DRAFT

Fee-for-Service Medicare

Quality and Resource Use Reports (QRUR)

For Selected Medical Practice Groups

CMS is in the early stages of developing feedback reports that will provide physicians (and eventually, other medical professionals) with confidential information about the care provided to their Medicare fee-for-service patients, based on Medicare claims submitted from all providers caring for their patients. These reports will provide a snapshot of the quality and average annual costs of care provided to a medical group's Medicare patients, compared to the average among medical groups practicing across the U.S.

The sample report "template" shown here displays the type of information that will be available late in 2010 to approximately 36 medical practice groups. For purposes of these first quality and resource use reports for medical practice groups, we have selected medical groups that serve at least 5,000 Medicare beneficiaries. The groups were identified through the common tax identification number (TIN) on Medicare claims submitted by physicians practicing in one of 12 metropolitan areas during 2007. At this time, group-level confidential feedback reports have been created only for these 36 medical practice groups. In November 2010, CMS will send letters to these groups informing them how they can obtain their confidential feedback report. If your medical practice group does not receive such a letter, your group was not part of this initial sample, and therefore no feedback report will be available for your group. CMS has also produced individual feedback reports for approximately 1,600 physicians who were affiliated with the 36 medical group practices (i.e., physicians who filed claims using the same group TIN). A sample template of the individual feedback report is also posted on this web site.

Beginning in 2011, CMS will create and provide feedback reports for increasing numbers of groups and, perhaps, individual physicians. Over the next several years, CMS plans to provide quality and resource use reports to most of the several hundred thousand physicians who participate in fee-for-service Medicare. We expect to improve both the content and format of feedback reports as we garner input and use more advanced methods of analysis.

Please bear in mind that the data displayed in the template <u>are</u> <u>not</u> <u>real</u> and are included only to demonstrate how a typical report might look. The specific displays included in a medical practice group report will be determined by the types of medical conditions and the services provided to Medicare patients in that group's practice during a calendar year.

The Centers for Medicare & Medicaid Services' Office of Research, Development, and Information (ORDI) strives to make information available to all. Nevertheless, portions of our files including charts, tables, and graphics may be difficult to read using assistive technology.

Persons with disabilities experiencing problems accessing portions of any file should contact ORDI through e-mail at ORDI_508_Compliance@cms.hhs.gov.

DRAFT

FEE-FOR-SERVICE MEDICARE QUALITY AND RESOURCE USE REPORT

ABC Healthcare Associates

Tax Identification Number (TIN) xxxx####

This confidential Medicare Quality and Resource Use Report (QRUR) is being provided to medical practice groups (each identified by a single tax identification number) that meet the following criteria:

- The medical group is located in one of 12 **designated metropolitan areas**
- The medical group has at least 5,000 Medicare beneficiaries **attributed** to the group
- The medical group has both primary care practitioners and medical or surgical specialists practicing with the group.

This report is provided *for information purposes only.*
It *will not affect* Medicare payment or participation in the Medicare program.

FEE-FOR-SERVICE MEDICARE PERFORMANCE HIGHLIGHTS
ABC Healthcare Associates

QUALITY INDICATORS

Compared to the average (mean) among medical practice groups in 12 metropolitan areas:

- Quality indicators for your group's patients were
  - ***Higher*** than average
    - on **4 out of 4** quality measures for patients with ***diabetes***
    - on **1 out of 2** ***preventive screening*** measures
  - ***Lower*** than average
    - on **3 out of 3** quality measures for patients with ***cardiovascular conditions***
- Your group's patients were admitted to the hospital
  - ***Less often*** than average for
    - ***diabetes***
    - ***bacterial pneumonia***
  - ***More often*** than average for
    - ***dehydration***

COSTS OF CARE

Compared to the averages (means) among medical practice groups in 12 metropolitan areas:

- The 2007 ***per capita costs*** (average annual treatments costs) of your group's Medicare patients were
  - ***Higher*** than the average per capita costs among all medical practice groups
- The per capita costs of your group's patients were
  - ***Lower*** than average for
    - ***procedures***
    - ***post acute care***
    - ***other services***
  - ***Higher*** than average for
    - ***evaluation and management services***
    - ***hospital inpatient services***
    - ***hospital outpatient and emergency services***
- For your group's patients with chronic conditions, average annual per capita costs were
  - ***Lower*** than average for patients with
    - ***chronic obstructive pulmonary disease***
  - ***Higher*** than average for patients with
    - ***congestive heart failure***
    - ***coronary artery disease***
    - ***prostate cancer***

This confidential Medicare Quality and Resource Use Report is intended **for informational purposes only.** It will not affect your participation in the Medicare program or your Medicare payment. This information will not be reported publicly.

