

SUMMARY OF THE LEAPFROG HOSPITAL SAFETY GRADE SCORING METHODOLOGY CHANGES & RESPONSES TO PUBLIC COMMENTS

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The Leapfrog Group's team of researchers, including researchers at the Armstrong Institute for Patient Safety and Quality at Johns Hopkins Medicine and the Hospital Safety Grade [national expert panel](#), continuously review the measures, scoring, and weights that comprise the [Hospital Safety Grade](#) composite score.

In April 2018, Leapfrog published a set of planned changes to the Hospital Safety Grade scoring methodology effective with the Fall 2018 grades, and requested comments from key stakeholder groups, including patients, hospitals, purchasers, and payers on these planned changes. The Leapfrog Group's team of researchers reviewed the comments and have included responses below. The final changes to the Hospital Safety Grade Scoring Methodology are summarized in Appendix I.

We offer our sincere gratitude to all commenters for their time and thought they gave to these planned changes.

The Fall 2018 Hospital Safety Grades will be issued in October 2018.

RESPONSES TO PUBLIC COMMENTS

Comments to the planned changes to the Leapfrog Hospital Safety Grade scoring methodology were submitted from health care organizations, as well as health care experts, patient advocates, and purchasers.

Responses to the public comments are organized by the topic. If you submitted a comment, and do not see a response, or if you have additional questions, please contact the Help Desk at helpdesk@leapfroggroup.org.

Overall

Some commenters expressed concern that the planned changes to Hospital Safety Grade scoring methodology will adversely impact hospitals that choose not to participate in the Leapfrog Hospital Survey, therefore the scores will not be a true comparison of hospitals across the nation.

As was described in the [planned changes](#), these scoring changes are being made to better reflect the level of detail that we can get from each data source about a hospital's efforts in these two key safety areas. For both CPOE and BCMA, the level of detail we get about a hospital's efforts from the Leapfrog Hospital Survey is substantially greater than what we can ascertain about a hospital's efforts from the AHA HIT Survey. This scoring adjustment will actually provide patients with more comprehensive information about critical aspects of a hospital's safety program. The [Leapfrog Hospital Survey](#) is free and open to every U.S. hospital.

A commenter expressed concern that reducing the number of points a hospital receives based solely on the data source the hospital choose to use is not ethical.

Leapfrog's goal with the Hospital Safety Grade is to share with patients and purchasers what we know about a hospital's efforts and outcomes in patient safety. Leapfrog prioritizes the data sources used based on the level of detail that can be obtained from each data source about a hospital's efforts and outcomes. The scoring adjustment will actually provide patients with more comprehensive information about critical aspects of a hospital's safety program.

Some commenters expressed concern that not all hospitals have the resources to complete the Leapfrog Hospital Survey, especially small hospitals with limited staff in the Quality department.

Approximately half the hospitals in the United States (2,000) compete the Leapfrog Hospital Survey each year. A substantial number of participating hospitals are smaller and rural. Hospitals only complete those sections of the Leapfrog Hospital Survey that apply to their hospital (i.e., if the hospital does not operate an ICU, it can skip the questions related to ICU Physician Staffing). Many hospitals have shared that while the first year of completing the Survey can take 40-80 person hours, depending on how many sections of the survey the hospital needs to complete, once processes and reports have been developed, completion of the Survey in future years is less labor intensive. The [Leapfrog Hospital Survey](#) is free and open to every U.S. hospital.

Some commenters suggested perhaps Leapfrog consider an alternative scoring method for hospitals that opt not to participate in the Leapfrog Hospital Survey.

The Hospital Safety Grade national expert panel is committed to scoring hospitals in a consistent and fair way, regardless of whether the hospital completes a Leapfrog Hospital Survey. The scoring changes being made preserve an alternative scoring method for hospitals that decline to participate in the

Leapfrog Hospital Survey, but better reflect the level of detail that we can get from each data source about a hospital's efforts in these two key safety areas. The scoring adjustments will actually provide patients with more comprehensive information about what we know about critical aspects of a hospital's safety program.

A commenter expressed concern that the Hospital Safety Grade methodology is not publically available, so patients are not aware that Leapfrog Survey-participating hospitals receive a scoring preference.

The [Hospital Safety Grade methodology](#) has always been publicly available. There is no scoring preference for any group of hospitals. Data sources and reporting periods used for each measure are published in the "full details" when viewing each hospital's grade. We will further review our website to ensure that the methodology document, data sources, and other important information regarding scoring is accessible to all website users.

