Appendix C
Additional Methodology and Application Rules For
2009 CIGNA Care® Designations and Quality and Cost Efficiency Profiles

This document provides additional detail on methodology, the data sources, time frames for the data, and application rules utilized in performing physician evaluations for both the CIGNA Care® designations and Quality and Cost Efficiency displays.

Physician Care Evaluation Principles
In providing individuals information on quality and cost-efficiency of physician care, we follow 3 key principles.

**Standardized performance measures using the most robust data set available**
For quality and cost-efficiency, we use nationally recognized measures endorsed by such organizations as the National Quality Forum (NQF) and the Healthcare Effectiveness Data Information Set (HEDIS®) or those commonly used in the industry. We also use the most robust source of that information such as publicly available evaluations performed by regional collaborations based on aggregated data or national designations, when available.

**Responsible use of the information**
We believe quality and cost-efficiency profiles are meaningful, but not yet ideally comprehensive and reliable. Therefore, the limitations of the measures must be properly communicated to the user; this information represents a partial evaluation of quality and cost-efficiency, but should never be used as the sole basis of decision-making, as such measures have a risk of error.

Similarly, we believe that the information is sufficiently meaningful that individuals may be encouraged through modest benefit incentives (e.g. a co-payment reduction for selection of a CIGNA Care designated physician) to consider using CIGNA Care designated physicians for their care. But, benefit incentives based upon this information should not be used in a way that financially dictates an individual’s choice of physician or disrupt currently satisfactory doctor-patient relationships. Therefore, we do not use the information to construct restricted lock-in networks.

**Provider Collaboration and Improvement Enablement**
We must work with physicians to provide them with information to assist them in improving the health care they provide. We will provide physicians with a comprehensive description of our methodology, the detail information behind the summary metrics, and on-going data to help performance improvement. Equally important, on-going discussions with key physician organizations ranging from national academies to large physician groups will provide input into future profiling design changes.
Data Sources

The sources of data and how the information is utilized from each source to complete evaluations for the 24 physician specialty types are outlined below.

CIGNA Provider Metrics, January 2006 through December 2007:

- Use combined Managed Care and PPO product data with episodes of care attributed to the responsible physician (based on the physician who is paid the most management and surgery fees and has at least 30% of those fees within the episode). This data is utilized to produce Episode Treatment Group (ETG) efficiency and Evidence Based Medicine (EBM) Summary reports.

- Combined Managed Care and PPO data is also utilized to apply Evidence Based Medicine provider rules. EBM rules are applied to the appropriate specialties and to the physicians who saw the patient for 2 visits within 24 months, with the most recent visit within the previous 12 months.

CIGNA Central Physician File (CPF):

- Extract files to identify contracted physicians, Tax ID Numbers (TINs), groups, specialty, board certification status, network and products contracted (as of April 2008)

Physician Recognition Program File obtained from National Committee for Quality Assurance (NCQA):

- Physicians recognized for the Diabetes, Heart /Stroke, Back Pain, Physician Practice Connections or Physician Practice Connections-Patient Centered Medical Home recognition programs as of April 2008

- The Physician Recognition Program File is received from NCQA at least 6 times per year. Additional physicians recognized are updated with their status change as received.

CIGNA’s Bariatric Centers of Excellence program:

- Identify bariatric surgeons associated with the CIGNA Bariatric Centers of Excellence as of April 2008

- The file containing physicians associated with CIGNA Bariatric Centers of Excellence is updated monthly if new centers are identified

Identifying Physicians and Level for Evaluation

Business rules about the types of physicians to be reviewed for CIGNA Care designation and the Quality and Cost-Efficiency display are applied. Physicians with one of the 21 reviewable specialty types listed in the main body of the 2009 Physician Evaluation Methodology whitepaper are eligible for evaluation and are CIGNA Care designated if they meet the CIGNA criteria. Physicians in the 21 reviewable specialty types and in the three primary care specialty types (Internal Medicine, Family Practice, Pediatrics) are reviewed for the Quality and Cost-Efficiency displays in the secure Provider Directory web site, available only to individuals with CIGNA coverage, www.mycigna.com.
The following physician specialty types are **not** reviewed.

