

### Leapfrog Hospital Recognition Program: 2010 Scoring Methodology

Please review the [Scoring Overview](#) for an explanation of the Leapfrog Hospital Recognition Program, the measure set, and inclusion/exclusion criteria related to measure scoring. The [Reference Measure Charts](#) provide a comprehensive picture of all included measures and their corresponding weights. Or, click on the links below to view the scoring specifications for each measure:

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## Scoring Overview

The LHRP Scoring Methodology utilizes the individual elements of the Leapfrog Hospital Survey, the data platform for the Recognition Program, to produce a single score that represents overall hospital performance. The elements of the Leapfrog Hospital Survey include several clinical areas that are composed of individual structural and process measures. These measures are categorized as either Quality or Resource Utilization measures and contain varying corresponding score weights.

The Recognition Program calculates an overall Efficiency Score to determine a hospital's level of performance. The Efficiency Score is determined by a hospital's Quality and Resource Use scores. Quality measures represent 65% of the total Efficiency Score and Resource Use measures represent 35% of the total Efficiency Score.

### Determining Measure Scores

Each measure of the Leapfrog Hospital Survey has been converted to a zero-100 scale so they can be combined into overall scores. Zero always denotes poor performance and 100 always denotes excellent performance. Leapfrog developed methods to convert each Survey measure to the zero-100 scale. As described below, the method varies depending on whether the measure is "categorical" or "continuous."

#### ***Categorical Measures***

A categorical measure is one where the root measure is one of the Survey scoring categories: "fully meets standards," "substantial progress," "some progress," "willing to report," and "did not report." These categories are already used by Leapfrog to determine the bars displayed on our public reporting website, [www.leapfroggroup.org/cp](http://www.leapfroggroup.org/cp). For the LHRP Scoring Methodology, however, Leapfrog had to convert these measures into numerical values so that measure scoring is consistent.

The categorical measures are scored in two ways—using pre-determined scores for each category or scores based on peer comparisons.

1. The pre-determined scores were assigned to each category by Leapfrog's stakeholder Steering Committee. CPOE is an example of a categorical measure (a hospital "fully meets standards," "substantial progress," etc.) that uses pre-determined scores (the Committee deemed "fully meets standards" to have a score of 100, "substantial progress" to have a score of 50, etc.).
2. The peer comparison scores were determined using all hospitals' Survey data for a particular measure. In the method, an individual hospital's score represents the percentage of other hospitals that the individual hospital scored equal to or better than. CABG Quality is an example of a categorical measure (a hospital "fully meets standards," "substantial progress," etc.) that uses peer comparison scores ("fully meets standards"

has a score of 100, “substantial progress” has a score of 59, etc.). In essence, these types of measures show a hospital’s performance as a numerical percentage compared to its peers. For example, a hospital with CABG Quality results of “substantial progress” receives a score of 59 for this measure, which means that 59% of hospitals nationwide have achieved this benchmark level or worse and 41% of hospitals are performing better than this benchmark.

### ***Continuous Measures***

A continuous measure is quantitative and is measured through a counting process, or an interval continuum. For these measures, Leapfrog takes the values produced by all Survey-reporting hospitals and then determines the cut-off points for the top decile and the bottom decile. Hospitals in the bottom decile receive a score of zero and hospitals in the top decile receive a score of 100 for that particular measure. For hospitals that fall in between the top and bottom deciles, Leapfrog applies the following calculation:

$$100 \times (\text{hospital's score} - \text{the bottom decile score}) / (\text{top decile score} - \text{bottom decile score})$$

Pressure Ulcer Incidence Rate is an example of a continuous measure. Hospitals’ scores for this measure may fall anywhere along a continuum (i.e., 0.02, 1.27, 2.01, etc.). To compare hospitals’ scores in a consistent manner, Leapfrog ranks hospitals’ data values using deciles and cut-point benchmarks for the top and bottom deciles. For Pressure Ulcer Incidence Rate, data results of 0.05 or lower represent the top decile (for a point value of 100) and data results of 1.51 or higher represent the bottom decile (for a point value of 0). Hospitals with data results in between the 0.05 and 1.51 cut-point benchmarks are ranked in the deciles between the top and the bottom. To determine which decile a hospital ranks, Leapfrog uses the formula above.

### ***“Not Applicable” Results***

In the LHRP Scoring Methodology, hospitals are not penalized if they do not perform certain procedures or are not applicable for certain clinical conditions, indicated by “N/A” on the Leapfrog Hospital Survey. In this scenario, when hospitals are not applicable for a measure, the score for that measure is deducted from both the numerator and denominator of the overall score. This process allows hospitals to only be scored based on the procedures and clinical areas for which they are applicable. As a result, the remainder of hospitals’ applicable measures will receive slightly higher weights, because the weights from the non-applicable measures are allocated across the applicable measures.

### ***“Did Not Report” Results***

Hospitals that are applicable for certain procedures and clinical areas but neglect to submit measure data to the Leapfrog Hospital Survey are classified as “did not report.” Leapfrog scores “did not report” with a zero in this methodology in order to be consistent with our goal of advancing transparency. A zero-score for “did not report” will negatively affect hospitals’ overall scores.

### ***“Response Not Required” Results***

Hospitals that are applicable for certain procedures and clinical areas but elect to not submit measure data to the Leapfrog Hospital Survey because the “response is not required” receive a zero score. Leapfrog scores “response not required” with a zero in this methodology in order to be consistent with our goal of advancing transparency.

