

## **Analysis of 2010 Physician Feedback Program Group Reports**

### **Introduction**

In September 2011, CMS produced and distributed confidential Physician Feedback reports to each of the 35 medical group practices that chose to participate in the 2010 Group Practice Reporting Option (GPRO) of the Physician Quality Reporting System (PQRS). Each report provided information on the quality of care and resource use for Medicare fee-for-service beneficiaries treated by the medical groups in 2010. This summary provides observations about the quality of care furnished and cost of care provided to Medicare fee-for-service beneficiaries in the 35 group practices.

### **A. Description and Composition of the Group Practices Participating in the 2010 Group Practice Reporting Option**

To participate in the GPRO of PQRS, a group practice had to be a single provider entity identified by a single tax identification number (TIN). Criteria for participation in 2010 GPRO included the following:

- The group practice had at least 200 individual physicians or other medical professionals (identified by Individual National Provider Identifiers, or NPIs) who had reassigned their billing rights to the TIN.
- The group practice submitted a self-nomination letter to CMS to participate in the 2010 PQRS GPRO.
- CMS determined that the self-nominating group practice met the program definition of a group practice and complied with other program requirements.

CMS determined that 35 groups were eligible to participate in the 2010 GPRO reporting option. These 35 groups encompassed 24,823 eligible professionals. Eligible professionals included physicians and other licensed health care providers (including physician assistants and nurse practitioners) who were Medicare enrolled providers who billed under the group practice's TIN in 2010.

On average, each group practice contained the following type of medical professionals: primary care (27%), medical specialties (20%), surgeons (13%), other medical professionals (36%) and ER physicians represented less than 1%. Despite the average group practice profile, five group practices were composed of substantially more medical specialists and surgeons than primary care professionals. A professional's medical specialty was determined based on the CMS medical specialty code listed most often on their 2010 Part B claims.

### **Attribution of Medicare Beneficiaries to Group Practices**

For each of the 35 participating group practices, CMS attributed Medicare fee-for-service beneficiaries to the group practice if eligible professionals in the group practice billed for at least two office visits or other outpatient Evaluation and Management (E&M) services and the group practice had the plurality of E&M charges for that beneficiary. The eligible E&M codes are listed in Table 1.

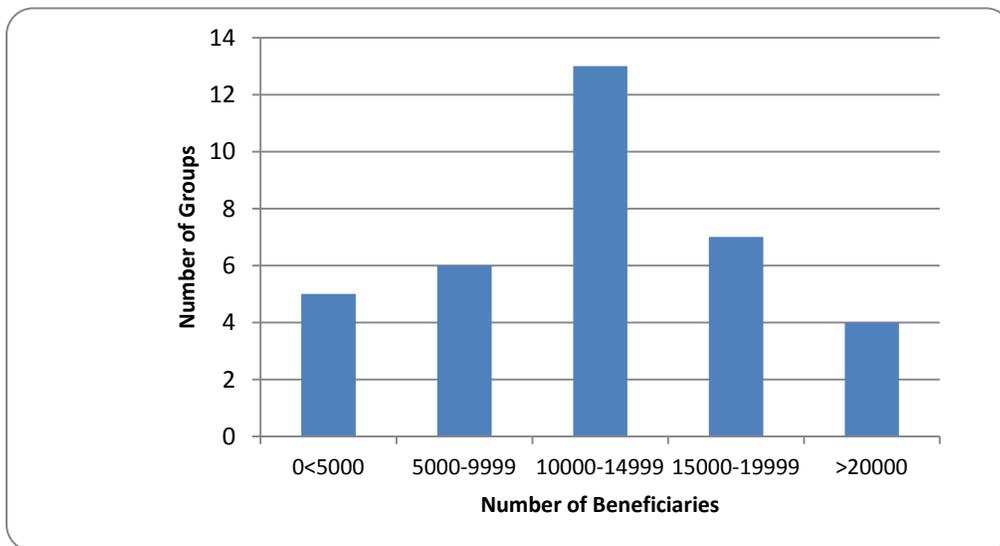
**Table 1. Medicare Part B Evaluation & Management Service Codes**

