Healthgrades Women’s Care Awards 2016 Methodology

Labor and Delivery Excellence Award™
Gynecologic Surgery Excellence Award™
Obstetrics and Gynecology Excellence Award™

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Performance Measurement: Ratings and Awards

To help consumers evaluate and compare hospital performance specific to specialty service lines and specialty focus areas, Healthgrades communicates performance in two ways—through ratings and awards.

Patient Outcome Data for All Patients

To measure performance, Healthgrades analyzed patient outcome data for all patients (all-payer data) provided by 17 individual states for years 2012 through 2014. The 17 states evaluated were:

- Arizona
- Colorado
- Florida
- Illinois
- Iowa
- Maryland
- Nevada
- New Jersey
- New York
- Oregon
- Pennsylvania
- Rhode Island
- Tennessee
- Texas
- Virginia
- Washington
- Wisconsin

In-Hospital Complications-Based Procedures & Conditions

Patient outcomes data for five conditions or procedures were analyzed:

- C-Section Delivery
- Urogynecologic Surgeries and Procedures
- Gynecologic Surgery
- Vaginal Delivery
- Hysterectomy

Using Ratings to Communicate Performance

The first and most fundamental way that Healthgrades communicates performance is through star ratings. Star ratings are an evaluation of the hospital’s actual performance as compared to the predicted performance for that hospital, based on a specific risk-adjustment model applied to that hospital. For more details, see the Healthgrades Women’s Care Ratings 2016 Methodology.

The purpose of risk adjustment is to obtain fair statistical comparisons of mortality and complication rates between hospitals while accounting for differences in underlying risk factors observed in the data among disparate populations or groups. Significant differences in clinical and demographic risk factors are found among patients treated in different hospitals. Therefore, it is necessary to make accurate and valid comparisons of clinical outcomes with a methodology using risk-adjustment techniques. Risk factors may include age, gender, specific procedure performed, and co-morbid conditions, such as hypertension or diabetes.

Developing the Healthgrades hospital star performance categories involves four steps:

1. The hospital predicted value (predicted number of complications at each hospital) is calculated by summing the individual patient record predicted values determined from logistic regression models discussed above.
2. The hospital predicted value is compared with the actual or observed value (e.g., actual number of complications at each hospital).
3. A test is conducted to determine whether the difference between the predicted and actual values was statistically significant. This test is performed to make sure that differences were very unlikely to be caused by chance alone. A z-score is used to establish a 90% confidence interval.
4. Hospital performance categories are determined based upon the outcome of the test for statistical significance.
For each condition or procedure, hospital performance is evaluated and stratified into three categories:

- ★★★★★ **Better Than Expected** - Actual performance was better than predicted and the difference was statistically significant at alpha = 0.1.
- ★★★ **As Expected** - Actual performance was not statistically significantly different from what was predicted at alpha = 0.1.
- ★ **Worse Than Expected** - Actual performance was worse than predicted and the difference was statistically significant at alpha = 0.1.

Healthgrades uses z-scores (individual or aggregate) to determine performance. A z-score is a standardized statistical test which calculates the difference between the actual and predicted complication and mortality rates, taking into account patient variability and volume. A higher z-score means better performance.

A complete description of the methodology including all exclusions, inclusions, risk factors, multivariate logistic regression model, and other relevant information is available in the Healthgrades Women’s Care Ratings 2016 Methodology.

**Using Awards to Communicate Performance**

The second way Healthgrades communicates information on performance is by awards. Awards determine and communicate a hospital’s superior performance when compared to other eligible hospitals.

Each award has eligibility requirements specific to the nature and intent of the award. All awards require that a hospital receive a rating in the cohort(s) included in the determination of the award. Awards may reference a singular cohort or require the combination of a grouping of cohorts. Specific information on the cohorts included in each award is outlined in the sections below.
Labor and Delivery Excellence Award™ Methodology

The Labor and Delivery Excellence Award™ provides healthcare consumers with more transparency about hospitals that have exceptional clinical outcomes while caring for a mother during delivery. Patients and consumers benefit from this transparency because they will now have information they need to make informed decisions about the best hospitals to choose for their labor and delivery needs.

The Labor and Delivery Excellence Award recognizes the top 10% of hospitals in the country for clinical excellence. While many hospitals have specific areas of expertise and high-quality outcomes in certain areas, these hospitals exhibit comprehensive high-quality care for mothers during delivery.

To help consumers evaluate and compare hospital performance relative to this award, Healthgrades uses a two-step methodology:

1. Evaluate hospital performance for two delivery types: C-section and vaginal births.
2. Identify the hospitals with superior performance overall for both delivery types using a volume-weighted z-score.

Eligibility

To be considered for an award in this specialty area, a hospital has to be evaluated and categorized into one of three performance categories for both C-Section Delivery and Vaginal Delivery. We evaluate both procedures based on in-hospital complications. The Labor and Delivery Excellence Award is based on a volume-weighted average of the z-scores for these procedures.