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<thead>
<tr>
<th>Anesthesiology</th>
<th>Other Child</th>
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<tr>
<td>Audiology</td>
<td>Pain Management</td>
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<tr>
<td>Cardio Electrophysiology</td>
<td>Pathology</td>
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<tr>
<td>Chiropractic</td>
<td>Pediatric Subspecialties (all)</td>
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<tr>
<td>Dental</td>
<td>Physical Therapy</td>
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<td>Emergency Medicine</td>
<td>Plastic Surgery</td>
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<td>Maternal Fetal Medicine</td>
<td>Podiatry</td>
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<td>Mental Health</td>
<td>Radiation Oncology</td>
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<td>Occupational Therapy</td>
<td>Radiology</td>
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<td>Optometry</td>
<td>Reproductive Endocrinology</td>
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<td>Oral-Maxillary</td>
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We measure participating physicians at the individual level but perform the majority of our profile assessments for physicians at the physician group or TIN level rather than at the individual physician level. Individual physicians who are not part of a group are profiled if they meet the volume criteria. This approach provides more robust data for evaluation and is consistent with the assumptions that (i) individuals often choose a group rather than a specific physician within the group, and (ii) individuals who initially choose a specific physician frequently receive care by another physician within that group.

Our profiles are largely based on comparison of physician practice patterns of participating physicians in the same geographic market. Since practice patterns vary by region, we have established 95 separate markets. The averages to which physicians are compared are established within each market for quality assessments and within each market and each specialty for cost-efficiency assessments. For 2009, 57 markets were activated for the CIGNA Care designation and 69 markets were activated for the Quality and Cost-Efficiency display. Markets that have insufficient data for analysis, third party vendor networks, and client specific networks were not evaluated or activated.

Because physician metrics reports are created at the Physician ID level, physicians in the 21 specialty types and the 3 primary care specialty types must be aggregated by specialty, Tax Identification Number (TIN), and market in order to calculate the efficiency scoring metric – the Standardized Cost Difference (SCD).

A physician may only be assigned one specialty, TIN and market, for purposes of the Quality and Cost-Efficiency display and CIGNA Care designation review. The zip-code of a physician’s primary office address is used to align a physician with a market. The first specialty listed for a physician in our central physician file is used to establish the specialty to evaluate physicians with multiple specialties.

Managed Care and PPO data is processed using Episode Treatment Group (ETG) methodology and Evidence Based Medicine EBM Connect® software licensed from Symmetry Health Data Systems, Inc. The methodology includes severity and case mix adjustments.
Attribution

For EBM quality assessment, the responsible physician is any relevant specialty physician who saw the patient for at least 2 visits in the previous 24 months with at least one of the visits occurring in the previous 12 months. Each EBM rule is associated with relevant specialties that treat the condition. Click here for a listing of the EBM rules and their relevant conditions and specialties (Appendix A). An EBM rule may be attributed to both specialists and primary care physicians (PCPs) if the measure is relevant to the specialty and the minimum volume criteria of two visits is met.

For ETG cost-efficiency assessment, each individual’s episode of care is attributed to a responsible physician. An episode of care may include inpatient, outpatient, lab, radiology, and pharmacy claims. The responsible physician is the physician with the highest management and/or surgery costs within an episode. In order for a physician to be attributed for the episode, the management and surgery fees (professional charges) for that physician must account for at least 30% of the total management and surgery fees. In cases where no physician treating the patient meets the criteria, the episode of care is not attributed to any physician.

Market Determination

The markets for 2009 were defined by the Contracting and Market Medical Executive teams for each state. To determine the Peer Group for comparison, in addition to the specialty, 95 geographic markets were identified.

Analysis Process for Cost-Efficiency- Episode Treatment Groups (ETGs)

For ETGs, episodes are first aligned to individual physicians. Individual physicians are compared for ETGs (at the ETG/Subclass/Severity level) where they were responsible, and to their "peers" (other physicians in the same specialty category and market), to calculate actual and expected costs. For an ETG to be included in that market’s analysis, there must be at least 10 episodes at the ETG/Subclass/Severity level within the market in order to determine the market expected cost.

Total actual and expected costs are determined for each physician. Individual physicians are then aligned to groups (non-reviewable specialists are removed). The individual physicians’ actual and expected totals are summed to derive the actual and expected totals for each group. The group Performance Index (PI) (group actual/group expected) and standardized cost difference (SCD) scores are calculated for groups with 30 or more episodes and then rank ordered by SCD. A statistical significance test is used to determine physician groups that perform better than the bottom performing groups with at least 90% confidence. This process is repeated for the primary care (PCP) specialty types for transparency display only. Reviewable specialists in the 21 specialty types are reviewed separately from the 3 PCP specialty types.
Important Notes:

- Physicians are only compared within specialty and market based on the ETGs/Subclass/Severity where they had at least 1 episode. So, for example, if a cardiologist is not responsible for any ETGs with surgery, he is not compared to cardiology ETGs with surgery
- Any ETG at the subclass and severity level with less than 10 episodes in the Specialty/Market is excluded
- ETGs for routine inoculation, transplants, or any ETG with low volume or wide cost variations are excluded
- Only groups and solo practitioners with at least 30 episodes are evaluated for cost efficiency