Included: Office or Other Outpatient Services			
Codes	Labels	Codes	Labels
99201	New Patient, brief	99212	Established Patient, limited
99202	New Patient, limited	99213	Established Patient, moderate
99203	New Patient, moderate	99214	Established Patient, comprehensive
99204	New Patient, comprehensive	99215	Established Patient, extensive
99205	New Patient, extensive	99215	Established Patient, extensive
99211	Established Patient, brief		

The following services were not considered when attributing beneficiaries to the group practices: hospital inpatient services; nursing facility services; care plan oversight services; home care services; domiciliary, rest home, or custodial care services; consultations; emergency department services; patient transport; critical care services; neonatal intensive services; newborn care; special evaluation and management services; other evaluation and management services; preventive medicine services; case management services; prolonged services; and hospital observations services.

The average beneficiary population attributed to a group practice was 12,550 beneficiaries with the smallest group practice attributed 2,424 beneficiaries and the largest with 31,006 beneficiaries. Table 2 displays the range of beneficiaries attributed to the group practices.

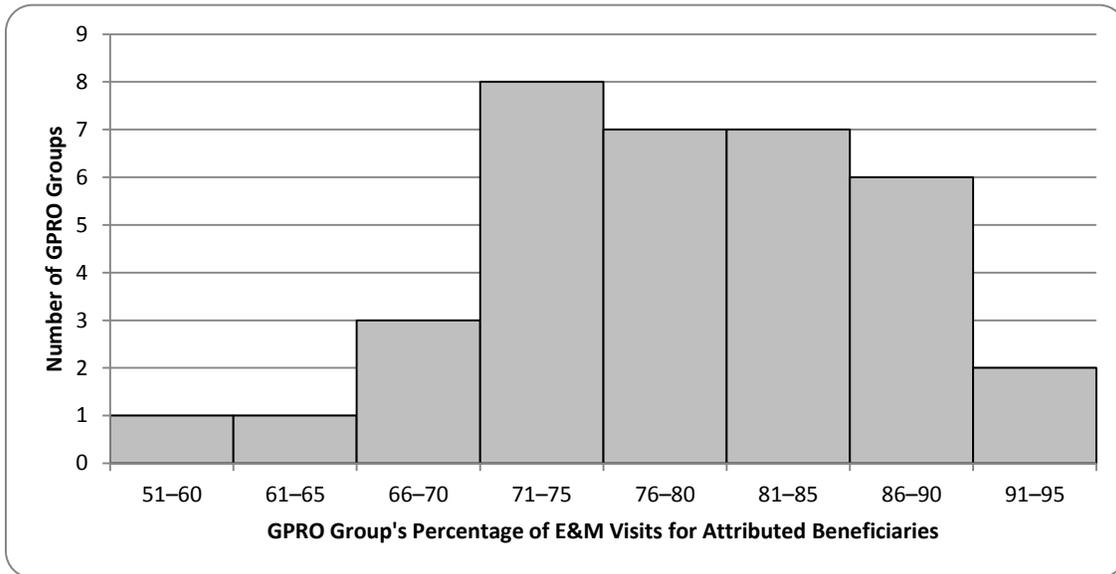
**Table 2. Number of Beneficiaries Attributed to the 35 Group Practices**



In 2010, each beneficiary that was attributed to a group practice had an average of ten E&M visits in 2010 (both to physicians in and outside the group practice), ranging from a low of nine visits per group practice to a high of fourteen visits per group practice. Seven of these E&M visits, on average, were with physicians **in** the group practice, ranging from a low of five E&M visits to high of nine E&M visits with physicians in the group practice. Thus, the GPRO groups provided not only the plurality, but the large majority, of E&M visits to the beneficiaries attributed to that group practice.

Table 3 shows the distribution of the percentage of all E&M visits billed by the group practice. On average, the group practices accounted for 78 percent of attributed beneficiaries' E&M visits.