### ***Please Note:***

*You can use the methodologies described in this document and the data you submitted to the 2010 Leapfrog Hospital Survey to manually calculate your hospital’s LHRP score for each measure. Leapfrog’s Hospital Recognition Program Standard and Custom Reports also include this information and are available for purchase; visit [www.leapfroggroup.org/lhrpreports](http://www.leapfroggroup.org/lhrpreports) for more information.*

## **Quality Measure Explanations**

### **CPOE**

Computer Physician Order Entry (CPOE) is one of Leapfrog’s “leaps” and measures hospitals’ progress toward implementing a CPOE system, which has been proven to reduce errors and therefore mortalities. CPOE is a [categorical measure](#) in the Survey—hospitals received either “fully meets standard,” “substantial progress,” “some progress,” “willing to report,” or “did not report” based on their reported data.

Leapfrog’s expert Steering Committee determined the score for each level of achievement:

- Fully meets standard receives a score of 100
- Substantial progress receives a score of 50
- Some progress receives a score of 15
- Willing to report receives a score of 5
- Did not report receives a score of 0

CPOE is a quality measure and receives a weight of 15% of the total Quality Score. The LHRP Scoring Methodology multiplies a hospital’s score (from above) by 15% and adds this calculation to the remaining quality measure scores to derive the overall Quality Score. Note that this standard weight may differ if your hospital is [not applicable](#) for other Quality measures.

### **IPS**

Intensivist Physician Staffing (IPS) is one of Leapfrog’s “leaps” and measures hospitals’ intensivist coverage, which significantly reduces mortality rates when implemented. IPS is a [categorical measure](#) in the Survey—hospitals received either “fully meets standards,” “substantial progress,” “some progress,” “willing to report,” or “did not report” based on their reported data.

Leapfrog’s expert Steering Committee determined the score for each level of achievement:

- Fully meets standards receives a score of 100

- Substantial progress receives a score of 50
- Some progress receives a score of 15
- Willing to report receives a score of 5
- Did not report receives a score of 0

IPS is a quality measure and receives a weight of 15% of the total Quality Score. The LHRP Scoring Methodology multiplies a hospital's score (from above) by 15% and adds this calculation to the remaining quality measure scores to derive the overall Quality Score. Note that this standard weight may differ if your hospital is [not applicable](#) for other Quality measures.

### **Evidence-Based Hospital Referrals (EBHR)**

Evidence-Based Hospital Referrals are also known as high-risk surgeries in the Leapfrog Hospital Survey and accounts for 25% of the Quality Score. Leapfrog classifies this measure as a major "leap" because studies show that hospitals that perform these procedures in high volumes are more likely to have lower mortality rates. This area of the Survey collects data for eight high-risk surgeries and procedures to evaluate hospital performance. Each procedure is classified as either a [categorical](#) or [continuous](#) measure and receives its own scoring weight.

### **CABG Quality**

CABG Quality is a [categorical measure](#)—hospitals received either "fully meets standards," "substantial progress," "some progress," "willing to report," or "did not report" based on their reported data.

Leapfrog applied the [peer comparison group methodology](#) for this categorical measure. The following scores correlate to each category:

- Fully meets standards receives a score of 100 (this means that hospitals with "fully meets standards" for this measure did as well or better than 100% of all hospitals)
- Substantial progress receives a score of 59 (this means that hospitals with "substantial progress" for this measure did as well or better than 59% of all hospitals)
- Some progress receives a score of 51 (this means that hospitals with "some progress" for this measure did as well or better than 51% of all hospitals)
- Willing to report receives a score of 20 (this means that hospitals with "willing to report" for this measure did as well or better than 20% of all hospitals)
- Did not report receives a score of 0

CABG Quality receives a weight of 4.03% of the total Quality Score. The LHRP Scoring Methodology multiplies a hospital's score (from above) by 4.03% and adds this calculation to the remaining quality measure scores to derive the overall Quality Score. Note that this standard weight may differ if your hospital is [not applicable](#) for other Quality measures.

### **PCI Quality**

PCI Quality is a [categorical measure](#)—hospitals received either “fully meets standards,” “substantial progress,” “some progress,” “willing to report,” or “did not report” based on their reported data.

Leapfrog applied the [peer comparison group methodology](#) for this categorical measure. The following scores correlate to each category:

- Fully meets standards receives a score of 100 (this means that hospitals with “fully meets standards” for this measure did as well or better than 100% of all hospitals)
- Substantial progress receives a score of 66 (this means that hospitals with “substantial progress” for this measure did as well or better than 66% of all hospitals)
- Some progress receives a score of 37 (this means that hospitals with “some progress” for this measure did as well or better than 37% of all hospitals)
- Willing to report receives a score of 7 (this means that hospitals with “willing to report” for this measure did as well or better than 7% of all hospitals)
- Did not report receives a score of 0

PCI Quality is a quality measure and receives a weight of 4.03% of the total Quality Score. The LHRP Scoring Methodology multiplies a hospital’s score (from above) by 4.03% and adds this calculation to the remaining quality measure scores to derive the overall Quality Score. Note that this standard weight may differ if your hospital is [not applicable](#) for other Quality measures.

### **AVR Quality**

AVR Quality is a [categorical measure](#)—hospitals received either “fully meets standards,” “substantial progress,” “some progress,” “willing to report,” or “did not report” based on their reported data.