Analysis Process for the Evidence Based Medicine (EBM) Quality Metric

CIGNA is committed to utilizing standardized measures derived from measures endorsed by the National Quality Forum (NQF), Ambulatory Care Quality Association (AQA), and National Committee for Quality Assurance/Healthcare Effectiveness Data Information Set (NCQA/HEDIS®) or those developed by physician organizations. Risk adjustment is incorporated into each measure through the population definitions for each measure, as appropriate. The population measured does not include the Medicare population, therefore, additional risk adjustment is not required. The table in Appendix A summarizes the core set of 48 Evidence Based Medicine (EBM) rules (Group One) and the specialties applicable in 2009 physician performance evaluations.

An additional 121 rules were utilized to assess physicians who fell into the middle or low category for EBM rules following assessment of the 48 core EBM rules referenced above. The application of these expanded rules (Group Two) is described in the methodology discussion that follows.

For the EBM quality metric assessment, the peer group is the specialty category (either primary care (PCP) or the 21 reviewable specialty types) and the assigned market. Comparisons are done by individual physician at the rule level. Opportunities and successes for a rule are aligned to each appropriate physician (using the 2+ visits and relevant specialty). Physicians are then compared by rule to other physicians in the specialty category (PCP or reviewable) and market, to derive the peer expected results.

Physicians are aligned to groups and then opportunities, successes and expected successes are summed to obtain group totals. Groups and solo practitioners with 30 or more opportunities are ranked using a Z-score.

2009 EBM Rule Group Two Methodology

The core set of 48 evidence based measures (EBM) currently used to evaluate physician group quality performance pertains to 13 of the 21 specialty types and all 3 of the primary care types of physician specialists, with Cardiology and Endocrinology well represented. Many more EBM rules exist which are being or will be considered for endorsement by national quality associations. The additional EBM rules have been reviewed by CIGNA Medical Executives and an additional 121 selected for use in physician
evaluation. In an effort to increase physician specialty participation and an opportunity to improve results from the core set of EBM rules, the Group Two set of rules is utilized.

Physician groups are subject to assessment using both sets of rules. Groups receive separate, independent quality appraisals and ratings, within market, for each rule set. The Group Two quality results are being used as a possible “bump up” provision for physician groups to achieve CIGNA Care designation or 3 star transparency display (a top score EBM icon).

Using the core set of measures, physician groups ranked in the top third of their market (33rd percentile) are eligible for CIGNA Care designation and top EBM quality display in the directory display. These groups must pass the group Board Certification criteria and also have at least 50% of group’s episodes performed by physicians with EBM quality information. Physician groups that are unable to receive CIGNA Care designation through core measure evaluation are eligible for Group Two consideration. With the expanded Group Two measures, more physician groups may receive quality scores. Groups that did not have 30 opportunities in the core set may reach the minimum volume requirement in the expanded set. Physician groups are then scored and ranked within their market based on their Group Two results. Those groups ranked in the top third of their market (33rd percentile) based on the expanded set of rules, are also eligible for CIGNA Care designation. As with the core set assessment, these groups must also pass the group Board Certification criteria and also have at least 50% of group episodes performed by physicians with EBM quality information.

In 2009, across all markets, 1,825 specialty and 5,996 PCP physician groups were recognized for EBM quality performance through the core Group One measure assessment. An additional 1,275 specialty and 2,896 PCP physician groups received CIGNA Care designation through their Group Two quality performance.

**Application Rules for CIGNA Care Designation**

The high level application rules and order of application for the 2009 implementation are summarized in the flow chart in the Physician Evaluation Methodology whitepaper and repeated below.
Physician(s) in group are in 21 assessable specialty types and are not primary care physicians

Assess for Quality Criteria

Is the group composed of some MDs & DOs and do they meet the group board certification standard?

Yes

Assess for Cost Efficiency

Does the group have at least 30 Evidence Based Medicine (EBM) opportunities and 50% of care provided by physicians with EBM rules?

Yes

Is the EBM rule success rate in top third of the market results?

No

NO

Does the group meet the group board certification standard?

No

Assess individual physicians for NCQA Physician Recognition or that practice in a CIGNA Certified Bariatric Center of Excellence (COE)?

Are there individual physicians in the group that have completed an ABIM-PIM?

Yes

Are there individual physicians in the group with NCQA Recognition or that practice in a CIGNA Certified Bariatric COE?