Some commenters suggested that the CPOE and BCMA metric weights in the overall grade need to be evaluated further to understand the relative importance with respect to other safety metrics.

For each cycle of the Hospital Safety Grade, Leapfrog reviews the relative weights that are assigned to each measure within each of the two domains. The relative weights assigned to each measure are a function of the evidence linking the measure to the harm itself, the opportunity for hospital improvement, and the impact the harm has on patients. This process will be repeated for the Fall 2018 grades, including CPOE and BCMA. A complete description of the weighting methodology is available on our [website](#).

Computerized Prescriber Order Entry (CPOE)

Some commenters expressed appreciation that Leapfrog changed the scoring of CPOE, as the previous scoring allowed hospitals that did not test their CPOE system with the CPOE Evaluation Tool to potentially score more points for the measure than those who elected to test their system.

For CPOE, the level of detail we get about a hospital's use and safety of their system from the Leapfrog Hospital Survey is substantially greater than what we can ascertain from any other public data source. Thus this scoring adjustment actually provides patients with more comprehensive information about what we know about critical aspects of a hospital's safety program.

Bar Code Medication Administration (BCMA)

Some commenters suggested that the Leapfrog Group look to certify EHRs (e.g., Epic) for BCMA so that hospitals get credit without doing the tests.

Leapfrog's BCMA standard has four components described below, but there is no test as there is for CPOE systems. From the brief comment offered, it is not clear how certifying an EHR vendor for BCMA would reduce the burden for hospitals in reporting on the BCMA standard. The decision support component of Leapfrog's BCMA standard is the only component that would be linked to the EHR the hospital uses. And even then, many hospitals have chosen to create customized decision support functions. The other three components of the BCMA standard relate to which units are using BCMA,

compliance with scanning prior to administration, and processes and structures that hospitals have in place to understand workarounds. These are all independent of the EHR chosen.

Some commenters suggested Leapfrog develop a simulation to test hospital's BCMA systems. Leapfrog is interested in this idea and will explore the feasibility of such a simulation.

Appendix I: Hospital Safety Grade Methodology Changes, Effective with Fall 2018 Grades

1. Changes to the scoring for Computerized Physician Order Entry (CPOE)

The Leapfrog Hospital Safety Grade's process/structural measure domain includes a measure of hospital implementation and effective use of Computerized Physician Order Entry (CPOE) in inpatient units. Studies have suggested that the implementation of CPOE presents significant opportunities to reduce medication errors, the most common type of error made in hospitals.

The Leapfrog Hospital Safety Grade Expert Panel continues to recommend using the Leapfrog Hospital Survey as the primary data source for this measure because it is the most comprehensive data source available for information about hospitals' implementation and effective use of CPOE. The CPOE standard included on the Leapfrog Hospital Survey includes two criteria:

Criteria 1: At least 85% of inpatient medication orders must be entered through a CPOE system

Criteria 2: The hospital must participate in a simulation to test the ability of their CPOE system to alert prescribers to at least 60% of serious, sometimes fatal medication ordering errors.





The Leapfrog Hospital Safety Grade uses the American Hospital Association's (AHA) HIT Supplement as the secondary data source for the CPOE measure. The AHA HIT Supplement provides some information on a hospital's implementation of CPOE (Criteria #1 above), but provides no information on the ability of the CPOE system to alert prescribers to serious, sometimes fatal medication ordering errors (Criteria #2 above). Therefore, the secondary source offers information on the implementation of CPOE, but not the efficacy of the alert system. Table 1 below outlines the differences between the information obtained from the primary and secondary data sources for CPOE

Table 1: Information Available from Primary and Secondary Data Sources for CPOE

Hospital Meets National CPOE Standard?	Primary Data Source: Leapfrog Hospital Survey	Secondary Data Source: AHA HIT Supplement
Criteria 1: At least 85% of inpatient medication orders must be entered through a CPOE system	X	X
Criteria 2: The CPOE system is tested to demonstrate it alerts prescribers to serious medication ordering errors	X	

A panel of medication safety experts and other researchers annually review hospital performance on this measure on the Leapfrog Hospital Survey. These experts recommended that a more intense focus should be placed on the ability of a hospital's CPOE system to alert physicians to errors, and thus recommended that a greater weight be placed on the CPOE test results for the purposes of scoring the measure on the Leapfrog Hospital Survey. The Leapfrog Hospital Survey scoring algorithm was updated in 2018 to reflect this change. Leapfrog will align the scoring for CPOE between the Leapfrog Hospital Survey and Leapfrog Hospital Safety Grade. See Table 2 below for new scoring details.