Leapfrog applied the [peer comparison group methodology](#) for this categorical measure. The following scores correlate to each category:

- Fully meets standards receives a score of 100 (this means that hospitals with “fully meets standards” for this measure did as well or better than 100% of all hospitals)
- Substantial progress receives a score of 89 (this means that hospitals with “substantial progress” for this measure did as well or better than 89% of all hospitals)
- Some progress receives a score of 34 (this means that hospitals with “some progress” for this measure did as well or better than 34% of all hospitals)
- Willing to report receives a score of 25 (this means that hospitals with “willing to report” for this measure did as well or better than 25% of all hospitals)
- Did not report receives a score of 0

AVR Quality is a quality measure and receives a weight of 2.42% of the total Quality Score. The LHRP Scoring Methodology multiplies a hospital’s score (from above) by 2.42% and adds this calculation to the remaining quality measure scores to derive the overall Quality Score. Note

that this standard weight may differ if your hospital is [not applicable](#) for other Quality measures.

### **AAA Quality**

AAA Quality is a [categorical measure](#)—hospitals received either “fully meets standards,” “substantial progress,” “some progress,” “willing to report,” or “did not report” based on their reported data.

Leapfrog applied the [peer comparison group methodology](#) for this categorical measure. The following scores correlate to each category:

- Fully meets standards receives a score of 100 (this means that hospitals with “fully meets standards” for this measure did as well or better than 100% of all hospitals)
- Substantial progress receives a score of 65 (this means that hospitals with “substantial progress” for this measure did as well or better than 65% of all hospitals)
- Some progress receives a score of 38 (this means that hospitals with “some progress” for this measure did as well or better than 38% of all hospitals)
- Willing to report receives a score of 18 (this means that hospitals with “willing to report” for this measure did as well or better than 18% of all hospitals)
- Did not report receives a score of 0

AAA Quality is a quality measure and receives a weight of 4.03% of the total Quality Score. The LHRP Scoring Methodology multiplies a hospital’s score (from above) by 4.03% and adds this calculation to the remaining quality measure scores to derive the overall Quality Score. Note that this standard weight may differ if your hospital is [not applicable](#) for other Quality measures.

### **Pancreatectomy Quality**

Pancreatectomy Quality is a [categorical measure](#)—hospitals received either “fully meets standards,” “substantial progress,” “some progress,” “willing to report,” or “did not report” based on their reported data.

Leapfrog applied the [peer comparison group methodology](#) for this categorical measure. The following scores correlate to each category:

- Fully meets standards receives a score of 100 (this means that hospitals with “fully meets standards” for this measure did as well or better than 100% of all hospitals)
- Substantial progress receives a score of 67 (this means that hospitals with “substantial progress” for this measure did as well or better than 67% of all hospitals)
- Some progress receives a score of 51 (this means that hospitals with “some progress” for this measure did as well or better than 51% of all hospitals)
- Willing to report receives a score of 24 (this means that hospitals with “willing to report” for this measure did as well or better than 24% of all hospitals)
- Did not report receives a score of 0

Pancreatectomy Quality receives a weight of 2.42% of the total Quality Score. The LHRP Scoring Methodology multiplies a hospital's score (from above) by 2.42% and adds this calculation to the remaining quality measure scores to derive the overall Quality Score. Note that this standard weight may differ if your hospital is [not applicable](#) for other Quality measures.

### ***Esophagectomy Quality***

Esophagectomy Quality is a [categorical measure](#)—hospitals received either “fully meets standards,” “substantial progress,” “some progress,” “willing to report,” or “did not report” based on their reported data.

Leapfrog applied the [peer comparison group methodology](#) for this categorical measure. The following scores correlate to each category:

- Fully meets standards receives a score of 100 (this means that hospitals with “fully meets standards” for this measure did as well or better than 100% of all hospitals)
- Substantial progress receives a score of 69 (this means that hospitals with “substantial progress” for this measure did as well or better than 69% of all hospitals)
- Some progress receives a score of 46 (this means that hospitals with “some progress” for this measure did as well or better than 46% of all hospitals)
- Willing to report receives a score of 33 (this means that hospitals with “willing to report” for this measure did as well or better than 33% of all hospitals)
- Did not report receives a score of 0

Esophagectomy Quality receives a weight of 1.61% of the total Quality Score. The LHRP Scoring Methodology multiplies a hospital's score (from above) by 1.61% and adds this calculation to the remaining quality measure scores to derive the overall Quality Score. Note that this standard weight may differ if your hospital is [not applicable](#) for other Quality measures.

### ***Bariatric Surgery Quality***

Bariatric Surgery Quality is a [categorical measure](#)—hospitals received either “fully meets standards,” “substantial progress,” “some progress,” “willing to report,” or “did not report.”

Leapfrog applied the [peer comparison group methodology](#) for this categorical measure. The following scores correlate to each category:

- Fully meets standards receives a score of 100 (this means that hospitals with “fully meets standards” for this measure did as well or better than 100% of all hospitals)
- Some progress receives a score of 64 (this means that hospitals with “some progress” for this measure did as well or better than 64% of all hospitals)
- Willing to report receives a score of 42 (this means that hospitals with “willing to report” for this measure did as well or better than 42% of all hospitals)
- Did not report receives a score of 0

Bariatric Surgery Quality is a quality measure and receives a weight of 2.42% of the total Quality Score. The LHRP Scoring Methodology multiplies a hospital's score (from above) by 2.42% and adds this calculation to the remaining quality measure scores to derive the overall Quality

Score. Note that this standard weight may differ if your hospital is [not applicable](#) for other Quality measures.

