Planned Updates to the Leapfrog Hospital Safety Grade Methodology: Request for Public Comment

Leapfrog is planning two changes to the Leapfrog Hospital Safety Grade methodology for the Fall 2018 grade update. These changes are the result of internal expert review, stakeholder feedback, and consultation with the Leapfrog Hospital Safety Grade Expert Panel. As a final step in implementing the new methodology, Leapfrog requests public comment. Stakeholders may submit comments at https://leapfrogscore.zendesk.com until 5:00 PM ET on May 22, 2018. When submitting a comment, please select "Public Comment" from the drop-down menu.

The methodology changes include:

1. Changes to the scoring for Computerized Physician Order Entry (CPOE)
2. Addition of a measure on Bar Code Medication Administration (BCMA)

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

The Leapfrog Hospital Safety Grade's process/structural measure domain includes a key measure of safety: the 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 found that while implementation of CPOE systems has expanded significantly among hospitals across the country, the ability of CPOE systems to alert physicians and other prescribers to serious, sometimes fatal medication ordering errors has not improved as dramatically. For example, results from the simulation included on the Leapfrog Hospital Survey indicate that physicians are not alerted when entering a "fatal order" (i.e., a medication order that, if given to a patient, would result in death) at least 15% of the time. Leapfrog's experts felt that a

more intense focus should be placed on the ability of a hospital's CPOE system to alert physicians to these 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 plans to 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	35 points
Substantial Progress	70 points	Implemented in at least one unit	10 points
Some Progress	40 points	Beginning to implement	5 points
Willing to Report	15 points	All other responses	5 points

2. Addition of a Measure on Bar Code Medication Administration (BCMA)

Leapfrog plans to add a measure of a hospital's use of Bar Code Medication Administration (BCMA) to the Leapfrog 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:
- Wrong patient
- Wrong medication
- Wrong dose
- Wrong time (e.g., early/late warning; warning that medication cannot be administered twice within a given window of time)
- Vital sign check
- Patient-specific allergy check
- Second nurse check needed

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:
- Has a formal committee that meets routinely to review data reports on BCMA system use
- Has backup systems for hardware failures
- Has a help desk that provides timely responses to urgent BCMA issues in real-time
- Conducts real-time observations of users at the unit level using the BCMA system
- Engages nursing leadership at the unit level on BCMA use
- In the past 12 months, used the data and information to implement quality improvement projects that have focused on improving the hospital's BCMA performance OR in the past 12 months, used the data and information to monitor a previously implemented quality improvement project focused on improving the hospital's BCMA performance
- In the past 12 months, evaluated the results of the quality improvement projects and demonstrated that these projects have resulted in higher adherence to the hospital's standard medication administration process OR in the past 12 months, evaluated the results of the quality improvement projects and demonstrated continued adherence to the hospital's standard medication administration process
- Communicated back to end users the resolution of any system deficiencies and/or problems that may have contributed to the workarounds

The Expert Panel recommends 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 plans to score BCMA as described in Table 4 below:

Table 4: Proposed Scoring for BCMA 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	35 points
Substantial Progress	75 points	Implemented in at least one unit	10 points
Some Progress	50 points	Beginning to implement	5 points
Willing to Report	25 points	All other responses	5 points

Leapfrog requests public comment on these changes. Stakeholders may submit comments until 5:00 PM ET on May 22, 2018.

To submit a public comment:
1. **Visit https://leapfrogscore.zendesk.com**
2. **Click on "Submit a Request" on the top right-hand corner of the webpage**
3. **Complete the online form and include your public comments in the "description field"**
4. **Select "public comment" from the issues drop down list and then click "submit"**

Leapfrog will publish a Summary of Changes document for the Fall 2018 Hospital Safety Grade at the beginning of June. The data snapshot date for the Fall 2018 Hospital Safety Grade is August 31. More information can be found at http://www.hospitalsafetygrade.org/for-hospitals/updates-and-timelines-for-hospitals.