs. Through participation in the Leapfrog Hospital Survey, hospitals are placed in one of several performance categories: "Achieved the Standard," "Considerable Achievement," "Some Achievement," "Limited Achievement," or "Declined to Respond." For the purposes of calculating the Safety Grade, a numerical score is assigned to each performance category:

Leapfrog Performance Category	Measure Score
Achieved the Standard	100
Considerable Achievement	50
Some Achievement	15
Limited Achievement	5
Declined to Respond	See Using Secondary Data
Does Not Apply	Not Available (See Scoring Terms)

For hospitals that did not submit a 2022 Leapfrog Hospital Survey by November 30, see Using Secondary Data Sources for detailed information on Leapfrog's imputation methodology.

NQF SAFE PRACTICES

Three (3) NQF Safe Practice measures are collected by The Leapfrog Group on the Leapfrog Hospital Survey. They measure a hospital's progress toward implementing NQF-endorsed processes and protocols to reduce and prevent adverse events. Through participation in the Leapfrog Hospital Survey, hospitals are able to earn up to 100 – 120 points for each Safe Practice. For the purposes of calculating the Safety Grade, individual scores for each Safe Practice are used:

NQF Safe Practice	Possible Measure Score
Safe Practice 1: Culture of Safety Leadership Structures and Systems	0 - 120
Safe Practice 2: Culture Measurement, Feedback and Intervention	0 - 120
Safe Practice 9: Nursing Workforce	0 - 100

There is no secondary data source for the NQF Safe Practices. Therefore, hospitals that did not submit a 2022 Leapfrog Hospital Survey by November 30 will not have these measures included in their Safety Grade and the measure will be reported as "Declined to Report." See Dealing with Missing Data for more information.

HAND HYGIENE

The Hand Hygiene measure is collected by The Leapfrog Group on the Leapfrog Hospital Survey. It measures processes and protocols that hospitals have in place regarding monitoring hand hygiene practices, fostering a culture of good hand hygiene, offering training and education, and providing equipment.

Publicly reported score from the Leapfrog Hospital Survey	Possible assigned for the purposes of calculating the Hospital Safety Grade
Achieved the Standard	100
Considerable Achievement	70
Some Achievement	40
Limited Achievement	15
Declined to Respond	See Using Secondary Data

For hospitals that did not submit a 2022 Leapfrog Hospital Survey by November 30, see Using Secondary Data Sources for detailed information on Leapfrog's imputation methodology.

HOSPITAL CONSUMER ASSESSMENT OF HEALTHCARE PROVIDERS AND SYSTEMS (HCAHPS) COMPOSITES

The Hospital HCAHPS survey responses are collected by CMS via the Inpatient Quality Reporting Program. Linear mean scores calculated by CMS incorporate the full range of survey response categories into a single metric for each HCAHPS composite. Five of the six composites are used in the Safety Grade. For the purposes of calculating the Safety Grade, a hospital's linear mean score for each of the five composites is used:

HCAHP Composite	Possible Measure Score
H-COMP-1: Nurse Communication	0 - 100
H-COMP-2: Doctor Communication	0 - 100
H-COMP-3: Staff Responsiveness	0 - 100
H-COMP-5: Communication about Medicines	0 - 100
H-COMP-6: Discharge Information	0 - 100

OUTCOME MEASURES

For Outcome Measures, a lower score is always better because these are measures of harm experienced by patients (e.g., central line-associated blood stream infections).

HOSPITAL-ACQUIRED CONDITIONS

Three hospital-acquired condition measures are calculated by CMS through the DRA HAC Reporting Program: Foreign Object Retained after Surgery, Air Embolism, and Falls and Trauma. Hospital-acquired condition rates are calculated by CMS based on Medicare Fee-for-Service claims and publicly reported as a rate per 1,000 inpatient discharges. For the purposes of calculating the Safety Grade, the rate is used.