### **High-Risk Newborn Delivery Quality**

High-Risk Newborn Quality is a [categorical measure](#)—hospitals received either “fully meets standards,” “substantial progress,” “some progress,” “willing to report,” or “did not report.”

Leapfrog applied the [peer comparison group methodology](#) for this categorical measure. The following scores correlate to each category:

- Fully meets standards receives a score of 100 (this means that hospitals with “fully meets standards” for this measure did as well or better than 100% of all hospitals)
- Substantial progress receives a score of 72 (this means that hospitals with “substantial progress” for this measure did as well or better than 72% of all hospitals)
- Some progress receives a score of 51 (this means that hospitals with “some progress” for this measure did as well or better than 51% of all hospitals)
- Willing to report receives a score of 28 (this means that hospitals with “willing to report” for this measure did as well or better than 28% of all hospitals)
- Did not report receives a score of 0

High-Risk Newborn Delivery Quality receives a weight of 4.03% of the total Quality Score. The LHRP Scoring Methodology multiplies a hospital’s score (from above) by 4.03% and adds this calculation to the remaining quality measure scores to derive the overall Quality Score. Note that this standard weight may differ if your hospital is [not applicable](#) for other Quality measures.

### **Common Acute Conditions**

The Common Acute Conditions section of the Leapfrog Hospital Survey includes Acute Myocardial Infarctions (AMI), Pneumonia (PN), and Normal Deliveries measures, which are classified as [continuous measures](#). The Survey collects data for these clinical areas to evaluate hospital quality performance.

### **AMI Quality**

AMI Quality is a continuous measure that depicts hospitals’ level of quality for this procedure.

Leapfrog applied the [continuous measure methodology](#) to derive the decile cut-point levels for this measure. The following scores correlate to each decile:

- A raw data value of 96% or better places a hospital in the top decile; the hospital receives a score of 100
- A raw data value of 39% or worse places a hospital in the bottom decile; the hospital receives a score of zero
- Scores in-between top and bottom deciles are calculated using the following formula:  
 $100 \times (\text{your hospital's score} - \text{bottom decile score}) / (\text{top decile score} - \text{bottom decile score})$
- Did not report receives a score of 0

AMI Quality is a quality measure and receives a weight of 5.67% of the total Quality Score. The LHRP Scoring Methodology multiplies a hospital's score (from above) by 5.67% and adds this calculation to the remaining quality measure scores to derive the overall Quality Score. Note that this standard weight may differ if your hospital is [not applicable](#) for other Quality measures.

### ***Pneumonia Quality***

Pneumonia Quality is a continuous measure that depicts hospitals' level of quality for this procedure.

Leapfrog applied the [continuous measure methodology](#) to derive the decile cut-point levels for this measure. The following scores correlate to each decile:

- A raw data value of 96% or better places a hospital in the top decile; the hospital receives a score of 100
- A raw data value of 54% or worse places a hospital in the bottom decile; the hospital receives a score of zero
- Scores in-between top and bottom deciles are calculated using the following formula:  
 $100 \times (\text{your hospital's score} - \text{bottom decile score}) / (\text{top decile score} - \text{bottom decile score})$
- Did not report receives a score of 0

Pneumonia Quality is a quality measure and receives a weight of 5.67% of the total Quality Score. The LHRP Scoring Methodology multiplies a hospital's score (from above) by 5.67% and adds this calculation to the remaining quality measure scores to derive the overall Quality Score. Note that this standard weight may differ if your hospital is [not applicable](#) for other Quality measures.

### ***Normal Deliveries Quality***

Normal Deliveries Quality is a [categorical measure](#)—hospitals received either “fully meets standards,” “substantial progress,” “some progress,” “willing to report,” or “did not report.”

Leapfrog applied the [peer comparison group methodology](#) for this categorical measure. The following scores correlate to each category:

- Fully meets standards receives a score of 100 (this means that hospitals with “fully meets standards” for this measure did as well or better than 100% of all hospitals)
- Substantial progress receives a score of 68 (this means that hospitals with “substantial progress” for this measure did as well or better than 68% of all hospitals)
- Some progress receives a score of 35 (this means that hospitals with “some progress” for this measure did as well or better than 35% of all hospitals)
- Willing to report receives a score of 23 (this means that hospitals with “willing to report” for this measure did as well or better than 23% of all hospitals)
- Did not report receives a score of 0

Normal Deliveries Quality receives a weight of 5.67% of the total Quality Score. The LHRP Scoring Methodology multiplies a hospital's score (from above) by 5.67% and adds this

calculation to the remaining quality measure scores to derive the overall Quality Score. Note that this standard weight may differ if your hospital is [not applicable](#) for other Quality measures.

### **Managing Serious Errors**

Managing Serious Errors includes Hospital-Acquired Conditions and Leapfrog's Never Events policy.

Hospital-Acquired Conditions include three measures, Pressure Ulcer Incidence Rate, Hospital Injuries Incidence Rate, and Central-Line Associated Bloodstream Infection Rate, which together represent 11% of the Quality Score. The Survey collects data for these measures to evaluate hospital quality performance. Hospital-Acquired Conditions measure scores are also included as part of the Resource Utilization score (see [Resource Utilization](#)).

