

# Health Care Professionals

## CENTERS OF EXCELLENCE<sup>SM</sup>/HOSPITAL VALUE TOOL 2008-2009 METHODOLOGY



This document outlines the CIGNA HealthCare (CIGNA) 2008-2009 Centers of Excellence<sup>SM</sup>/Hospital Value Tool hospital evaluation methodology used to determine the quality and cost efficiency display in the CIGNA provider directory available on both [www.cigna.com](http://www.cigna.com) and [www.MyCIGNA.com](http://www.MyCIGNA.com). The 2008-2009 information is available on the provider directory beginning July 28, 2008\*.

### **GENERAL INFORMATION**

The Centers of Excellence program was developed to provide individuals with information that can be used as an aid in selecting hospitals. The information is a partial assessment of hospitals, and should not be used as the sole basis for decision-making as such measures have a risk of error. Individuals are encouraged to consider all relevant information and to consult with their treating physician when selecting a hospital.

CIGNA has profiled 29 surgical procedures/medical conditions for the 2008-2009 release for Patient Outcomes and Cost Efficiency. Patient Outcomes are measures of a hospital's relative effectiveness in treating the selected procedure/condition. Cost Efficiency is a measure of a hospital's cost (not including physicians' fees and outpatient services) compared to other hospitals nationally in treating the selected procedure/condition. The data used to profile these procedures/medical conditions consists of self-reported hospital data, public information from Medicare (MedPar) or, where available, state All Payor data as provided by HealthShareTechnology/WebMD.

Participating hospitals receive a score of one, two or three stars for both Patient Outcomes and Cost Efficiency for each of the 29 procedures/conditions as well as an overall score. For each procedure/condition evaluated, hospitals that attain a three star score for both Patient Outcomes and Cost Efficiency receive our Center of Excellence designation for that procedure/condition. The evaluation information is informational only and is not utilized for the purpose of providing performance based payments to CIGNA contracted hospitals. Additional information about the evaluation methodology and the criteria used to measure both Patient Outcomes and Cost Efficiency are presented below.

### **SURGICAL PROCEDURES/MEDICAL CONDITIONS PROFILED**

The 29 medical conditions and surgical procedures profiled were determined based on volume, variability of outcome and consumer interest. In aggregate, these 29 conditions and procedures represent more than half of the procedures/conditions reviewed by individuals when they visit the HealthShare Technology/WebMD Hospital Comparison Tool, Select Quality Care website. Approximately 86% (3,798) of the 4,431 CIGNA participating hospitals (including those in third party vendor networks) met the defined volume criteria for evaluation of at least one procedure or condition.

The 29 medical conditions and surgical procedures profiled are identified in the table below:

<b>CARDIAC CARE</b>	<b>OBSTETRICS**</b>
Angioplasty Cardiac Catheterization Cardiac Pacemaker Implant Coronary Artery Bypass Grafting Heart Attack Heart Failure Heart Valve Replacement Irregular Heartbeat	Cesarean Section Vaginal Delivery Infant-Premature Infant – Premature-Major Problems
<b>GENERAL SURGERY</b>	<b>ORTHOPEDICS</b>
Colon Surgery** Laparoscopic Gall Bladder Removal Transurethral Prostatectomy Total Abdominal Hysterectomy	Disc Surgery Spinal Fusion Total Hip Replacement Total Knee Replacement
<b>NEUROLOGIC</b>	<b>RESPIRATORY</b>
Craniotomy – Adult Stroke Head & Neck Endarterectomy	Acute Bronchitis - Pediatric** Chronic Obstructive Pulmonary Disorder (COPD) Pediatric Asthma** Pneumonia – Adult
<b>GASTROENTEROLOGY</b>	
GI Hemorrhage Gastric Bypass	

\*Updated information for hospitals in Tennessee will be available around October 1, 2008

\*\*These procedures are not profiled in states where MedPar data is the only source.

## **CALCULATING THE HOSPITAL VALUE TOOL PROFILES MEASUREMENT CRITERIA**

### **PATIENT OUTCOMES MEASURES**

Patient Outcomes are measures of a hospital's relative effectiveness in treating the selected procedures/conditions based on publicly available, self-reported patient data.