HEALTHCARE-ASSOCIATED INFECTIONS

Five healthcare-associated infection measures are collected by The Leapfrog Group on the Leapfrog Hospital Survey: Central line-associated bloodstream infections (CLABSI) in ICUs and select wards, Catheter-associated urinary tract infections (CAUTI) in ICUs and select wards, Surgical site infections from colon

surgery (SSI: Colon), Facility-wide inpatient MRSA Blood Laboratory-identified Events, and Facility-wide inpatient C.diff. Laboratory-identified Events. Through participation in the Leapfrog Hospital Survey, hospitals were required to 1) join Leapfrog's NHSN group, 2) provide an accurate NHSN ID in the Profile section of the Online Survey Tool, and 3) submit Section 7 Managing Serious Errors by November 30. For the purposes of calculating the Safety Grade, the standardized infection ratio (SIR) is used:

As Reported by Leapfrog	Measure Score	Notes
Standardized Infection Ratio (SIR)	SIR	Measure is **included** in calculating the Safety Grade
Does Not Apply	Not Available (See Scoring Terms)	Measure is **not included** in calculating the Safety Grade. No use of Secondary Data.
Unable to Calculate Score	Not Available (See Scoring Terms)	Measure is **not included** in calculating the Safety Grade. No use of Secondary Data.
Declined to Respond	See Using Secondary Data	Secondary Data source is used.

For hospitals that did not submit a 2022 Leapfrog Hospital Survey by November 30, see Using Secondary Data Sources for more information on Leapfrog's use of CMS data.

AHRQ PATIENT SAFETY INDICATORS (PSIS)

Two AHRQ Patient Safety Indicators are calculated by CMS through the Inpatient Quality Reporting Program and the HAC Reduction Program: PSI 4 Death Rate among Surgical Inpatients with Serious Treatable Conditions and PSI 90 Patient Safety and Adverse Events Composite. PSI rates are calculated by CMS based on Medicare Fee-for-Service claims and publicly reported as a rate per 1,000 inpatient discharges. For the purposes of calculating the Safety Grade, the smoothed rate is used for both measures.

Note: CMS calculates PSI 90 using the ten (10) component PSIs that are listed in the PSI 90 Components table above. While 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. Additional information about the PSI 90 measure and how it is calculated by CMS can be found here.

USING SECONDARY DATA SOURCES

Twelve (12) of the 22 measures included in the Safety Grade are derived from the Leapfrog Hospital Survey. The Leapfrog Hospital Survey is voluntary, and as such, hospitals may choose not to submit a Survey. To address this gap in available data, the Safety Grade methodology utilizes secondary data when available. For information on how to complete a free Leapfrog Hospital Survey, visit www.leapfroggroup.org/survey.

IMPUTATION METHOD FOR CPOE, BCMA, IPS, AND HAND HYGIENE

Leapfrog has worked closely with statisticians at Mathematica, Leapfrog's National Expert Panel, and our scientific partners at Johns Hopkins Medicine to develop a new two-step imputation approach for determining scores for CPOE, BCMA, IPS, and Hand Hygiene if they are missing from our publicly reported Survey Results.

STEP 1: USE A HOSPITAL'S MOST RECENT SCORE ON THE MEASURE

CPOE, BCMA, and Hand Hygiene: If the hospital had a score assigned by Leapfrog in the previous four rounds of grades (i.e., fall 2022, spring 2022, fall 2021, spring 2021), the hospital is assigned the most recent score on that measure in the current Hospital Safety Grade (i.e., spring 2023).

IPS: If the hospital had a score assigned by Leapfrog in the previous five rounds of grades (i.e., fall 2022, spring 2022, fall 2021, spring 2021, fall 2020), the hospital is assigned the most recent score on that measure in the current Hospital Safety Grade (i.e., spring 2023).