Yes

Include in CIGNA Care Designation

NO

Is the group EBM rule success rate statistically significantly lower than the market average?

Yes

Is the EBM rule success rate in top third of the market results?

NO

NO

Excludes from CIGNA Care Designation

NO

Are the group ETG SCD better than the market cutoff and have a confidence interval of 90%?

Yes

NO

Assess individual physicians for NCQA Physician Recognition or that practice in a CIGNA Certified Bariatric Center of Excellence (COE)?

Are the group ETG SCD better than the market cutoff and have a confidence interval of 90%?

Yes

NO

Assess individual physicians for NCQA Physician Recognition or that practice in a CIGNA Certified Bariatric Center of Excellence (COE)?

Excludes from CIGNA Care Designation

NO

Are there individual physicians in the group with NCQA Recognition or that practice in a CIGNA Certified Bariatric COE?

NO

Assess individual physicians for NCQA Physician Recognition or that practice in a CIGNA Certified Bariatric Center of Excellence (COE)?

Does the physician or group have at least 30 episodes for ETG assessment?

Yes

Assess individual physicians for NCQA Physician Recognition or that practice in a CIGNA Certified Bariatric Center of Excellence (COE)?

NO

Are there individual physicians in the group with NCQA Recognition or that practice in a CIGNA Certified Bariatric COE?

NO

Assess individual physicians for NCQA Physician Recognition or that practice in a CIGNA Certified Bariatric Center of Excellence (COE)?
**2009 Outlier Removal Methodology**

The cost efficiency evaluation includes a methodology to account for episodes that are outliers, i.e. those episodes that are substantially different from the market expected amounts. High cost episodes (ETGs) that are greater than 1.5 times the market specialty average are reduced to 1.5 times the market specialty average. For 2009, approximately 15% of physician episodes were reduced. Low cost outlier episodes are determined by the Ingenix software or are episodes of less than $25.00 and are dropped from the evaluation.

**2009 Buffer Zone Methodology**

**Purpose**

In an annual review process, variation in physician performance is inevitable and expected. Year over year variation can be positive or negative, substantial or minimal. There are many reasons why variation occurs, including changes to physician group makeup, external market factors, and practice pattern modifications. Accordingly, a “buffer zone” or “grandfathering” methodology has been implemented to address small-scale variation among non-CIGNA Care designated physician groups that were designated in the previous year. A buffer zone of 5 percent from the market SCD cutoff percentile has been adopted for groups’ whose CIGNA Care designation was lost due to ETG efficiency performance. A group may maintain its CIGNA Care designation status if its market SCD percentile rank is within 5 percentile of their market SCD cutoff percentile. For example, if a Markets’ 2009 SCD cutoff percentile is the top 35% of groups, then groups ranked up to the 40th percentile, which had been CIGNA Care designated for efficiency in 2008 are eligible for consideration. Similarly, a buffer zone of 5 percent from market EBM cutoff percentile has been adopted for groups whose CIGNA Care designation was lost due to EBM quality performance.

This methodology was reviewed and approved by an outside, independent consultant.

**Efficiency Buffer Zone Methodology 2009**

Groups that were CIGNA Care designated in 2008 due to their efficiency performance that are not CIGNA Care designated in 2009, were selected and analyzed. If the 2009 group SCD percentile rank was within 5 percent of the market SCD cutoff percentile, the group was eligible for inclusion due to buffer zone status.

To achieve 2009 designation buffer zone status the selected group must then meet the standard CIGNA Care designation criteria. Their physician group Board Certification rate must be at least 80%, the Board Certified physicians must be responsible for at least 50% of the group episodes, the group must have at least 30 episodes and the group must not be in the bottom 2.5 market percentile for EBM quality performance.
A total of 824 groups in several markets met the buffer zone criteria. It was not a requirement that the groups’ have the same physicians in 2008 as 2009. This specific methodology will be revisited for the 2010 methodology.

**Quality Buffer Zone Methodology 2009**

Groups designated in 2008, due to their EBM quality performance – market top 33rd percentile z-score rank – which lost their designation in 2009, were selected and analyzed. If their 2009 EBM quality market percentile rank was within 5 percent of the 2009 cutoff (33%), the group was eligible for buffer zone status. To achieve 2009 buffer zone status the selected group must then meet the standard CIGNA Care Network criteria. The group’s physicians with EBM opportunities must be responsible for at least 50% of the group episodes.

A total of 167 groups across multiple markets met the criteria. It was not a requirement that the groups have the same physicians in 2008 as 2009. This specific methodology will be revisited for the 2010 methodology.