Patient Outcomes are assessed on five factors related to quality of care (process and outcome measures):

1. Major and OB Complications, obtained through All Payor and Medicare (MedPar) databases. The Major and OB Complication rates (outcome and surgical based) and the Mortality rate are severity adjusted using 3M's All Patient Refined-DRGs (APR-DRGs).
2. Mortality, obtained through All Payor and Medicare databases. Quality is assessed using procedure specific complication and mortality data supplied by WebMD. The complication rate is severity adjusted and reflects the most common complications by procedure. The mortality rate is also severity adjusted and reflects the incidence of death after a procedure or treatment for a condition.

To compare these measures, each is converted to an index that compares the hospital's score to the nationwide average for the procedure/condition. Once the index is calculated, the measures are combined with the Leapfrog index and the CMS index using a weighting system to calculate the overall quality index which is used to determine the number of stars (one to three) a hospital will receive for the procedure/condition. For more detailed information on the method for calculating the CMS, Complications, Mortality and Overall Quality indexes, click [here](#).

3. Leapfrog Patient Safety Measures (includes all four leaps from 2007 hospital survey reports). The Leapfrog patient safety survey measure incorporates hospital compliance with four Leaps. The Leapfrog measures are:

- Computer Physician Order Entry (CPOE)
- ICU Physician Staffing (IPS)
- Evidence-Based Hospital Referral (EBHR)
- The Leapfrog Safe Practices Score

The CPOE, IPS, and EBHR measures look at the estimated avoidable deaths per thousand. A separate score is calculated by hospital for the Leapfrog Safe Practices (QI) measure (fourth Leap) which is then combined with the score tabulated for the other three Leapfrog Patient Safety measures. The Leapfrog index accounts for 15% of the overall quality score. For additional information on the method for calculating the Leapfrog Index, click [here](#).

4. CIGNA hospital quality index based on Medicare CMS Quality Measures.

The CMS Overall Hospital Quality Measure is applied to all 29 procedures/conditions listed in the “Surgical Procedures and Medical Conditions Profiles for 2008/2009 Release” table above. The CMS index for conditions other than Heart Attack, Heart Failure, and Pneumonia Care is calculated using the CMS Overall Hospital Quality Index or the CMS Overall Hospital Quality Measure and Surgical Infection Prevention combined index for surgical conditions. Heart Attack, Heart Failure, and Pneumonia Care CMS Indexes are calculated utilizing the CMS specific condition measures indexes listed below. The appropriate CMS index counts for 25% of the total quality index score.

5. Medicare CMS Hospital Condition Specific Quality Measure.

The CMS Hospital Condition Specific Measures are applied to those procedures/conditions where applicable and as listed in the table below.

- Heart Attack Care (nine measures)
- Heart Failure Care (five measures)
- Pneumonia Care (seven measures)
- Surgical Infection Control (three measures)

<b>CMS HOSPITAL QUALITY MEASURES</b>	<b>PROCEDURE/CONDITION IMPACTED</b>
<b>Heart Attack Care</b>	
Percent of Patients Given ACE Inhibitor for Left Ventricular Systolic Dysfunction (LVSD)	Heart Attack
Percent of Patients Given Adult Smoking Cessation Advice/Counseling	Heart Attack
Percent of Patients Given Aspirin at Arrival	Heart Attack
Percent of Patients Given Aspirin at Discharge	Heart Attack
Percent of Patients Given Beta Blocker at Arrival	Heart Attack
Percent of Patients Given Beth Blocker at Discharge	Heart Attack
Percent of Patients Given Percutaneous Coronary Intervention (PCI) within 90 minutes of Arrival and Fibrinolytic Medication	Heart Attack
Percent of Patients Given Fibrinolytic Medication within 30 minutes of Arrival	Heart Attack
30 Day Risk Adjusted Mortality (Death)	Heart Attack