#### ***Pressure Ulcer Incidence Rate***

Pressure Ulcer Incidence Rate is a continuous measure that depicts hospitals' level of quality for minimizing this hospital-acquired condition.

Leapfrog applied the [continuous measure methodology](#) to derive the decile cut-point levels for this measure. The following scores correlate to each decile:

- Top decile (data results of 0.05 or lower) receives a score of 100
- Bottom decile (data results of 1.51 or higher) receives a score of 0
- Scores in-between top and bottom deciles are calculated using the following formula:  
 $100 \times (\text{your hospital's score} - \text{bottom decile score}) / (\text{top decile score} - \text{bottom decile score})$
- Did not report receives a score of 0

Pressure Ulcer Incidence Rate is a quality measure and receives a weight of 3.67% of the total Quality Score. The LHRP Scoring Methodology multiplies a hospital's score (from above) by 3.67% and adds this calculation to the remaining quality measure scores to derive the overall Quality Score. Note that this standard weight may differ if your hospital is [not applicable](#) for other Quality measures.

#### ***Hospital Injuries Incidence Rate***

Hospital Injuries Incidence Rate is a continuous measure that depicts hospitals' level of quality for minimizing this hospital-acquired condition.

Leapfrog applied the [continuous measure methodology](#) to derive the decile cut-point levels for this measure. The following scores correlate to each decile:

- Top decile (data results of 0.00) receives a score of 100
- Bottom decile (data results of 0.69 or higher) receives a score of 0
- Scores in-between top and bottom deciles are calculated using the following formula:  
 $100 \times (\text{your hospital's score} - \text{bottom decile score}) / (\text{top decile score} - \text{bottom decile score})$
- Did not report receives a score of 0

Hospital Injuries Incidence Rate is a quality measure and receives a weight of 3.67% of the total Quality Score. The LHRP Scoring Methodology multiplies a hospital's score (from above) by 3.67% and adds this calculation to the remaining quality measure scores to derive the overall Quality Score. Note that this standard weight may differ if your hospital is [not applicable](#) for other Quality measures.

### **Central-Line Associated Bloodstream Infection (CLABSI) Rates**

Central-Line Associated Bloodstream Infection Rate is a continuous measure that assesses hospitals' level of performance for minimizing this hospital-acquired condition. The LHRP score is based on the hospital's [Standardized Infection Ratio \(SIR\)](#) for CLABSI.

Leapfrog applied the [continuous measure methodology](#) to derive the decile cut-point levels for this measure. The following scores correlate to each decile:

- Top decile (data results of 0.00 or lower) receives a score of 100. In other words, hospitals must achieve a SIR of zero to score 100 points.
- Bottom decile (data results of 1.86 or higher) receives a score of 0
- Scores in-between top and bottom deciles are calculated using the following formula:  
$$100 \times (\text{your hospital's score} - \text{bottom decile score}) / (\text{top decile score} - \text{bottom decile score})$$
- Did not report receives a score of 0

Central-Line Associated Bloodstream Infection Rates is a quality measure and receives a weight of 3.67% of the total Quality Score. The LHRP Scoring Methodology multiplies a hospital's score (from above) by 3.67% and adds this calculation to the remaining quality measure scores to derive the overall Quality Score. Note that this standard weight may differ if your hospital is [not applicable](#) for other Quality measures.

### **Never Events**

Managing Serious Errors also includes Leapfrog's Never Events policy which focuses on the process of reporting serious errors when they occur in hospitals. Never Events is a [categorical measure](#)—hospitals received either “fully meets standards,” “some progress,” “willing to report,” or “did not report”—and represents 4% of the Quality Score.

Leapfrog's expert Steering Committee determined the score for each level of achievement:

- Fully meets standards receives a score of 100
- Willing to report receives a score of 20
- Did not report receives a score of 0

Never Events is a quality measure and receives a weight of 4% of the total Quality Score. The LHRP Scoring Methodology multiplies a hospital's score (from above) by 4% and adds this calculation to the remaining quality measure scores to derive the overall Quality Score. Note that this standard weight may differ if your hospital is [not applicable](#) for other Quality measures.

## Safe Practices

Safe Practices is a continuous measure and one of Leapfrog's "leaps" and measures hospitals' progress in patient safety efforts. The Leapfrog Hospital Survey contains 17 Safe Practices measures, which are classified as quality measures in the LHRP Scoring Methodology.

Leapfrog applied the [continuous measure methodology](#) to derive the decile cut-point levels for this measure. The maximum possible value for Safe Practices is 737 points across the 17 measures. The following scores correlate to each decile:

- Hospitals receiving 737 points are considered top performers for this measure and receive a score of 100.
- Hospitals receiving 357 points or lower are considered the bottom decile for this measure and receive a score of 0.
- Scores in-between top and bottom deciles are calculated using the following formula:  
 $100 \times (\text{your hospital's score} - \text{bottom decile score}) / (737 - \text{bottom decile score})$
- Did not report receives a score of 0

Safe Practices is a quality measure and receives a weight of 13% of the total Quality Score. The LHRP Scoring Methodology multiplies a hospital's score (from above) by 13% and adds this calculation to the remaining quality measure scores to derive the overall Quality Score. Note that this standard weight may differ if your hospital is [not applicable](#) for other Quality measures.