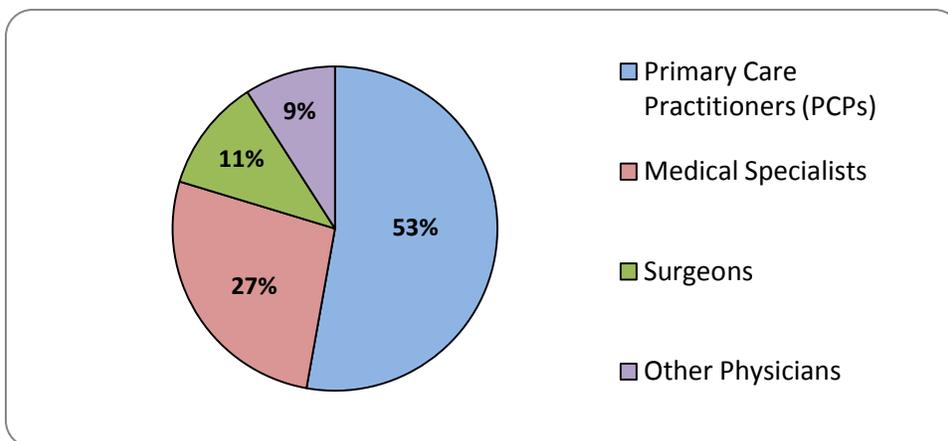
**Table 3. Distribution of the Percentage of All Evaluation and Management (E&M) Visits Billed by the GPRO Group**



In comparing the types of physicians providing the plurality of E&M visits within the group practice, Figure 1 shows that primary care physicians, on average among all 35 groups, provided over half (53%) of E&M services followed by medical specialists at 27%. Surgeons provided 11% of E&M visits and other physicians provided 9%.

We note that for five group practices, medical specialists rather than primary care physicians, delivered the plurality of care for the attributed beneficiaries.

**Figure 1. Physician Stratification Category Billing the Plurality of Evaluation and Management Visits Billed by the GPRO Group, All Groups**



## **B. Quality Measure Performance Rates: Clinical Care Measures**

As discussed above, CMS attributed Medicare fee-for-service beneficiaries to a group practice if eligible professionals in the group practice billed for at least two office visits or other outpatient E&M services and the group practice had the plurality of E&M charges for that beneficiary. CMS provided to each group practice a database containing a sample of attributed Medicare fee-for-service patients who, based on claims data, met the clinical criteria for specific clinical measures of quality. The group practices were responsible for populating the database to report whether each consecutively assigned beneficiary/patient had received recommended clinical interventions represented by each of the 26 quality measures. Table 4 displays the quality measures. The measures included National Quality Forum-endorsed quality measures in four disease modules (diabetes mellitus, heart failure, coronary artery disease, and hypertension) and four preventive care measures.

Each group practice was required to report clinical data for the first 411 beneficiaries on their list of assigned beneficiaries for each disease module and preventive care measure. If the group practice was attributed fewer than 411 beneficiaries for a certain quality measure, clinical indicators had to be submitted for 100 percent of the beneficiaries who met clinical criteria for the measure.

We believe it is likely that some differences in the group practice performance rates are affected by factors unrelated to performance. For example, group practices may have used different methods to populate the database such as manually inputting information into the data fields based on chart review or loading clinical information directly from an Electronic Health Record system. We do not know the extent to which differences in performance rates are related to these different database population methodologies. We expect that group practices that had established processes for collecting the relevant clinical information for each of the quality measures were likely to perform better than those that did not.

Despite these differences, certain observations can be made about the quality data. Table 4 below shows the mean performance rate and the performance rates for the 10<sup>th</sup>, 50<sup>th</sup>, and 90<sup>th</sup> percentiles for each of the 26 quality measures. Table 4 also shows the mean performance rate for the 19 comparable measures (based on augmented administrative claims-based measures) that eligible professionals reported at an individual level through PQRS. The mean group practice performance rate was equal to or higher than the individual performance rate for 16 of the 19 measures. These measures include the disease measures in the heart failure, coronary artery disease, and hypertension disease modules and all of the preventive care measures. For eight of the 16 measures, the group mean was at least ten percentage points higher than the mean individually reported rate. By contrast, mean individual performance rates were higher than group practice performance rates for three diabetes measures (high blood pressure control, low density lipoprotein control, and foot exams).