INTRODUCTION

This report provides information on the quality and costs of care provided to Medicare beneficiaries in your medical group's practice, based on Medicare claims submitted in 2007 from all providers caring for patients **attributed** to ABC Healthcare Associates. It also tells you how the quality and costs of your patients' care compared to the average for Medicare patients of medical practice groups in 12 **designated metropolitan areas** in the U.S.[1]

Part I provides summary information about **quality of care** indicators for Medicare patients attributed to ABC Healthcare Associates. This includes

- quality measures for common health conditions and preventive treatments derived from your patients' Medicare claims data using the methodology of the **Generating Medicare Physician Quality Performance Measurement Results** (GEM) project, and
- your Medicare patients' acute care hospitalization rate for conditions where timely and effective ambulatory care can prevent or reduce the need for admission to the hospital (**ambulatory care sensitive conditions**).

Part II provides summary information about the average annual **costs** of treating your Medicare patients, based on all Medicare Part A and B claims submitted by all providers who treated your patients. This includes

- your patients' total **per capita costs** (average annual costs per patient), based on all Medicare Part A and B claims submitted by all providers (including those not affiliated with ABC Healthcare Associates) who treated patients attributed to your group, and
- a breakdown of per capita costs by specific categories of service.

Part III provides summary information about the average annual costs of subgroups of patients with **specific chronic conditions** common in the Medicare population, including congestive heart failure (CHF), chronic obstructive pulmonary disease (COPD), coronary artery disease (CAD), diabetes, and prostate cancer.

Cost and quality information are reported only if the number of patients included in a given measure meets a minimum threshold, as indicated in each data display. All cost data have been **risk adjusted** to account for differences in patient characteristics that may affect costs. All comparative cost data use **price standardization** to account for differences in Medicare payments across geographic regions due to such factors as wages or rents.

Terms **underlined and in blue** are defined in the Glossary**.**

The **Methodology** section describes how quality and cost data are calculated.

[1] The 12 metropolitan areas are Boston, MA; Cleveland, OH; Greenville, SC; Indianapolis, IN; Lansing, MI; Little Rock, AR; Miami, FL; Northern NJ; Orange County, CA; Phoenix, AZ; Seattle, WA; and Syracuse, NY.

PART I: QUALITY OF CARE INDICATORS

This section provides summary information about the **quality of the care** provided to Medicare patients attributed to ABC Healthcare Associates, based on

- performance results for 12 measures of clinical quality that reflect recommended preventive and clinical care for some common health conditions, derived from 2007 Medicare claims data using the methodology of the **Generating Medicare Physician Quality Performance Measurement Results** (GEM) project (http://www.cms.hhs.gov/GEM/), and
- rates of hospital admissions for ambulatory care sensitive conditions, derived from 2007 Medicare claims data.

Medicare Physician Quality Performance Measurement Results (GEM)

Using the methodology developed for the GEM project, the Centers for Medicare & Medicaid Services generated performance results for 12 measures of clinical quality. (See the Methodology section of this report for more information about the GEM project.)

Exhibit 1 summarizes ABC Healthcare Associates' performance on GEM measures, compared to mean performance rates in medical practice groups across 12 metropolitan areas, based on all Medicare claims submitted for patients in 2007.

Exhibit 1. ABC Healthcare Associates' Performance on GEM Measures, 2007

Clinical or Preventive Service GEM Measure	ABC Healthcare Associates		Medical Practice Groups in 12 Metro Areas	
	Number of Patients for Whom This Clinical Service Was Indicated	**Percent of Eligible Patients Who Received Designated Service***	*Number of Medical Practice Groups for Which Measure Was Calculated**	**Mean Performance Rate**
LDL Screening for Beneficiaries ≤ 75 with Diabetes		**94**		
Eye Exam (retinal) for Beneficiaries ≤ 75 with Diabetes		**69**		
HbA1c Testing for Beneficiaries ≤ 75 with Diabetes		**76**		
Medical Attention for Nephropathy for Diabetics ≤ 75		**74**		
LDL-C Screening for Beneficiaries ≤ 75 with Cardiovascular Conditions		**96**		
β-Blocker Treatment after Heart Attack		**95**		
Persistence of β-Blocker Treatment after Heart Attack		**95**		
Colorectal Cancer Screening for Beneficiaries ≤ 80		**56**		
Breast Cancer Screening for Women ≤ 69		**87**		
Annual Monitoring for Beneficiaries on Persistent Medications***		**65**		
Antidepressant Medication Management (Acute Phase)		**67**		
Disease-Modifying Anti-Rheumatic Drug Therapy in Rheumatoid Arthritis		**65**		