## **Resource Utilization Measure Explanations**

### **Evidence-Based Hospital Referrals**

Evidence-Based Hospital Referrals are also known as high-risk surgeries in the Leapfrog Hospital Survey and represent 42% of the Resource Utilization Score. Leapfrog classifies this measure as a major “leap” because studies show that hospitals that perform these procedures in high volumes are more likely to have lower mortality rates. This area of the Survey collects data for two high-risk surgeries and procedures, CABG Resource Utilization and PCI Resource Utilization, to evaluate resource utilization. Both procedures are classified as [continuous measures](#) and receive comparable scoring weights.

### ***CABG Resource Utilization***

CABG Resource Utilization is a continuous measure that evaluates hospitals’ average length of stay for CABG procedures, which is risk-adjusted and inflated for readmissions within 14 days.

Leapfrog applied the [continuous measure methodology](#) to derive the decile cut-point levels for this measure. The following scores correlate to each decile:

- Top decile (data results of 7.36 or lower) receives a score of 100
- Bottom decile (data results of 11.44 or higher) receives a score of 0
- Scores in-between top and bottom deciles are calculated using the following formula:  
 $100 \times (\text{your hospital's score} - \text{bottom decile score}) / (\text{top decile score} - \text{bottom decile score})$
- Did not report receives a score of 0

CABG Resource Utilization is a resource utilization measure and receives a weight of 21% of the total Resource Utilization Score. The LHRP Scoring Methodology multiplies a hospital’s score (from above) by 21% and adds this calculation to the remaining resource utilization measure scores to derive the overall Resource Utilization Score. Note that this standard weight may differ if your hospital is [not applicable](#) for other Resource Utilization measures.

### ***PCI Resource Utilization***

PCI Resource Utilization is a continuous measure that evaluates hospitals’ average length of stay for PCI procedures, which is risk-adjusted and inflated for readmissions within 14 days.

Leapfrog applied the [continuous measure methodology](#) to derive the decile cut-point levels for this measure. The following scores correlate to each decile:

- Top decile (data results of 1.90 or lower) receives a score of 100
- Bottom decile (data results of 3.54 or higher) receives a score of 0
- Scores in-between top and bottom deciles are calculated using the following formula:  
 $100 \times (\text{your hospital's score} - \text{bottom decile score}) / (\text{top decile score} - \text{bottom decile score})$
- Did not report receives a score of 0

PCI Resource Utilization is a resource utilization measure and receives a weight of 21% of the total Resource Utilization Score. The LHRP Scoring Methodology multiplies a hospital’s score (from above) by 21% and adds this calculation to the remaining resource utilization measure

scores to derive the overall Resource Utilization Score. Note that this standard weight may differ if your hospital is [not applicable](#) for other Resource Utilization measures.

### **Common Acute Conditions**

The Common Acute Conditions section of the Leapfrog Hospital Survey includes both Acute Myocardial Infarctions (AMI) and Pneumonia (PN) resource utilization measures, which are classified as [continuous measures](#) and represent 48% of the Resource Utilization Score. The Survey collects data for both clinical areas to evaluate hospital resource utilization performance.

#### ***AMI Resource Utilization***

AMI Resource Utilization is a continuous measure that evaluates hospitals' average length of stay for AMI procedures, which is risk-adjusted and inflated for readmissions within 14 days.

Leapfrog applied the [continuous measure methodology](#) to derive the decile cut-point levels for this measure. The following scores correlate to each decile:

- Top decile (data results of 2.49 or lower) receives a score of 100
- Bottom decile (data results of 5.37 or higher) receives a score of 0
- Scores in-between top and bottom deciles are calculated using the following formula:  
 $100 \times (\text{your hospital's score} - \text{bottom decile score}) / (\text{top decile score} - \text{bottom decile score})$
- Did not report receives a score of 0

AMI Resource Utilization is a resource utilization measure and receives a weight of 24% of the total Resource Utilization Score. The LHRP Scoring Methodology multiplies a hospital's score (from above) by 24% and adds this calculation to the remaining resource utilization measure scores to derive the overall Resource Utilization Score. Note that this standard weight may differ if your hospital is [not applicable](#) for other Resource Utilization measures.

#### ***Pneumonia Resource Utilization***

Pneumonia Resource Utilization is a continuous measure that evaluates hospitals' average length of stay for pneumonia, which is risk-adjusted and inflated for readmissions within 14 days.

Leapfrog applied the [continuous measure methodology](#) to derive the decile cut-point levels for this measure. The following scores correlate to each decile:

- Top decile (data results of 3.71 or lower) receives a score of 100
- Bottom decile (data results of 6.77 or higher) receives a score of 0
- Scores in-between top and bottom deciles are calculated using the following formula:  
 $100 \times (\text{your hospital's score} - \text{bottom decile score}) / (\text{top decile score} - \text{bottom decile score})$
- Did not report receives a score of 0

Pneumonia Resource Utilization is a resource utilization measure and receives a weight of 24% of the total Resource Utilization Score. The LHRP Scoring Methodology multiplies a hospital's score (from above) by 24% and adds this calculation to the remaining resource utilization

measure scores to derive the overall Resource Utilization Score. Note that this standard weight may differ if your hospital is [not applicable](#) for other Resource Utilization measures.