**Table 4. Performance Rates on 26 Quality Measures for Individual Eligible Physicians and Groups**

Measure Number	Measure Title	2010 Average Performance Rate/ Eligible Professional	Performance Rate for All 2010 GPROs			
			Mean	Percentile		
				10 <sup>th</sup>	50 <sup>th</sup>	90 <sup>th</sup>
<b>DIABETES</b>						
GPRO DM-1	Diabetes Mellitus: Hemoglobin A1C Testing	NA	93%	88%	94%	98%
GPRO DM-2*	Diabetes Mellitus: Hemoglobin A1C Poor Control	22%	22%	11%	21%	39%
GPRO DM-3	Diabetes Mellitus: High Blood Pressure Control	59%	58%	49%	57%	67%
GPRO DM-5	Diabetes Mellitus: Low Density Lipoprotein (LDL-C) Control	57%	54%	41%	55%	66%
GPRO DM-6	Diabetes Mellitus: Urine Screening for Microalbumin or Medical Attention for Nephropathy	74%	89%	82%	89%	96%
GPRO DM-8	Diabetes Mellitus: Foot Exam	72%	61%	16%	69%	86%
GPRO DM-9	Diabetes Mellitus: Lipid Profile	NA	84%	75%	84%	93%
<b>HEART FAILURE</b>						
GPRO HF-1	Heart Failure: Left Ventricular ( LVF) Assessment	46%	86%	68%	93%	97%
GPRO HF-2	Heart Failure: Left Ventricular ( LVF) Testing	NA	86%	68%	90%	98%
GPRO HF-3	Heart Failure: Weight Measurement	NA	86%	79%	88%	96%
GPRO HF-5	Heart Failure: Patient Education	43%	77%	54%	83%	97%
GPRO HF-6	Heart Failure: Beta Blocker Therapy for Left Ventricular Systolic Dysfunction ( LVSD)	83%	92%	86%	95%	99%
GPRO HF-7	Heart Failure: Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker ( ARB) Therapy for Left Ventricular Systolic Dysfunction ( LVSD)	86%	90%	82%	91%	97%
GPRO HF-8	Heart Failure: Warfarin Therapy For Patients With Atrial Fibrillation	72%	79%	62%	82%	94%
<b>CORONARY ARTERY DISEASE</b>						
GPRO CAD-1	Coronary Artery Disease ( CAD): Oral Antiplatelet Therapy Prescribed for patients with CAD	85%	85%	50%	93%	97%
GPRO CAD-2	Coronary Artery Disease ( CAD): Drug Therapy for Lowering LDL- Cholesterol	75%	90%	85%	92%	97%
GPRO CAD-3	Coronary Artery Disease ( CAD): Beta Blocker Therapy for CAD Patients with Prior Myocardial Infarction	71%	87%	76%	88%	95%
GPRO CAD-7	Coronary Artery Disease ( CAD): Angiotensin-Converting Enzyme ( ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Patients with CAD and Diabetes and /or Left Ventricular Systolic Dysfunction ( LVSD)	67%	83%	75%	84%	91%
<b>HYPERTENSION</b>						
GPRO HTN-1	Hypertension ( HTN): Blood Pressure Measurement	NA	92%	72%	98%	100%
GPRO HTN-2	Hypertension ( HTN): Blood Pressure Control	NA	68%	58%	68%	76%
GPRO HTN-3	Hypertension ( HTN): Plan of Care	NA	56%	21%	61%	79%
<b>PREVENTIVE CARE AND SCREENING</b>						
GPRO PREV-5	Preventive Care and Screening: Screening Mammography	54%	74%	63%	76%	85%
GPRO PREV-6	Preventive Care and Screening: Colorectal Cancer Scrng	52%	60%	37%	64%	76%
GPRO PREV-7	Preventive Care and Screening: Influenza Immunization for Patients ≥ 50 Years Old	51%	67%	50%	67%	79%
GPRO PREV-8	Preventive Care and Screening: Pneumonia Vaccination	55%	62%	40%	62%	86%

- DM-2 is a measure of poorly controlled blood sugar: Higher scores (and percentile rankings) on this measure reflect worse performance.
- NAs within the table indicate that individuals did not have an opportunity to report on a measure that was comparable to the measure shown for GPROs.