<b>CMS HOSPITAL QUALITY MEASURES</b>	<b>PROCEDURE/CONDITION IMPACTED</b>
<b>Heart Failure Care</b>	
Percent of Patients Given ACE Inhibitor for Left Ventricular Systolic Dysfunction (LVSD)	Heart Failure
Percent of Patients Given Adult Smoking Cessation Advice/Counseling Heart Failure	Heart Failure
Percent of Patients Given Assessment of Left Ventricular Function (LVF)	Heart Failure
Percent of Patients Given Discharge Instructions	Heart Failure
30 Day Risk Adjusted Mortality (Death)	Heart Failure
<b>Pneumonia Care</b>	
Percent of Patients Assessed and Given Pneumococcal Vaccination	Pneumonia
Percent of Patients Given Adult Smoking Cessation Advice/Counseling	Pneumonia
Percent of Patients Given Initial Antibiotic(s) within 4 Hours After Arrival	Pneumonia
Percent of Patients Given Oxygenation Assessment	Pneumonia
Percent of Patients Given the Most Appropriate Initial Antibiotic(s)	Pneumonia
Percent of Patients Having a Blood Culture Performed Prior to First Antibiotic Received in Hospital	Pneumonia
Percent of Patients Assess for Influenza Vaccination and Given Vaccination if None Previously Administered	Pneumonia
<b>Surgical Infection Prevention</b>	
Percent of Surgery Patients Who Received Preventative Antibiotic(s) One Hour Before Incision	All Surgical Procedures
Percent of Surgery Patients Whose Preventative Antibiotic(s) are Stopped within 24 Hours After Surgery	All Surgical Procedures
Percent of Surgery Patients That Received the Appropriate Preventive Antibiotic(s) for Their Surgery	All Surgical Procedures

The Patient Outcomes score is compiled using both All Payor and MedPar data. All Payor data is available in the 21 states listed below:

Arizona (2005/2006)	North Carolina (2004/2005)
California (2005/2006)	Oregon (2005/2006)
Colorado (2005/2006)	Pennsylvania (2005/2006)
Florida (2005/2006)	Rhode Island (2005/2006)
Iowa (2005/2006)	Texas (2004/2005)
Maryland (2005/2006)	Utah (2005/2006)
Massachusetts (2005/2006)	Vermont (2004/2005)
Nevada (2005/2006)	Virginia (2005/2006)
New Hampshire (2004/2005)	Washington (2005/2006)
New Jersey (2005/2006)	Wisconsin (2004/2005)
New York (2005/2006)	

All Payor states and the measurement periods vary by state based on availability of data. Where All Payor data is not available, MedPar data alone is used. MedPar data is from calendar years 2005 and 2006. Note: Tennessee and Maine are All Payor states. However, only MedPar data was used for these states due to the age of Tennessee and Maine All Payor data.

For more detailed information on the process for calculation of the CMS, Complications, Mortality and Overall Quality indexes, click [here](#).

**COST EFFICIENCY MEASURES**

Cost Efficiency is a measure of a hospital’s average cost (not including physicians’ fees and outpatient services) for a particular procedure/condition, severity adjusted for comparison nationally.

The Cost Efficiency score for a procedure may be affected by a variety of factors, including geographic cost differences (i.e., major metropolitan areas typically have higher costs as compared to more rural areas) and the cost information we use to calculate the national average cost. CIGNA generally uses the Open Access Plus contract rate. The Cost Efficiency score reflects not only the rates that a hospital charges but also the average time spent in the hospital for the procedure/condition.

CIGNA's hospital specific contracted rates in effect as of January 1, 2008 were utilized to model an average cost per day for each specific procedure or condition. The rates include any DRG exceptions, stop loss language or available carve-outs in the calculation. A random sample of 1,000 cases per procedure or condition is assessed to calculate an average cost per day per hospital and procedure or condition, taking into consideration the samples’ average length of stay (ALOS).

Using the modeled average cost per day calculated as described above or the percent discount contract and HealthShare Technology/WebMD’s publicly available charge and length of stay data (adjusted for patient severity of illness and risk of mortality using 3M’s APR-DRG methodology), costs by hospital and procedure are determined. No severity-adjustment is completed for case rate contracts.

**SCORING CRITERIA**

Two calendar years of data was utilized for the 2008-2009 release. Hospital admission volume for each procedure must meet a minimum of 100 incidences during the measurement period (usually calendar year 2005 and 2006) in order to be evaluated.