STEP 2: USE THE MEAN OF THE SCORES ASSIGNED TO OTHER SIMILAR HOSPITALS IN THE U.S. (APPLIES TO CPOE, BCMA, AND HAND HYGIENE ONLY)

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 the 2022 Leapfrog Hospital Survey: urban/rural status, safety net status, number of beds, and teaching status (urban cohorts only). The CMS Impact File is the data source for urban/rural status, safety net status, and number of beds. The 2022 Leapfrog Hospital Survey Results are the primary data source for teaching status and the CMS impact file is the secondary data source.

The hospital is then assigned the **lower** of two possible mean scores for CPOE, BCMA, and Hand Hygiene based on their cohort's performance:

- **Mean of current and recent scores**: The mean score of the cohort is calculated based on the hospital scores in the current round (i.e., spring 2023) from either Leapfrog's publicly reported Survey Results or Step 1 of the imputation model.

- **Mean of scores obtained in each hospital's first year of reporting on Leapfrog's CPOE, BCMA, or Hand Hygiene standards via the Leapfrog Hospital Survey**: The mean score of the cohort is calculated based on the score (i.e., performance category from the Leapfrog Hospital Survey) each hospital in the cohort obtained the <u>first</u> year they reported on Leapfrog's CPOE, BCMA, or Hand Hygiene standards, starting with the 2018 Leapfrog Hospital Survey (the year the CPOE and BCMA standards were last significantly updated) or the 2020 Leapfrog Hospital Survey (the year the Hand Hygiene standard was first scored). CPOE Scores from the 2020 Leapfrog Hospital Survey are excluded as the CPOE Evaluation Tool was not included on the Leapfrog Hospital Survey due to COVID-19.

To determine a hospital's cohort and mean score:

1. Download the latest IMPACT Zip file here.
    a. Open the Microsoft Excel Worksheet in that Zip file named "FY 2023 IPPS Final Rule Impact File"
    b. Select the "FY 2023 CA" tab
    c. Filter for the hospital's CMS Certification Number (CCN) under the "Provider Number" column
    d. Refer to criteria in Table 1: Cohort Criteria
2. View 2022 Leapfrog Hospital Survey Results here.
    a. Search for the hospital by name or location
    b. If the hospital submitted a 2022 Leapfrog Hospital Survey, select "More Information" at the bottom of the webpage to view teaching status
    c. Refer to the criteria in Table 1: Cohort Criteria

Table 1: Cohort Criteria

Characteristic	2022 Leapfrog Hospital Survey Results	Column in CMS Impact File	Criteria
Urban/rural status	N/A	URGEO (Column I)	**CMS Impact File:** Urban: LURBAN or OURBAN Rural: RURAL
Safety net status	N/A	DSHPCT (Column Y)	**CMS Impact File:** Safety net: DSHPCT is greater than or equal to 0.4007* *0.4007 is the 80th percentile of the IMPACT file
Number of Beds	N/A	Beds (Column U)	**CMS Impact File**

Characteristic	2022 Leapfrog Hospital Survey Results	Column in CMS Impact File	Criteria
			Fewer than 100 beds 100 or more beds
Teaching status	Teaching Status	Resident to Bed Ratio (Column S)	**2022 Leapfrog Hospital Survey Results (primary source):** Non-teaching Teaching **CMS Impact File (secondary source):** Non-teaching: Resident to bed Ratio equals 0 Teaching: Resident to bed ratio is greater than 0

3. Find the cohort's scores for CPOE, BCMA, and Hand Hygiene in Table 2: Cohort Scores

Table 2: Cohort Scores

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

CMS DATA FOR HAIS

CMS is **the secondary data** source for healthcare-associated infections. For the purposes of calculating the Safety Grade, the standardized infection ratio (SIR) published by CMS is used:

Hospitals That Did Not Submit Section 7: Managing Serious Errors of the 2022 Hospital Survey by November 30, 2022

As Reported by CMS	Measure Score	Notes
Not Available (no locations or low volume)	Not Available (See Scoring Terms)	Measure is **not included** in calculating the Leapfrog Hospital Safety Grade.
Standard Infection Ratio (SIR)	SIR	Measure is **included** in calculating the Leapfrog Hospital Safety Grade.