** Consistent with GEM criteria, measures are calculated only if the service was indicated for 11 or more patients.*

****Includes ACE Inhibitors or Angiotensin Receptor Blockers, Digoxin, Diuretics, and Anti-Convulsants*

Hospital Admissions for Ambulatory Care Sensitive Conditions

Ambulatory care sensitive conditions (ACSCs) are medical conditions for which timely and coordinated outpatient care can potentially prevent the need for hospitalization. Exhibit 2 shows how hospital admission rates for ACSCs for all Medicare patients attributed to ABC Healthcare Associates compared to the mean admission rates among medical practice groups in 12 metropolitan areas.

Exhibit 2. Hospital Admission Rates* for Ambulatory Care Sensitive Conditions, 2007

Condition	Per Capita Admission Rates for Medicare Patients in ABC Healthcare Associates	Mean Per Capita Admission Rates Among Medical Practice Groups in 12 Metro Areas (n=284)
Total	**2.37**	**1.34**
Diabetes	0.58	0.32
Chronic Obstructive Pulmonary Disease	0.44	0.08
Congestive Heart Failure	0.42	0.43
Bacterial Pneumonia	0.87	0.47
Urinary Tract Infection	0.06	0.04
Dehydration	0	0.02

**Rates are based on Medicare claims submitted in 2007. The denominator used to calculate condition-specific admission rates is the total number of Medicare patients attributed to a medical practice group, not the number diagnosed with a given condition. Rates are reported only for medical practice groups with 30 or more attributed patients.*

Hospitals and Hospital Quality

Based on all Medicare Part A claims submitted in 2007, at least ten percent of your patients' inpatient stays were at one of the hospitals shown in Exhibit 3. Information on the quality performance of hospitals is available on the Hospital Compare website (http://www.hospitalcompare.hhs.gov).

Exhibit 3. Hospitals in Indianapolis Metropolitan Area Admitting ABC Healthcare Associates' Patients, 2007

Hospital	Medicare Patients in ABC Healthcare Associates	
	Number of Inpatient Stays, 2007	Percent of All Inpatient Stays, 2007
Total	##	100%
Barrett Hospital		
Gardner Hospital		
Hillside Hospital		

Quality of Post-Acute Care in Nursing Homes and Home Health Agencies

Information on the quality performance of nursing homes and home health agencies in the Indianapolis metropolitan area is available on the following Medicare websites:

- Nursing Home Compare (http://www.medicare.gov/NHCompare/)
- Home Health Compare (http://www.medicare.gov/HHCompare/).

PART II: COSTS OF CARE

This section provides summary information about the average annual **costs of care** provided to Medicare patients attributed to ABC Healthcare Associates.

The cost information in this report is derived from all Medicare Part A and B claims submitted by all providers who treated Medicare patients attributed to ABC Healthcare Associates, including those not affiliated with your group. To the extent that Medicare claims include such information, costs are comprised of payments to providers from Medicare, from beneficiaries (copayments and deductibles), and from third-party private payers.

All cost data have been **risk adjusted** to account for differences among patient characteristics, and **price standardized** to account for cost differences across geographic regions and different types of health care facilities.

Per Capita Costs

Based on all Medicare Part A and Part B claims submitted by all providers for your Medicare patients in 2007, risk-adjusted and price-standardized per capita costs for # Medicare patients attributed to ABC Healthcare Associates were $**20,123**.

Exhibit 4 shows how the per capita costs of your Medicare patients, before and after risk adjustment[2], compared to the mean per capita costs among 284 medical practice groups in 12 designated metropolitan areas.