**SCORING, PATIENT OUTCOMES**

Sixteen procedures use a different volume incidence for assessing patient outcomes:

• Angioplasty (200)	• Heart Failure (300)
• Cardiac Catheterization (500)	• Hysterectomy - Total Abdominal (150)
• Cardiac Pacemaker Implant (200)	• Irregular Heartbeat (600)
• Cesarean Section (200)	• Knee Replacement - Total (150)
• COPD (700)	• Pneumonia - Adult (300)
• Disc Surgery (200)	• Prostatectomy - Transurethral (200)
• Head & Neck Endarterectomy (150)	• Stroke (150)
• GI Hemorrhage (500)	• Vaginal Delivery (200)

Patient Outcome scores are determined utilizing three to five of the quality factors (indexes), depending on data availability, and weighted to total 100%. Conditions that do not have at least three quality factors weighted will display a “not rated” indicator for the Patient Outcomes score in the directory.

The table below demonstrates the factors utilized and the corresponding weights for each of the 29 procedures and conditions:

<b>Condition</b>	<b>Stable Volume Threshold</b>	<b>Total Hospitals Rated</b>	<b>Mortality Weight</b>	<b>Complication Weight</b>	<b>Leapfrog Weight</b>	<b>CMS Overall Hospital Quality Measure Weight</b>	<b>CMS Condition Specific Weight</b>
Acute Bronchitis, Pediatric *	100	414	n/a	n/a	n/a	n/a	n/a
Asthma, Pediatric *	100	376	n/a	n/a	n/a	n/a	n/a
Infant-Premature*	100	697	n/a	n/a	n/a	n/a	n/a
Infant-Premature-Major Problems *	100	322	n/a	n/a	n/a	n/a	n/a
Angioplasty	200	1216		60%	15%	25%	-
CABG	100	1000		60%	15%	25%	-
Cardiac Catheterization	500	579	-	60%	15%	25%	-
Cardiac Pacemaker Implant	200	554	-	60%	15%	25%	-
Cesarean Section***	200	1262	-	60%	15%	25%	-
Colon Surgery	100	1198	-	60%	15%	25%	-
COPD	700	506	60%	-	15%	-	25%
Craniotomy, Adult	100	415	10%	50%	15%	25%	-
Disc Surgery	200	651	-	60%	15%	25%	-
Gall Bladder Removal, Laparoscopic	100	1444	-	60%	15%	25%	-
Gastric Bypass **	n/a	125	n/a	n/a	n/a	n/a	n/a
GI Hemorrhage	500	546	40%	20%	15%	25%	-
Head and Neck Endarterectomy	150	501	-	60%	15%	25%	
Heart Attack	100	2106	60%	-	15%	-	25%
Heart Failure	300	2090	60%	-	15%	-	25%
Heart Valve Replacement	100	513	10%	50%	15%	25%	-
Hip Replacement, Total	100	1826	-	60%	15%	25%	-
Hysterectomy, Abdominal Total***	150	827	-	60%	15%	25%	-
Irregular Heartbeat	600	436	60%	-	15%	25%	-
Knee Replacement, Total	150	1741	-	60%	15%	25%	-

Condition	Stable Volume Threshold	Total Hospitals Rated	Mortality Weight	Complication Weight	Leapfrog Weight	CMS Overall Hospital Quality Measure Weight	CMS Condition Specific Weight
Pneumonia, Adult	300	2140	60%	-	15%	-	25%
Prostatectomy, Transurethral***	200	100	-	60%	15%	25%	-
Spinal Fusion	100	1118	-	60%	15%	25%	-
Stroke	150	1848	60%	-	15%	25%	-
Vaginal Delivery***	200	1453	-	60%	15%	25%	-

\* Cost only (no quality) to be displayed for Pediatric and Infant conditions.

\*\* Patient Outcomes stars for Gastric Bypass are based on CIGNA bariatric certification. Three stars will be displayed for CIGNA bariatric certified hospitals for Patient Outcomes. There are no two or one star patient outcomes indicators for Gastric Bypass.

\*\*\* Due to small volume or no statistically significant difference between one and two stars, only two or three stars will be displayed for Patient Outcomes.

The Patient Outcomes categories are displayed online. For approximately 4,431 CIGNA contracted hospitals that had data for which valid scores could be generated, the following distribution was used: 45% - three star, 50% - two star and 5% - one star for each procedure. The volume of hospitals achieving a designation in at least one procedure or condition is:

- Designation one star = below average - 690 hospitals;
- Designation two stars = average - 2,292; and
- Designation three stars = above average - 2,194.