If a hospital does not have available data from the Leapfrog Hospital Survey or CMS (e.g., no locations or low volume), the hospital is reported as Not Available "Not Available." See Dealing with Missing Data for more information.

WEIGHTING INDIVIDUAL MEASURES

Each measure included in the Leapfrog Hospital Safety Grade is assigned a standard weight. The methodology to assign standard weights includes four criteria: (1) Impact, (2) Evidence, (3) Opportunity, and (4) Number of Component Measures. These four criteria are then combined using the equation below, which results in a standard weight for each measure that represents the measure's relative importance within the Hospital Safety Grade.

[Evidence + (Impact x Opportunity x Number of Component Measures)]

EVIDENCE

The Evidence Score for each individual measure is assigned a value of one (1) or two (2) using the following criteria:

- 1 = Supported by either suggestive clinical or epidemiological studies or theoretical rationale
- 2 = Supported by experimental, clinical, or epidemiological studies and strong theoretical rationale

OPPORTUNITY

The Opportunity Score for each individual measure is based on the Coefficient of Variation (Standard Deviation/Mean) of that measure, using the following formula: **[1 + (Standard Deviation/Mean)]**. The Opportunity Score is on a continuous scale that is capped at three (3). Any measure with an Opportunity Score above three (3) is assigned a three (3).

IMPACT

The Impact Score for each individual measure is comprised of two (2) parts, each of which is assigned a value from one (1) to three (3):

1. Number of patients affected
2. Severity of harm

The *number of patients affected* score is determined by the following:

- 0 = Extremely rare event (e.g., Air Embolism)
- 1 = Rare event (e.g., Foreign Object Retained After Surgery)
- 2 = Some patients in hospital affected (e.g., ICU Physician Staffing)
- 3 = All patients in hospital affected (e.g., Hand Hygiene)

The *severity of harm* score is determined by the following:

- 1 = No direct evidence of harm or harm reduction (e.g., Patient Experience)
- 2 = Clear documentation of harm or harm reduction; adverse events (e.g., Foreign Object Retained After Surgery)
- 3 = Significant mortality reduction (more than 1,000 deaths or a 10% reduction in hospital wide mortality) (e.g., ICU Physician Staffing)

The values from each part are then added together to arrive at the overall Impact Score using the following criteria:

- 1 = Score of 2 (Low Impact) (e.g., Air Embolism)
- 2 = Score of 3-4 (Medium Impact) (e.g., Patient Experience)
- 3 = Score of 5-6 (High Impact) (e.g., ICU Physician Staffing)

NUMBER OF COMPONENT MEASURES

The number of component measures refers to how many measures are included within the measure. For PSI 90, the number of component measures is 10 (PSI 3, PSI 6, PSI 8, PSI 9, PSI 10, PSI 11, PSI 12, PSI 13, PSI 14, and PSI 15). For all other measures included in the Hospital Safety Grade, the number of component measures within the measure is one (1).

STANDARD MEASURE WEIGHTS

Measure	Evidence Score	Opportunity Score	Impact Score	Number of Component Measures	Standard Measure Weight
Process/Structural Measure Domain (50%)					
CPOE	2	1.17	3	1	5.7%
BCMA	2	1.14	3	1	5.6%
IPS	2	1.63	3	1	7.1%
SP 1	1	1.07	2	1	3.2%
SP 2	1	1.13	2	1	3.4%
SP 9	1	1.08	3	1	4.4%
Hand Hygiene	2	1.39	2	1	4.9%
H-COMP-1	1	1.03	2	1	3.1%
H-COMP-2	1	1.03	2	1	3.1%
H-COMP-3	1	1.05	2	1	3.2%
H-COMP-5	1	1.05	2	1	3.2%
H-COMP-6	1	1.04	2	1	3.2%
Outcome Measure Domain (50%)					
Foreign Object Retained	1	3.00	2	1	4.3%
Air Embolism	1	3.00	1	1	2.4%
Falls and Trauma	2	2.06	3	1	5.0%
CLABSI	2	1.81	3	1	4.5%
CAUTI	2	1.84	3	1	4.6%
SSI: Colon	2	1.82	2	1	3.4%
MRSA	2	1.74	3	1	4.4%
C. Diff.	2	1.77	3	1	4.4%
PSI 4	1	1.12	2	1	2.0%
PSI 90	1	1.17	2	10	14.9%