The group practice performance rates were statistically reliable at a high level across the vast majority of the measures. We examine reliability because the clinical measures are derived from samples of the group practice's attributed beneficiaries. In this context, reliability means the group practices' performance rates would be similar or the same if a different sample population of the group practice were used for quality measurement. The average reliability score for the group practices' quality measures related to coronary artery disease ranged from 0.86 to 0.99, for diabetes from 0.87 to 0.99, for heart failure from 0.79 to 0.99, for hypertension from 0.89 to 1.00, and for the preventive measures from 0.94 to 0.98. All groups' quality measures achieved at least a .50 score with most group practices well above that level.

The percentage of primary care physicians in a group practice did not correlate with higher performance on the clinical care measures, even though the 26 quality measures focused on effective primary care. As noted above, in five group practices, medical specialists rather than primary care providers delivered care to the majority of attributed beneficiaries. Two of these five group practices were among the top five group practices in overall quality across all quality measures.

### **C. Quality of Care Measures: Potentially Avoidable Hospitalization Measures**

In addition to the 26 quality measures included in the GPRO, the confidential feedback reports also contained each group practice's performance on measures of potentially avoidable hospitalizations for six ambulatory care sensitive conditions (ACSCs). These are conditions for which timely ambulatory care may prevent complications or exacerbation of a disease state. The measures were based on measures developed by the Agency for Healthcare Research and Quality (AHRQ) and more information can be found at: [http://www.qualityindicators.ahrq.gov/modules/pqi\\_overview.aspx](http://www.qualityindicators.ahrq.gov/modules/pqi_overview.aspx).

The six ambulatory care sensitive conditions CMS used include: (1) bacterial pneumonia, (2) urinary tract infection (UTI), (3) dehydration, (4) heart failure (HF), (5) chronic obstructive pulmonary disease (COPD), and (6) diabetes – CMS developed a composite measure based on short-term diabetes complications, uncontrolled diabetes, long-term diabetes complications, and lower extremity amputation for diabetes.

For the three acute conditions (bacterial pneumonia, UTI, and dehydration), CMS calculated the performance rate as the number of hospitalizations for beneficiaries attributed to the group practice who were identified as having been hospitalized for that condition in 2010 (the numerator), divided by the sum of all beneficiaries attributed to the group practice (the denominator). For the three chronic conditions (HF, COPD, diabetes), CMS calculated the performance rate as the number of hospitalizations for that condition in 2010 (the numerator), divided by the sum of attributed beneficiaries identified in 2009 as having the condition. For both acute and chronic conditions, the performance rates are expressed per 1,000 attributed beneficiaries. The ACSC measures were not risk adjusted for beneficiary demographic characteristics and chronic disease status.

Table 5 shows the mean, as well as minimum, and maximum performance rate for each of the six ACSC measures.

**Table 5. Performance Rates (per thousand attributed beneficiaries) for the ACSCs**

(ACSC)	Mean	Minimum	Maximum
Diabetes	25	7	39
COPD	95	53	142
CHF	122	66	200
Bacterial Pneumonia	12	7	20
UTI	8	4	13
Dehydration	3	0	11

For the three ACSCs related to chronic conditions, a majority of group practices achieved a reliability score greater than .70. In particular, 34 out of 35 groups for diabetes, 33 out of 35 for COPD, and all 35 groups for heart failure achieved a reliability score greater than .70. Of those group practices that did not have reliability score greater than 0.70, all of them achieved statistical reliability of greater than 0.50.

For the three ACSCs related to acute conditions, the vast majority of group practices achieved a reliability score greater than 0.70. In particular, 34 out of 35 groups for bacterial pneumonia, 31 out of 35 for UTI, and 33 out of 35 groups for dehydration achieved statistical reliability of greater than 0.70. Of those groups that did not achieve a statistical reliability greater than 0.70, all groups for bacterial pneumonia, 34 out of 35 for UTI, and 34 out of 35 groups for dehydration achieved a reliability score of greater than 0.50.