A hospital could be included in the one star, two star and three star designations depending on the number of procedures that were able to be scored for a particular hospital. In the event a procedure does not show a significant difference between the one star and two star outcome categories, or if there is a procedure that has a small volume of hospitals being ranked, no one star for quality will be assigned.

### **SCORING, COST EFFICIENCY**

The cost Index distribution around the average cost Index determines the cost efficiency categories displayed online. For approximately 4,431 CIGNA contracted hospitals that had data for which valid scores could be generated, the following distribution for cost was use: 33% one star (highest cost); 33% two stars (average cost); and 33% three stars (lowest cost). The volume of hospitals achieving a designation in at least one procedure or condition is:

- Designation one star = highest cost - 1,818 hospitals;
- Designation two stars = average cost - 2,426 hospitals; and
- Designation three stars = lowest cost - 2,256 hospitals.

A hospital could be included in the one star, two star and three star designation categories depending on the number of procedures that were able to be scored for a particular hospital. When accessed through the secure CIGNA website for individuals, [www.MyCIGNA.com](http://www.MyCIGNA.com), each Cost Efficiency designation also includes estimated average cost ranges and the individual's estimated average out-of-pocket cost range.

### **“GRANDFATHERING” HOSPITAL PATIENT OUTCOME SCORES**

To ensure hospitals that have good ratings one year aren't penalized in their ratings due to a methodology change or some factor outside of the hospitals' control in subsequent years, a methodology for grandfathering

has been introduced. Grandfathering is a process that will “bump up” the quality score of a hospital one star rating if certain criteria are met. This process will apply to hospitals whose results have fallen either one or two stars and does not apply to cost star ratings (cost ratings cannot be changed without affecting the cost ranges that are shown on the secure CIGNA website for individuals, [www.MyCIGNA.com](http://www.MyCIGNA.com). For additional detail information on the Grandfathering process, click [here](#).

## **ADDITIONAL INFORMATION**

### **NO RESULTS SHOWN**

Hospital data may not display in the CIGNA online provider directory for several reasons, including but not limited to, those listed below:

- Insufficient patient volume or MedPar data available for that procedure or condition;
- A surgical procedure is not performed or a condition is not treated at the hospital; or
- Hospital has requested their data not be displayed.

### **ACADEMIC/TEACHING AND COMMUNITY HOSPITALS**

A hospital’s Patient Outcomes results are compared to the hospital’s peer group, either community hospitals or teaching/academic hospitals. The results are then combined together for display purposes within the online search results. The community versus teaching/academic hospital comparison only applies to the Patient Outcomes scores, not Cost Efficiency scores.

### **UPDATING HOSPITAL VALUE TOOL DATA**

Hospital Value Tool data is analyzed and refreshed annually. While every attempt is made to use the best available data and nationally recognized standards, we acknowledge that Patient Outcomes and Cost Efficiency standards continue to evolve. Accordingly, we caution individuals not to use this information as the sole basis for decision-making and to consult with their treating physician in selecting a hospital.

Data for the Centers of Excellence program is reviewed annually to decrease the number of procedures and hospitals that do not display. Various methods, from adjusting the minimum volumes to encouraging hospitals to display their data, are used to ensure the most complete ranking of hospitals possible.

### **PROCESS FOR HOSPITALS TO CORRECT ERRORS OR REQUEST RECONSIDERATION OF PROFILE**

At any time, if a hospital would like to review data, quality and cost efficiency performance ratings, or request reconsideration, correct errors, or submit additional information for review and reconsideration, call the CIGNA Customer Service Center at 1.800.88CIGNA (882.4462) to initiate the Selection Review Committee review process. The Selection Review Committee will meet within 30 days of receipt of submitted documentation and provide a written response to the requested review.

### **PROCESS TO PROVIDE FEEDBACK**

Individuals with CIGNA coverage, clients, and participating physicians and hospitals are encouraged to provide feedback and suggestions for the usefulness of reports or other suggested improvements. Clients and individuals with CIGNA administered coverage should call the telephone number listed on the back of their CIGNA ID card. Participating physicians and hospitals may provide feedback by calling our customer service department at 1.800.88CIGNA (882.4462). Feedback and suggestions are reviewed and changes to the hospital evaluation methodology, reporting formats and processes are implemented as quickly as feasible. Methodology changes are reviewed and implemented annually.

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CGLIC has acquired the business of Great-West Healthcare.