CALCULATING Z-SCORES

Z-Scores are used to standardize data from measures with different performance scales and allow for comparisons (e.g., a linear mean score of 90 on H-COMP-1: Nurse Communication and a CLABSI SIR of 0.870). In addition, Z-Scores can indicate to a hospital whether their measure score is above, below, or equal to the average hospital.

In the Scoring Methodology, a Z-Score is calculated for each available measure score. A Z-Score is calculated using a hospital's actual measure score, the national mean for that measure, and the standard deviation for that measure. The Z-Score for each measure is calculated using the following formulas:

- **For Process/Structural Measures: [Hospital Score – Mean) / Standard Deviation]**
- **For Outcome Measures: [(Mean – Hospital Score) / Standard Deviation]**

The following table includes the national mean and standard deviation for each measure used to calculate a hospital's Z-Score. For display, means and standard deviations are displayed rounded to two or three decimal places. For scoring, these values are not rounded.

Process and Structural Measures	Mean	Standard Deviation
CPOE	91.70	15.44
BMCA	91.21	12.50
IPS	67.49	42.21
SP 1	116.82	8.03
SP 2	115.77	15.45
SP 9	98.06	8.11
Hand Hygiene	71.62	27.78
H-COMP-1	89.81	2.52
H-COMP-2	89.70	2.45
H-COMP-3	81.30	4.18
H-COMP-5	74.21	3.92
H-COMP-6	85.07	3.78

Outcome Measures	Mean	Standard Deviation
Foreign Object Retained	0.015	0.06
Air Embolism	0.001	0.01
Falls and Trauma	0.437	0.46
CLABSI	1.076	0.88
CAUTI	0.861	0.72
SSI: Colon	0.822	0.68
MRSA	1.095	0.81
C. Diff.	0.489	0.37
PSI 4	143.22	17.46
PSI 90	0.98	0.17

A NOTE ABOUT EXTREME VALUES

For hospitals that have an "extreme" value for a particular measure (i.e., a value that <u>exceeds</u> the 99th percentile) Leapfrog "trims" the reported value to the 99th percentile. For example, a rate of 0.50 per 1,000 patient discharges for Foreign Object Retained after Surgery is "trimmed" to 0.352 (e.g., the 99th percentile). Only "trimmed" rates are displayed on the Leapfrog Hospital Safety Grade website. The table below includes the "trim" values for the spring 2023 Leapfrog Hospital Safety Grade. The PSI 90 measure score represents an observed to expected ratio that has already been risk adjusted at both the component PSI level and at the composite level; therefore, the measure is not "trimmed" by Leapfrog.

Measure	99th Percentile
Foreign Object Retained	0.352
Air Embolism	0.358
Falls and Trauma	2.229
CLABSI	4.462
CAUTI	3.516
SSI: Colon	3.117
MRSA	3.918
C. Diff.	2.066
PSI 4	186.71

Note: Percentiles are rounded to reflect the precision of the raw data.

DEALING WITH MISSING DATA

Due to a variety of reasons, a hospital may not have a measure score for all 22 measures. If a hospital is missing a measure score for any measure (except PSI 90; hospitals missing PSI 90 are not graded), 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 of 7.0% 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.

[Standard measure weight / (sum of standard weights for the remaining 11 measures in the process/structural measure domain)]*50% = updated measure weight

For more information about how the measure weight redistribution is calculated and affects the overall score, please see the Leapfrog Hospital Safety Grade Calculator, which can be found on the last page of the Safety Grade Review Website.