Exhibit 4. Medicare Patients' Per Capita Costs*, 2007

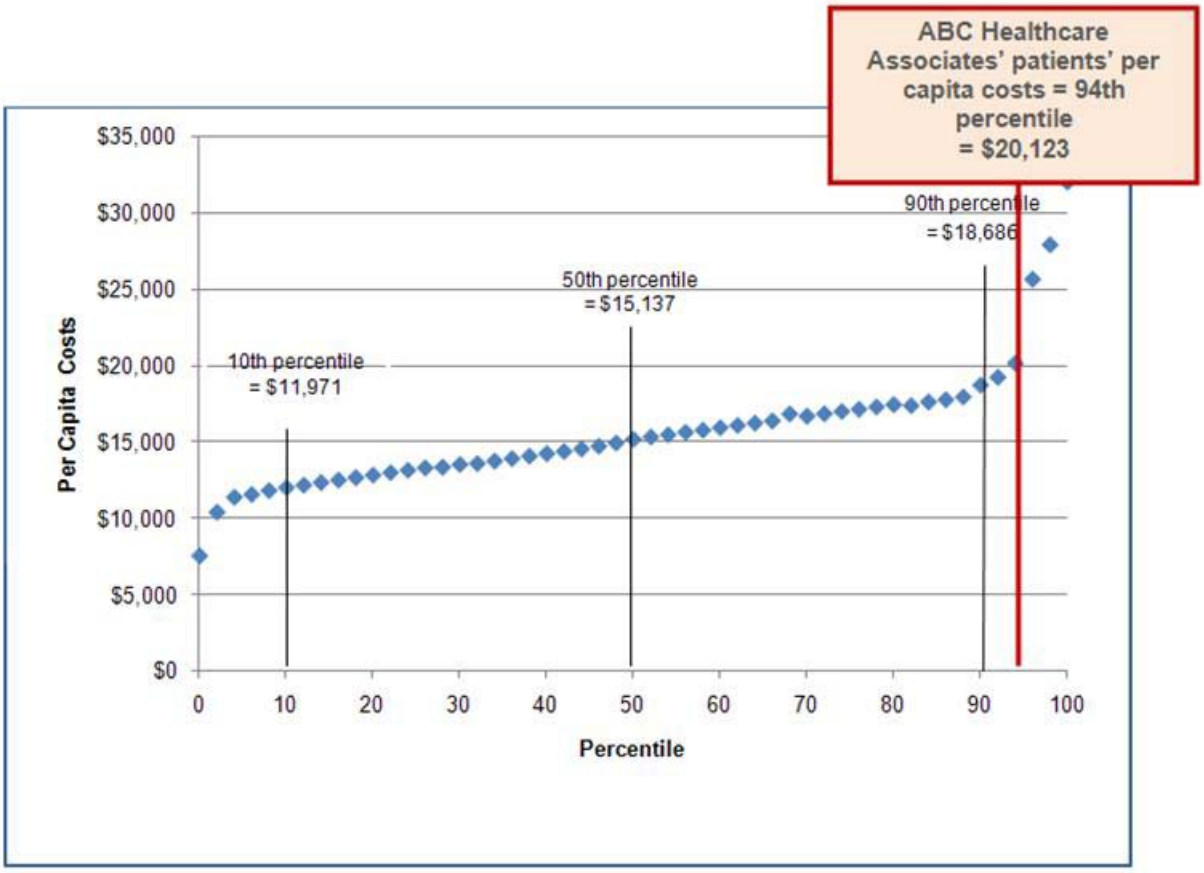
Per Capita Costs for ABC Healthcare Associates (Price Standardized)		Mean Per Capita Costs Among Medical Practice Groups in 12 Metropolitan Areas (n=284)
Before Risk Adjustment	**After Risk Adjustment**	**Price Standardized and Risk Adjusted**
$XX,XXX	$20,123	$17,323

**Per capita costs are based on all Medicare Part A and Part B claims submitted in 2007 by all providers (including professionals, hospitals, and post-acute care facilities) for Medicare beneficiaries attributed to a medical practice group.*

[2] For medical practice groups that have a higher than average proportion of patients with serious medical conditions or other risk factors, unadjusted costs will be higher than adjusted costs. For medical practice groups with a healthier patient population, unadjusted costs will be lower than adjusted costs. See the Methodology section of this report for a description of risk adjustment used for this report.

Per capita costs for 284 medical practice groups in the 12 metropolitan areas in 2007 ranged from a low of $7,512 to a high of $32,123. Average patient costs for your group were at the **94th** percentile of average patient costs among all medical practice groups in 12 metropolitan areas. (Exhibit 5**)**

Exhibit 5. Medicare Patients' Per Capita Costs* Among Medical Practice Groups in 12 Metropolitan Areas (n=284) by Percentile, 2007