Clinical Excellence Award Determination

After creating a list of hospitals that meet the above eligibility criteria, Healthgrades uses the following steps to determine recipients of the Labor and Delivery Excellence Award.

1. Determine an overall performance score: The overall performance score for each hospital is calculated using volume-weighted z-scores averaged across both cohorts. Volume weights represent the proportion of patients within a given cohort. The proportion is calculated as the ratio of patients in a cohort and outcome measure over total patients across both cohorts. The final contribution of each cohort to the overall score will vary based on the mix of delivery types at each hospital.
2. Determine performance in sequential order: Hospitals are listed in descending order by their overall performance score.
3. Identify top 10% of all facilities: The top performers are selected from the above listing and receive the Labor and Delivery Excellence Award for 2016.
Gynecologic Surgery Excellence Award™ Methodology

The Gynecologic Surgery Excellence Award™ provides healthcare consumers with more transparency about hospitals that have exceptional clinical outcomes while caring for women during gynecologic surgeries and procedures.

The Gynecologic Surgery Excellence Award recognizes the top 10% of hospitals in the country for clinical excellence. While many hospitals have specific areas of expertise and high-quality outcomes in certain areas, these hospitals exhibit comprehensive high-quality care for women during gynecologic surgeries and procedures.

To help consumers evaluate and compare hospital performance relative to this award, Healthgrades uses a two-step methodology:

1. Evaluate hospital performance for two types of surgeries and procedures—Hysterectomy and Gynecologic Surgery (other than hysterectomies).
2. Identify the hospitals with superior performance overall for both delivery types using a volume-weighted z-score.

Eligibility

To be considered for an award in this specialty area, a hospital has to be evaluated and categorized into one of three performance categories for both Hysterectomy and Gynecologic Surgery. We evaluate both procedures based on in-hospital complications. The Gynecologic Surgery Excellence Award is based on a volume-weighted average of the z-scores for these procedures.

Clinical Excellence Award Determination

After creating a list of hospitals that meet the above eligibility criteria, Healthgrades uses the following steps to determine recipients of the Gynecologic Surgery Excellence Award.

1. Determine an overall performance score: The overall performance score for each hospital is calculated using volume-weighted z-scores averaged across both cohorts. Volume weights represent the proportion of patients within a given cohort. The proportion is calculated as the ratio of patients in a cohort and outcome measure over total patients across both cohorts. The final contribution of each cohort to the overall score will vary based on the mix Hysterectomy and Gynecologic Surgery at each hospital.
2. Determine performance in sequential order: Hospitals are listed in descending order by their overall performance score.
3. Identify top 10% of all facilities: The top performers are selected from the above listing and receive the Gynecologic Surgery Excellence Award for 2016.
Obstetrics and Gynecology Excellence Award™ Methodology

The Obstetrics and Gynecology Excellence Award™ provides healthcare consumers with more transparency about hospitals that have exceptional clinical outcomes while caring for women during delivery as well as during and after gynecologic surgeries and procedures.

The Obstetrics and Gynecology Excellence Award recognizes the top 10% of hospitals in the country for clinical excellence. While many hospitals have specific areas of expertise and high-quality outcomes in certain areas, these hospitals exhibit comprehensive high-quality care for women during delivery and gynecologic surgeries and procedures.

To help consumers evaluate and compare hospital performance relative to this award, Healthgrades uses a two-step methodology:

1. Evaluate hospital performance for four types of surgeries and procedures:
   - C-Section Delivery
   - Gynecologic Surgery (other than hysterectomies)
   - Hysterectomy
   - Vaginal Delivery
2. Identify the hospitals with superior performance overall in Obstetrics and Gynecology using a volume-weighted z-score.

Eligibility

To be considered for an award in this specialty area, a hospital has to be evaluated and categorized into one of three performance categories for C-Section Delivery, Gynecologic Surgery, Hysterectomy, and Vaginal Delivery. We evaluate all four procedures based on in-hospital complications. The Obstetrics and Gynecology Excellence Award is based on a volume-weighted average of the z-scores for these procedures.

Clinical Excellence Award Determination

After creating a list of hospitals that meet the above eligibility criteria, Healthgrades uses the following steps to determine recipients of the Obstetrics and Gynecology Excellence Award.

1. Determine an overall performance score: The overall performance score for each hospital is calculated using volume-weighted z-scores averaged across both cohorts. Volume weights represent the proportion of patients within a given cohort. The proportion is calculated as the ratio of patients in a cohort and outcome measure over total patients across both cohorts. The final contribution of each cohort to the overall score will vary based on the mix of the four types of surgeries and procedures at each hospital.
2. Determine performance in sequential order: Hospitals are listed in descending order by their overall performance score.
3. Identify top 10% of all facilities: The top performers are selected from the above listing and receive the Obstetrics and Gynecology Excellence Award for 2016.