CALCULATING WEIGHTED MEASURE SCORES

To calculate a hospital's numerical safety score, multiply the Z-Score of each process/structural measure by the standard weight assigned to that measure to get the weighted process/structural measure score. If a hospital is missing any process/structural measure scores, see Dealing with Missing Data to determine the updated measure weight. Then, sum all weighted process/structural measure scores. This is the hospital's overall weighted process/structural measures score.

Multiply the Z-Score of each outcome measure by the standard weight assigned to that measure to get the weighted outcome measure score. If a hospital is missing any outcome measure scores, see Dealing with Missing Data to determine the updated measure weight. Then, sum all weighted outcome measure scores. This is the hospital's overall weighted outcome measures score.

To calculate the overall Safety Grade for a hospital, add the overall weighted process/structural measure score and the overall weighted outcome measures score. Add 3.0 to your score; this is done to normalize scores to a positive distribution. This final numerical score (typically between 1.0 and 4.0) is then assigned to a letter grade. To assist hospitals in calculating their numerical score, a calculator is available on the Safety Grade Review Website. Letter grade cut-points are published during the Letter Grade Embargo Period.

LEAPFROG
HOSPITAL
SAFETY GR[A]DE

TERMS USED IN SCORING AND PUBLIC REPORTING

"**Not Available**" means that the hospital does not have a score for this measure. This could be because the measure is related to a service the hospital does not provide or because the hospital had too few patients or cases to report data for a condition or procedure. A "Not Available" result does not mean that the hospital withheld information from the public.

In the case of healthcare-associated infections, a SIR is reported as "Not Available" if one of the following applies:

- The number of predicted infections is less than 1.
- The number of observed infections present on admission (community-onset prevalence) was above a pre-determined cut-point.

For more information about NHSN's SIR models, please visit https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/nhsn-sir-guide.pdf.

"**Declined to Report**" means that a hospital did not voluntarily provide information to the Leapfrog Hospital Survey. Measures scored as "Declined to Report" will not be used in calculating the overall score (see Dealing with Missing Data).

SHARED CMS CERTIFICATION NUMBERS

All hospitals that share a CMS Certification Number (CCN) will be assigned the same source data as reported by CMS. Affected measures include the HCAHPS, Hospital-Acquired Conditions, Healthcare-Associated Infections (if secondary data source is used), and Patient Safety Indicators.

UPDATES TO DATA USED IN THE LEAPFROG HOSPITAL 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. In January of each year, Leapfrog publishes the Data Snapshot Dates for each of the two Leapfrog Hospital Safety Grade public releases at https://www.hospitalsafetygrade.org/for-hospitals/key-dates-and-information. Leapfrog publishes these dates to give hospitals and other stakeholders advance notice so they can be prepared to submit a Leapfrog Hospital Survey and monitor their performance on CMS measures used in the Safety Grade.

In addition, Leapfrog holds a Courtesy Review Period to give hospitals an additional opportunity to review the data that will be used to calculate their hospital's Safety Grade. 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.

DATA FROM THE LEAPFROG HOSPITAL SURVEY

During the Safety Grade Review Period (February 21 – March 12), Leapfrog will only make corrections to a hospital's data from the 2022 Leapfrog Hospital Survey if a recording error is identified (i.e., we have recorded a different measure score than what is posted on our Survey Results website) or a scoring error is identified (i.e., Leapfrog has calculated an incorrect measure score based on the submitted responses and Leapfrog's published scoring algorithms). Updates to Leapfrog Hospital Survey data that are submitted after the Data Snapshot Date will **not** be included in the current Leapfrog Hospital Safety Grade. Hospitals submitting a Leapfrog Hospital Survey are urged to take advantage of the opportunity to review their Survey Results for accuracy and completeness prior to each of the two published Data Snapshot Dates.