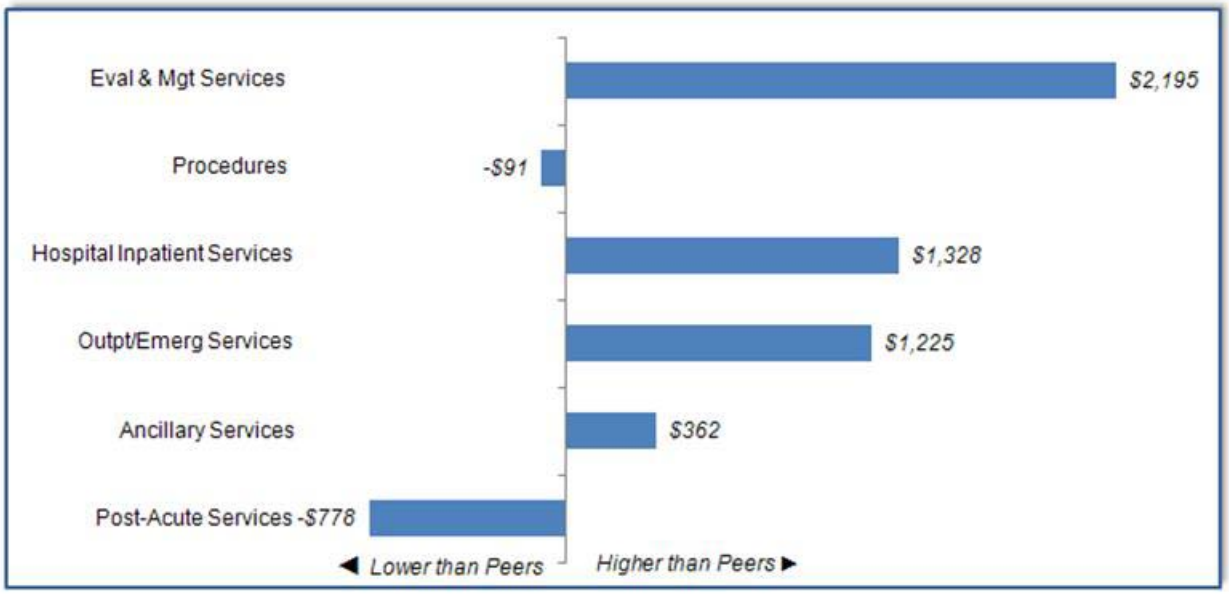


**Per capita costs shown here are risk adjusted and price standardized, and are based on all Medicare Part A and Part B claims submitted in 2007 by all providers (including professionals, hospitals, and post-acute care facilities) for Medicare beneficiaries attributed to a medical practice group.*

Per Capita Costs for Specific Services

Exhibit 6 shows the difference between per capita costs of specific categories of service for Medicare patients attributed to ABC Healthcare Associates and the average (mean) among 284 medical practice groups in 12 metropolitan areas in 2007.

Exhibit 6. Difference Between Your Group's Per Capita Costs* of Services and Mean Among Medical Practice Groups in 12 Metropolitan Areas, 2007



**Per capita costs are based on all Medicare Part A and Part B claims submitted in 2007 by all providers (including professionals, hospitals, and post-acute care facilities) for Medicare beneficiaries attributed to your group. All per capita costs are price standardized and risk adjusted.*

Exhibit 7 shows additional detail on per capita costs of services for Medicare patients attributed to ABC Healthcare Associates, compared to average per capita patient costs of 284 medical practice groups in the 12 metropolitan areas.

Exhibit 7. Your Group's Medicare Patients' Per Capita Costs* for Specific Services Compared to Mean Among Medical Practice Groups in 12 Metropolitan Areas, 2007

Service Category	Medicare Patients in ABC Healthcare Associates Using Any Service in This Category	Per Capita Costs for Medicare Patients in ABC Healthcare Associates (n=5,653)	Mean Per Capita Costs for Medical Practice Groups in 12 Metro Areas (n=284)	Amount by Which Your Group's Costs are Higher or (Lower) than Mean in 12 Metro Areas
TOTAL	**Number Percent ### %**	**$20,123**	**$17,323**	**$2,800**
Average number of professionals in all care settings who treated each patient = 15				
Percent of professionals treating your patients who were part of your medical practice group = 50%				
Evaluation & Management Services in All Settings				
All Professional Evaluation & Management Services	**100%**	**$5,332**	**$3,137**	**$2,195**
Primary Care Physicians	100%	$1,847	$859	
Medical Specialists	65%	$2,100	$1,288	
Surgeons	40%	$885	$743	
Emergency Department Physicians	22%	$500	$247	
Other Professionals**	%	$	$	
Procedures in All Settings				
All Procedures	**65%**	**$362**	**$453**	**($91)**
Primary Care Physicians	42%	$181	$146	
Medical Specialists	38%	$95	$162	
Surgeons	56%	$54	$74	
Emergency Department Physicians	18%	$32	$71	
Other Professionals**	%			
Hospital Services				
Inpatient Hospital Facility Services	**44%**	**$2,535**	**$1,207**	**$1,328**
Outpatient and Emergency Services	**30%**	**$3,361**	**$2,136**	**$1,225**
Clinic or Emergency Visits	24%	$1,052	$910	
Procedures	22%	$989	$526	
Laboratory Tests	30%	$704	$421	
Imaging Services	26%	$616	$279	
Services in Ambulatory Settings				
All Ancillary Services	**80%**	**$3,984**	**$3,622**	**$362**
Laboratory Tests	80%	$1,851	$1,441	
Imaging Services	69%	$1,339	$1,435	
Durable Medical Equipment	18%	$794	$746	
Post-Acute Care				
All Post-Acute Services	**20%**	**$1,167**	**$1,945**	**($778)**
Skilled Nursing Facility	12%	$502	$884	
Psychiatric or Rehab Facility	5%	$317	$501	
Hospice	5%	$236	$363	
Home Health	16%	$112	$197	
Other Services				
All Other Services* **	**100%**	**$3,381**	**$4,823**	**($1,442)**