**Cost of Care Measures**

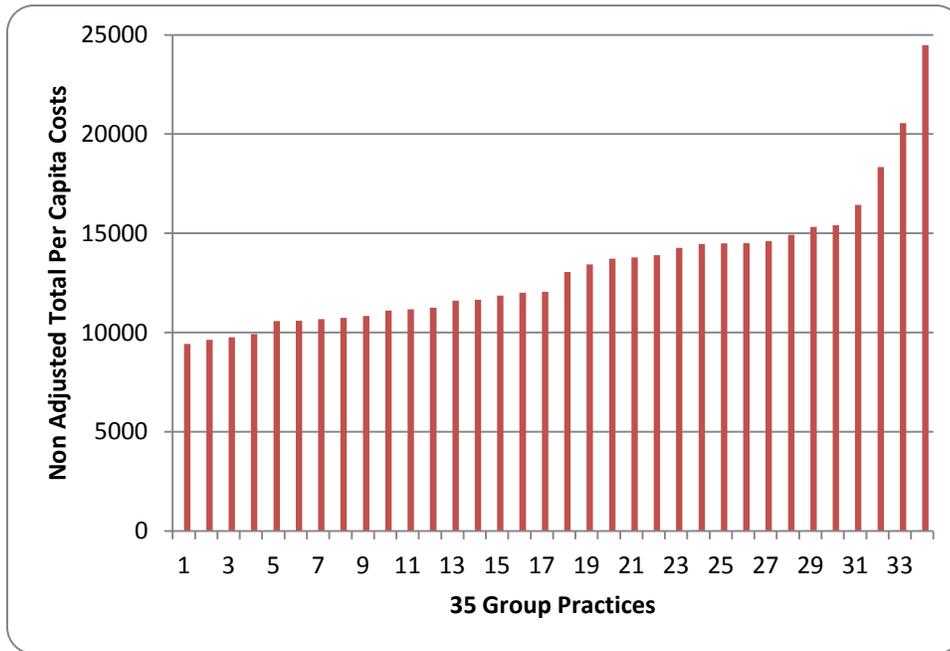
We examined five measures of cost: total per capita costs for beneficiaries attributed to the group practice and total per capita for beneficiaries that had the following four chronic conditions: diabetes, heart failure, chronic obstructive pulmonary disease, and coronary artery disease.

In calculating these measures, CMS first standardized the Medicare payments to ensure fair comparisons. Geographic variations in Medicare payments to providers can reflect factors unrelated to the care provided to beneficiaries. All Medicare payments have been standardized such that a given service is assigned the same dollar value across all providers within the same facility type or setting, regardless of geographic location or differences in Medicare payment rates among facilities. More information about how CMS standardized payments can be found in the September 2011 document describing the methodologies used in the 2010 QRURs, which can be accessed at:

[http://www.cms.gov/PhysicianFeedbackProgram/Downloads/2010\\_GPRO\\_QRUR\\_Detailed\\_Methodology.pdf](http://www.cms.gov/PhysicianFeedbackProgram/Downloads/2010_GPRO_QRUR_Detailed_Methodology.pdf)

Across the 35 group practices, the standardized total per capita costs for attributed beneficiaries was \$13,135. Thus on average, Medicare paid providers \$13,135 per beneficiary attributed to each group practice. Table 6 displays the range of total per capita costs from lowest to highest: \$9,124 to \$24,480 and an absolute difference of \$15,536 per beneficiary.

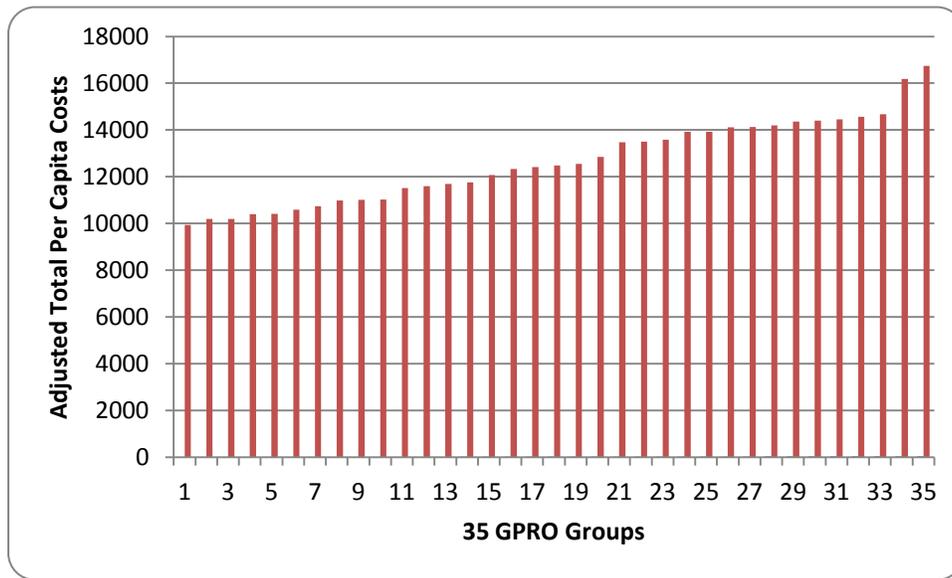
**Table 6. Unadjusted Per Capita Costs for the 35 Groups**