HOW HOSPITALS CAN REVIEW LEAPFROG HOSPITAL SURVEY RESULTS PRIOR TO THE DATA SNAPSHOT DATE

The Leapfrog Hospital Survey is open from April 1 to November 30 of each year. Following the Submission Deadline (June 30), Survey Results are published monthly on a secure 'Hospital Details' page and a public website (ratings.leapfroggroup.org). Hospitals are urged to review their Survey Results immediately. Hospitals that identify any reporting errors are instructed to log back into the Survey to submit a correction. Hospitals can correct and re-submit a previously submitted Survey until the Survey closes for the year. Note that corrections submitted after the Data Snapshot Date are not included in the current Leapfrog Hospital Safety Grade. Leapfrog has several automated processes in place to prevent hospitals from making data entry errors in the Online Survey Tool and to enhance the overall accuracy of the Survey Results. Learn more at http://www.leapfroggroup.org/survey-materials/data-accuracy.

DATA FROM THE CENTERS FOR MEDICARE & MEDICAID SERVICES (CMS)

During the Safety Grade Review Period (February 21 – March 12), Leapfrog will only make corrections to a hospital's data from CMS if the correction is issued by CMS and posted on either the Data.Medicare.Gov website or the Data.CMS.Gov website. If a hospital has identified an error with a measure score published by CMS, and CMS cannot post a correction within the review period, the measure score will not be used in calculating the hospital's Safety Grade, provided that the hospital can document that CMS has agreed to publicly issue a correction or remove the measure score from public reporting. Hospitals participating with CMS are urged to take advantage of the opportunity to participate in the CMS 30-day review periods.

CMS FOOTNOTE 23 POLICY

Leapfrog will notify hospitals that have CMS footnote 23 present for one or more claims-based measure scores (e.g., DRA HAC Rate, PSI 4 rate, or PSI 90 rate) at the start of the Courtesy Review Period. Footnote 23 indicates that "The data are based on claims that the hospital or facility submitted to CMS. The hospital or facility has reported discrepancies in their claims data." Hospital CEOs can request that Leapfrog use the measure score that is accompanied by the footnote. Written requests must be received prior to the close of the Safety Grade Review Period. If written requests are not received by the close of the Review Period, the measure will not be used to calculate the Hospital Safety Grade.

For hospitals that submit a Leapfrog Hospital Survey by the Data Snapshot Date, the CEO, Primary Survey Contact, and Secondary Survey Contact will be notified at the email addresses included in the Hospital's Survey Profile. For hospitals that do not submit a Leapfrog Hospital Survey by the Data Snapshot Date, the CEO will be contacted by certified letter.

HOW HOSPITALS CAN REVIEW CMS DATA PRIOR TO THE DATA SNAPSHOT DATE

CMS administers several hospital-based reporting and payment programs including the Inpatient Quality Reporting Program, HAC Reduction 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. CMS provides hospitals with a 30-day preview period before publishing measure scores on the Data.Medicare.Gov website and the Data.CMS.Gov website. More information is available at https://qualitynet.org.

LEAPFROG HOSPITAL SAFETY GRADE

HOW TO PARTICIPATE IN THE LEAPFROG HOSPITAL SURVEY

If a hospital did **not** complete a 2022 Leapfrog Hospital Survey by November 30, Survey Results were not used to calculate the spring 2023 Leapfrog Hospital Safety Grade. Hospitals that would like Survey Results included in the fall 2023 Hospital Safety Grade must submit a 2023 Leapfrog Hospital Survey (including the CPOE Evaluation) by June 30, 2023. Hospitals will be able to review their publicly reported Survey Results in July and respond to any issues identified by Leapfrog's Extensive Monthly Data Verification before the Data Snapshot Date for the fall 2023 Safety Grade of August 31. More information is available at https://leapfroggroup.org/survey.

LEAPFROG HELP DESK

If you have any questions regarding the scoring methodology, please contact the Help Desk at https://leapfroghelpdesk.zendesk.com.