**In calculating service-specific per capita costs, the numerator is the total costs for a category of service used by attributed patients; the denominator is the total number of Medicare patients attributed to a medical practice group, not just those who used the service.*

***Other Professionals include, for example, physician assistants, nurse practitioners, clinical nurse specialists, certified nurse anesthetists, clinical social workers, clinical psychologists, dieticians, audiologists, physical therapists, and speech therapists.*

**** Includes services not captured in other categories, such as anesthesia, ambulance services, chemotherapy, other Part B drugs, orthotics, chiropractic, enteral and parenteral nutrition, vision services, hearing and speech services, and influenza immunizations.*

PART III: COSTS FOR SUBGROUPS OF PATIENTS WITH CHRONIC CONDITIONS

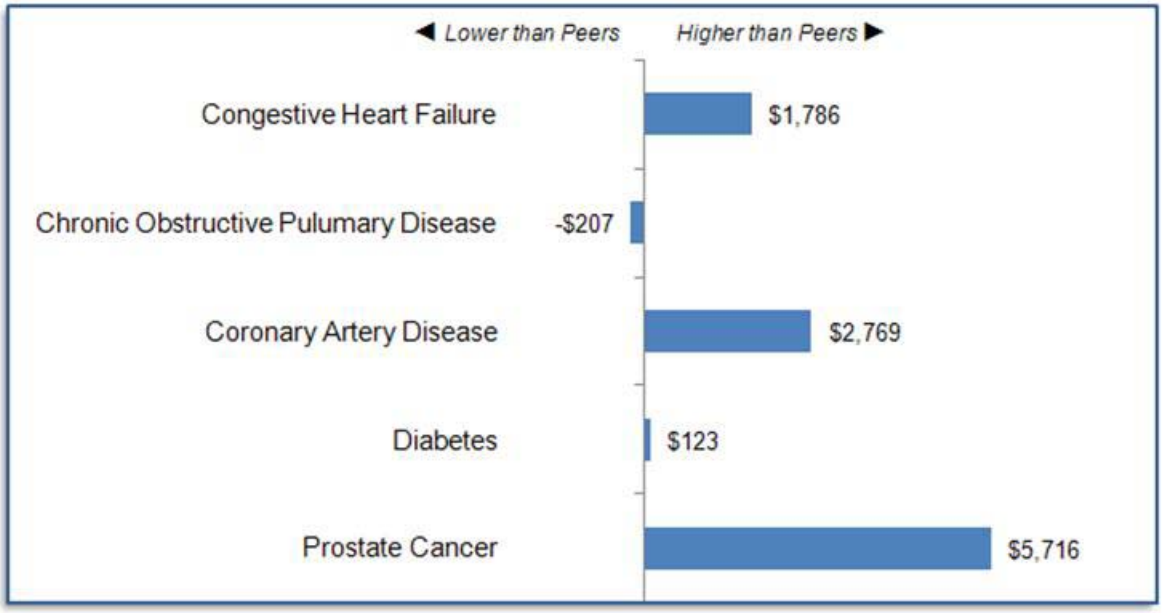
This section provides information on the total risk-adjusted and price-standardized per capita costs incurred by subgroups of your Medicare patients identified as having specific **chronic health conditions** in 2007. It also provides information on hospital utilization by subgroup.

Total Per Capita Costs by Subgroup

Exhibit 8 shows the difference between the total per capita costs of Medicare patients attributed to ABC Healthcare Associates by chronic condition subgroup and the average (mean) costs for each subgroup among 284 medical practice groups in 12 metropolitan areas.

The subgroups are not mutually exclusive, which means that a beneficiary's costs may be included in the per capita costs for more than one condition subgroup.