### **Hospital-Acquired Conditions**

The Hospital-Acquired Conditions section of the Leapfrog Hospital Survey includes three measures: Pressure Ulcer Incidence Rate, Hospital Injuries Incidence Rate, and Central-Line Associated Bloodstream Infection Rate, which are classified as [continuous measures](#) and represent 10% of the Resource Utilization Score. The Survey collects data for all three measures to evaluate hospital resource utilization performance. All three Hospital-Acquired Conditions measure scores are also included as part of the Quality score (see [Quality](#)).

#### ***Pressure Ulcers Incidence Rate***

Pressure Ulcer Incidence Rate is a continuous measure that depicts hospitals' level of resources used to minimize this hospital-acquired condition.

Leapfrog applied the [continuous measure methodology](#) to derive the decile cut-point levels for this measure. The following scores correlate to each decile:

- Top decile (data results of 0.05 or lower) receives a score of 100
- Bottom decile (data results of 1.51 or higher) receives a score of 0
- Scores in-between top and bottom deciles are calculated using the following formula:  
 $100 \times (\text{your hospital's score} - \text{bottom decile score}) / (\text{top decile score} - \text{bottom decile score})$
- Did not report receives a score of 0

Pressure Ulcer Incidence Rate is a resource utilization measure and receives a weight of 3.33% of the total Resource Utilization Score. The LHRP Scoring Methodology multiplies a hospital's score (from above) by 3.33% and adds this calculation to the remaining resource utilization measure scores to derive the overall Resource Utilization Score. Note that this standard weight may differ if your hospital is [not applicable](#) for other Resource Utilization measures.

#### ***Hospital Injuries Incidence Rate***

Hospital Injuries Incidence Rate is a continuous measure that depicts hospitals' level of resources used to minimize this hospital-acquired condition.

Leapfrog applied the [continuous measure methodology](#) to derive the decile cut-point levels for this measure. The following scores correlate to each decile:

- Top decile (data results of 0.00) receives a score of 100
- Bottom decile (data results of 0.69 or higher) receives a score of 0
- Scores in-between top and bottom deciles are calculated using the following formula:  
 $100 \times (\text{your hospital's score} - \text{bottom decile score}) / (\text{top decile score} - \text{bottom decile score})$
- Did not report receives a score of 0

Hospital Injuries Incidence Rate is a resource utilization measure and receives a weight of 3.33% of the total Resource Utilization Score. The LHRP Scoring Methodology multiplies a hospital's

score (from above) by 3.33% and adds this calculation to the remaining resource utilization measure scores to derive the overall Resource Utilization Score. Note that this standard weight may differ if your hospital is [not applicable](#) for other Resource Utilization measures.

### ***Central-Line Associated Bloodstream Infection Rate***

Central-Line Associated Bloodstream Infection Rate depicts hospitals' level of quality for minimizing this hospital-acquired condition.

Central-Line Associated Bloodstream Infection Rates is a [categorical measure](#)—hospitals received either “fully meets standards,” “substantial progress,” “some progress,” “willing to report,” or “did not report.”

Leapfrog applied the [peer comparison group methodology](#) for this categorical measure. The following scores correlate to each category:

- Fully meets standards receives a score of 100 (this means that hospitals with “fully meets standards” for this measure did as well or better than 100% of all hospitals)
- Substantial progress receives a score of 70 (this means that hospitals with “substantial progress” for this measure did as well or better than 70% of all hospitals)
- Some progress receives a score of 54 (this means that hospitals with “some progress” for this measure did as well or better than 54% of all hospitals)
- Willing to report receives a score of 30 (this means that hospitals with “willing to report” for this measure did as well or better than 30% of all hospitals)
- Did not report receives a score of 0

Central-Line Associated Bloodstream Infection Rate is a resource utilization measure and receives a weight of 3.33% of the total Resource Utilization Score. The LHRP Scoring Methodology multiplies a hospital's score (from above) by 3.33% and adds this calculation to the remaining resource utilization measure scores to derive the overall Resource Utilization Score. Note that this standard weight may differ if your hospital is [not applicable](#) for other Resource Utilization measures.

Appendix A. LHRP Quality Measures and Weights					
Measure Category	Overall Category Weight	Measure	Measure Weight	Measure Type	Scoring scale
CPOE	15%	CPOE Score	15%	Categorical	Fully meets standards = 100 Substantial progress = 50 Some progress = 15 Willing to report = 5 Did not disclose this information = 0
IPS	15%	IPS Score	15%	Categorical	Fully meets standards= 100 Substantial progress = 50 Some progress = 15 Willing to report = 5 Did not disclose this information = 0
Evidence Based Hospital Referral	25%	CABG Quality	4.03%	Categorical	Fully meets standards= 100 Substantial progress = 59 Some progress = 51 Willing to report = 20 Did not disclose this information = 0
		PCI Quality	4.03%	Categorical	Fully meets standards= 100 Substantial progress = 66 Some progress = 37 Willing to report = 7 Did not disclose this information = 0
		AVR Quality	2.42%	Categorical	Fully meets standards= 100 Substantial progress = 89 Some progress = 34 Willing to report =25 Did not disclose this information = 0
		AAA Quality	4.03%	Categorical	Fully meets standards= 100 Substantial progress = 65 Some progress = 38 Willing to report =18 Did not disclose this information = 0
		Pancreatectomy Quality	2.42%	Categorical	Fully meets standards= 100 Substantial progress = 67 Some progress = 51 Willing to report =24 Did not disclose this information = 0
		Esophagectomy Quality	1.61%	Categorical	Fully meets standards= 100 Substantial progress = 69 Some progress = 46 Willing to report =33 Did not disclose this information = 0
		Bariatric Surgery Quality	2.42%	Categorical	Fully meets standards= 100 Some progress = 64