Table 2: New CPOE Scoring for the Fall 2018 Leapfrog Hospital Safety Grade

Primary Data Source: Leapfrog Hospital Survey		Secondary Data Source: AHA HIT Supplement	
Score on the Leapfrog Hospital Survey	Points assigned for the Leapfrog Hospital Safety Grade	Hospital Response from the AHA HIT Supplement	Points assigned for the Leapfrog Hospital Safety Grade
Fully Meets Standard 	100 points	Fully implemented across all units	45 points*
Substantial Progress 	70 points	Partially implemented*	15 points*
Some Progress 	40 points	Not implemented	5 points
Willing to Report 	15 points		

2. Adding a Measure of Bar Code Medication Administration (BCMA) to Process/Structural Domain

Leapfrog will add a measure of a hospital’s use of Bar Code Medication Administration (BCMA) to the process/structural domain of the Hospital Safety Grade. Studies have suggested that the use of BCMA for the administration of medications at the bedside can reduce medication errors when implemented correctly. The Leapfrog Hospital Safety Grade expert panel recommended that the Leapfrog Hospital Survey be used as the primary data source for the BCMA measure, as it is the most comprehensive data source available for information about this safety construct.

The Leapfrog Hospital Survey measure of Bar Code Medication Administration includes four criteria:

- Criteria 1: A bar code medication administration system integrated with an electronic medication administration record must be used at the bedside in 100% of medical surgical units, intensive care units, and labor and delivery units.
- Criteria 2: The system must include seven clinical decision support functions.
- Criteria 3: The hospital must ensure that at least 95% of the time both the patient and the medication are scanned prior to medication administration.
- Criteria 4: The hospital must ensure they have at least six out of eight evidence-based processes and protocols in place to prevent workarounds.

For greater detail on Leapfrog’s BCMA standard, please see [The Leapfrog Hospital Survey](#).

The Hospital Safety Grade expert panel recommended using the AHA IT Supplement as the secondary




data source. The AHA IT Supplement provides information about the implementation of BCMA across all units (Criteria 1 above), but provides limited to no information about decision support (Criteria 2 above), scanning compliance (Criteria 3 above), or work around prevention (Criteria 4 above). Table 3 below outlines the differences between the information obtained from primary and secondary data sources for BCMA:


Table 3: Information Available from Primary and Secondary Data Sources for BCMA

Hospital Meets National BCMA Standard?	Primary Data Source: Leapfrog Hospital Survey	Secondary Data Source: AHA HIT Supplement
Criteria 1: A bar code medication administration system integrated with an electronic medication administration record must be used at the bedside in 100% of medical surgical units, intensive care units, and labor and delivery units	X	X
Criteria 2: The system must include seven clinical decision support functions	X	
Criteria 3: The hospital must ensure that at least 95% of the time both the patient and the medication are scanned prior to medication administration	X	
Criteria 4: The hospital must ensure they have at least six out of eight evidence-based processes and protocols in place to prevent workarounds	X	

For the purposes of the Leapfrog Hospital Safety Grade, Leapfrog will score BCMA as described in Table 4 below:

Table 4: BCMA scoring for the Fall 2018 Leapfrog Hospital Safety Grade

Primary Data Source: Leapfrog Hospital Survey		Secondary Data Source: AHA HIT Supplement	
Score on the Leapfrog Hospital Survey	Points assigned for the Leapfrog Hospital Safety Grade	Hospital Response from the AHA HIT Supplement	Points assigned for the Leapfrog Hospital Safety Grade
Fully Meets Standard 	100 points	Fully implemented across all units	45 points*
Substantial Progress 	75 points	Partially Implemented*	15 points*
Some Progress 	50 points		

Willing to Report 	25 points
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Not implemented	5 points
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*Due to changes in the available response options on the 2017 AHA Annual Survey Information Technology Supplement, Leapfrog has updated the scoring for CPOE and BCMA on pages 6 and 7 of this document. Previously, the AHA Annual Survey Information Technology Supplement included the following two response options: “Implemented in at least one unit” and “Beginning to implement.” The original points assigned to “Implemented in at least one unit” were 10 points and the points assigned to “Beginning to implement” were 5 points. These two response options are not available on the 2017 AHA Annual Survey Information Technology Supplement. Instead they have been replaced with “Partially implemented.” Therefore, Leapfrog has evaluated the updated data set and assigned updated values to all three response options for both CPOE and BCMA.