Exhibit 8. Difference between Your Group's Per Capita Costs* of Care for Patient Subgroups in ABC Healthcare Associates, and Mean Among Medical Practice Groups in 12 Metropolitan Areas, 2007



**Per capita costs are based on all Medicare Part A and Part B claims submitted by all providers in 2007 for Medicare beneficiaries attributed to a medical practice group within each diagnostic subgroup, whether or not costs were related to treatment of that condition. All costs are price standardized and risk adjusted. Costs are calculated only for subgroups with a minimum of 30 attributed patients.*

Total Hospital Utilization by Subgroup

Exhibit 9 shows the number of your group's Medicare patients in each chronic condition subgroup in 2007 and the per capita utilization rates for inpatient and emergency hospital services in 2007 among patients within each subgroup.

Hospitalizations and emergency department (ED) use are not restricted to the condition of interest. All inpatient hospital admissions and ED visits are included, whether or not such use was directly related to the condition of interest.

Exhibit 9. Total Use of Inpatient and Emergency Hospital Services, by Chronic Condition Subgroup for Your Group's Medicare Patients*, 2007

Chronic Condition Subgroup	Medicare Patients in ABC Healthcare Associates		
	Number of Patients with This Condition	Average Number of Inpatient Hospital Admissions per Patient with This Condition	Average Number of Hospital ED Visits (Without a Hospital Admission) per Patient with This Condition
Congestive Heart Failure	78		
Chronic Obstructive Pulmonary Disease	92		
Coronary Artery Disease	189		
Diabetes	164		
Prostate Cancer	56		

**Hospital utilization statistics are based on any reported use of inpatient or emergency services.*

***Statistics are calculated only for chronic condition subgroups with a minimum of 30 attributed patients.*

Total Per Capita Costs for Congestive Heart Failure

Based on all Medicare Part A and Part B claims submitted in 2007 for ## patients in the congestive heart failure (CHF) subgroup attributed to ABC Healthcare Associates, per capita costs for Medicare patients with this condition were **$6,251**.

Exhibit 10.CHF shows how the per capita costs of your Medicare patients with CHF, before and after risk adjustment[3], compared to the mean per capita costs of CHF patients in 257 medical practice groups in 12 designated metropolitan areas.

Costs displayed include all costs for each beneficiary diagnosed with CHF, not just costs related to treatment of CHF itself.

Exhibit 10.CHF. Per Capita Costs* of Medicare Patients with CHF, 2007

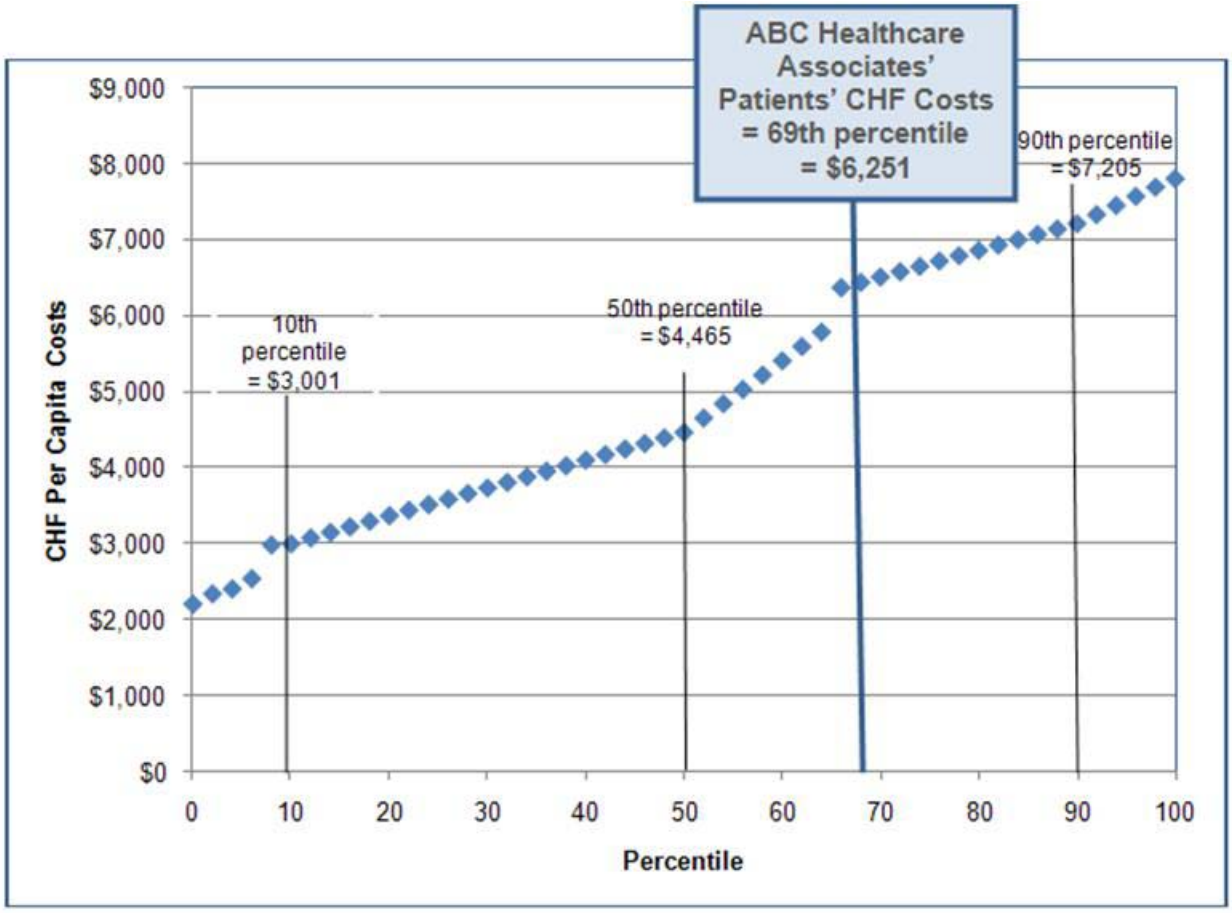
Per Capita Costs for Medicare Patients with CHF in ABC Healthcare Associates (Price Standardized)		Mean Per Capita Costs of CHF Patients in Medical Practice Groups in 12 Designated Metropolitan Areas (n=257)
Before Risk Adjustment	**After Risk Adjustment**	**Price Standardized and Risk Adjusted**
$XX,XXX	$6,251	$4,465