After CMS standardized payments, we risk adjusted total per capita costs based on the unique mix of Medicare beneficiaries attributed to each group. Recognizing that physiologic differences among beneficiaries can affect their medical costs, regardless of the care provided, the risk adjustment methodology includes markers for patient demographics, socioeconomic factors, and prior diagnoses. Our risk adjustment methodology is based on the CMS’ Hierarchical Clinical Conditions (HCC) model that assigns ICD-9 diagnosis codes (each with similar disease characteristics and costs) to 70 clinical conditions to capture medical condition/cost risk. The HCC risk scores also incorporate patient age, gender, reason for Medicare eligibility (aged or disabled), and Medicaid eligibility. The risk adjustment model also takes into account whether the beneficiary has been diagnosed with end stage renal disease (ESRD). More information about how CMS risk adjusted per capita costs can be found in the September 2011 document describing the methodologies used in the 2010 QRURs, which can be accessed at: [http://www.cms.gov/PhysicianFeedbackProgram/Downloads/2010\\_GPRO\\_QRUR\\_Detailed\\_Methodology.pdf](http://www.cms.gov/PhysicianFeedbackProgram/Downloads/2010_GPRO_QRUR_Detailed_Methodology.pdf)

Table 7 shows that after risk adjustment, the adjusted total per capita costs was \$12,652 with a range of \$9,932 to \$16,736 and an absolute difference of \$6,804. Thus the risk adjustment methodology had the effect of reducing the absolute difference between the groups with the lowest and highest total per capita range by 55.7%. In particular, the lowest cost third of the groups were adjusted upward by an average of 6.2% and the highest (most expensive) third of the groups were lowered by 10.4%. The middle third of the groups, on average, were adjusted downward by 0.1%, but the range of adjustments were -10.3 to +8.2%

**Table 7. Risk Adjusted Per Capita Costs for the 35 Groups**



Among the five groups for which medical specialists provided the plurality of care to attributed beneficiaries, three medical groups had their costs risk adjusted downward. Two of the five groups had their unadjusted per capita costs adjusted upward.

The physician feedback reports also showed the percentage of professional who treated the beneficiaries attributed to the group practice, but who did not bill under the group practice’s tax identification number (TIN). On average, 42 % of the professionals that cared for attributed patients were outside the group practice. The portion of eligible professionals seeing attributed beneficiaries but not billing under the group TIN ranged from 18% to 84%. We also found a weak association between the percent of professionals who did not bill under the group practice’s TIN and higher total per capita costs for the attributed beneficiaries. The correlation was 0.12.

All 35 group practices achieved statistical reliability scores greater than 0.70 for the overall per capita cost measures and the four subgroup-specific cost measures. In particular, the group practices achieved an average reliability score of 0.99 for the overall per capita cost measure. In addition, all 35 group practices achieved a reliability of greater than 0.70 across all sub cost categories. The average reliabilities were 0.93 for heart failure, 0.91 for COPD, 0.95 for diabetes, and 0.96 for CAD.

**Comparison of Quality of Care Furnished to Cost**

We found almost no association between quality of care furnished and the total risk-adjusted per capita cost for each group practice. We constructed a simple quality score by taking the average of the 32 performance rates (26 clinical quality measures and six ACSC rates). We translated the ACSC rates into percentages with the lowest ACSC rate equal to 100% (because lower rates are better) and the highest ACSC rate equal to 0%. Figure 2 is a scatter diagram that displays the relationship between the quality of care furnished by each group practice and the total risk-adjusted per capita cost. The correlation between the two variables is 2.0%.

**Figure 2. Quality of Care Compared To Cost**