Appendix A. LHRP Quality Measures and Weights					
Measure Category	Overall Category Weight	Measure	Measure Weight	Measure Type	Scoring scale
					Willing to report =42 Did not disclose this information = 0
		High-risk Newborn Delivery Quality	4.03%	Categorical	Fully meets standards= 100 Substantial progress = 72 Some progress = 51 Willing to report =28 Did not disclose this information = 0
Common Acute Conditions	17%	AMI Quality	5.67%	Continuous	<b>Standard continuous measure scoring</b> Top decile cut-off (or better) = 100 Bottom decile cut-off (or worse) = 0 Between top and bottom decile = $100 \times (\text{the hospital's score} - \text{the bottom decile score}) \div (\text{the top decile score} - \text{the bottom decile score})$ Top decile cut-off: 96% Bottom decile cut-off: 39%
		Pneumonia Quality	5.67%	Continuous	See "standard continuous measure scoring," above Top decile cut-off: 96% Bottom decile cut-off: 54%
		Normal Deliveries Quality	5.67%	Categorical	Fully meets standards= 100 Substantial progress = 68 Some progress = 35 Willing to report =23 Did not disclose this information = 0
Managing Serious Errors	11%	Pressure Ulcer Incidence Rate	3.67%	Continuous	See "standard continuous measure scoring," above Top decile cut-off: 0.05 Bottom decile cut-off: 1.51
		Hospital Injuries Incidence Rate	3.67%	Continuous	See "standard continuous measure scoring," above Top decile cut-off: 0.00 Bottom decile cut-off: 0.69
		Central-Line Associated Bloodstream Infection Rate	3.67%	Continuous	See "standard continuous measure scoring," above Top decile cut-off: 0.00 Bottom decile cut-off: 1.86
	4%	Never Events Policy	4%	Categorical	Fully meets standards= 100 Willing to report = 20 Did not disclose this information = 0

Appendix A. LHRP Quality Measures and Weights					
Measure Category	Overall Category Weight	Measure	Measure Weight	Measure Type	Scoring scale
Safe Practices	13%	Safe Practices <b>Note:</b> Safe practices include: SP1- Leadership Structure s and Systems SP2- Culture Measurement for Performance SP3- Teamwork Training and Skill Building SP4- Identification and Mitigation of Risks and Hazards SP5- Informed Consent SP6- Life Sustaining Treatment SP9- Nursing Workforce SP12- Communication of Critical Information SP14- Labeling of Diagnostic Studies SP15- Discharge Systems SP17- Medication Reconciliation SP19- Hand Hygiene SP21- Central Venous Catheter Related Bloodstream Infection Prevention SP23- Prevention of Aspiration and Ventilator Associated Pneumonia SP25- Catheter Associated Urinary Tract Infection Prevention SP28- DVT/VTE Prevention SP29- Anticoagulation Therapy	13%	Continuous	See “standard continuous measure scoring,” above Top cut-off*: 737 Bottom decile cut-off: 357  * 737 is the maximum number of points attainable for safe practices.

<b>Appendix B. LHRP Resource Use Measures and Weights</b>					
<b>Measure Category</b>	<b>Overall Category Weight</b>	<b>Measure</b>	<b>Measure Weight</b>	<b>Measure Type</b>	<b>Scoring Scale</b>
<b>Evidence-Based Hospital Referral</b>	42%	CABG resource use	21%	Continuous	<b><i>Standard continuous measure scoring</i></b> Top decile cut-off (or better) = 100 Bottom decile cut-off (or worse) = 0 Between top and bottom decile = $100 \times (\text{the hospital's score} - \text{the bottom decile score}) \div (\text{the top decile score} - \text{the bottom decile score})$ Top decile cut-off: 7.36 Bottom decile cut-off: 11.44
		PCI resource use	21%	Continuous	See "standard continuous measure scoring," above Top decile cut-off: 1.90 Bottom decile cut-off: 3.54
<b>Common Acute Conditions</b>	48%	AMI Resource Use	24%	Continuous	See "standard continuous measure scoring," above Top decile cut-off: 2.49 Bottom decile cut-off: 5.37
		Pneumonia Resource Use	24%	Continuous	See "standard continuous measure scoring," above Top decile cut-off: 3.71 Bottom decile cut-off: 6.77
<b>Hospital-Acquired Conditions</b>	10%	Pressure Ulcers Incidence Rate	3.33%*	Continuous	See "standard continuous measure scoring," above Top decile cut-off: 0.05 Bottom decile cut-off: 1.51
		Hospital Injuries Incidence Rate	3.33%*	Continuous	See "standard continuous measure scoring," above Top decile cut-off: 0.00 Bottom decile cut-off: 0.69
		Central-Line Associated Bloodstream Infection Rate	3.33%*	Continuous	See "standard continuous measure scoring," above Top decile cut-off: 0.00 Bottom decile cut-off: 1.86
* Note that, in addition to the weight listed here, this measure is also part of the quality score that influences a hospital's overall efficiency score.					