**Per capita costs are based on all Medicare Part A and Part B claims submitted in 2007 by all providers (including professionals, hospitals, and post-acute care facilities) for Medicare beneficiaries with CHF attributed to a medical practice group.*

[3] For medical practice groups that have a higher than average proportion of CHF patients with serious co-morbidities or other risk factors, unadjusted costs will be higher than adjusted costs. For medical practice groups whose CHF patients have fewer risk factors, unadjusted costs will be lower than adjusted costs. See the Methodology section of this report for a description of risk adjustment used for this report

Among 257 medical practice groups in 12 metropolitan areas, per capita costs for patients with CHF ranged from a low of $2,209 to a high of $7,796. Per capita costs for your medical group's patients with this condition were at the **69th percentile** among medical practice groups treating patients diagnosed with this condition. (Exhibit 11.CHF).

Exhibit 11.CHF. Per Capita Costs* of Care for Medicare Patients with CHF Among Medical Practice Groups Treating Patients with This Condition in 12 Metropolitan Areas (n=257) in 2007, by Percentile



**Per capita costs are based on all Medicare Part A and Part B claims submitted by all providers in 2007 for Medicare beneficiaries within this diagnostic subgroup attributed to each medical practice group, whether or not costs were related to treatment for that condition. All costs are price standardized and risk adjusted. Costs are calculated only for medical practice groups with a minimum of 30 attributed patients in the subgroup.*

Total Per Capita Costs for Chronic Obstructive Pulmonary Disease

Exhibit 10.COPD
Exhibit 11.COPD

Total Per Capita Costs for Coronary Artery Disease

Exhibit 10.CAD
Exhibit 11.CAD

Total Per Capita Costs for Diabetes

Exhibit 10.Diabetes
Exhibit 11.Diabetes

Total Per Capita Costs for Prostate Cancer

Exhibit 10.Prostate Cancer
Exhibit 11.Prostate Cancer

GLOSSARY

(Medical Practice Groups)

AMBULATORY CARE SENSITIVE CONDITIONS

Ambulatory care-sensitive conditions (ACSCs) are conditions for which good outpatient care can prevent complications or more serious disease. These conditions include congestive heart failure, chronic obstructive pulmonary disease, urinary tract infection, bacterial pneumonia, diabetes, and dehydration. High or increasing rates of hospitalization for these conditions in a defined population of patients may indicate inadequate access to high-quality ambulatory care.

Hospital admission rates for ACSCs are calculated by dividing the number of beneficiaries attributed to the medical group who were identified as having been hospitalized for that condition in 2007 (the numerator) by the sum of attributed beneficiary weights, where a beneficiary's weight is equal to the portion of the year the beneficiary was alive and enrolled in both Parts A and B fee-for-service (FFS) Medicare in 2007 (the denominator). Hospital admission rates for ACSCs are only reported at the medical practice group level and are not reported for individual medical professionals.

ATTRIBUTION OF BENEFICIARIES TO MEDICAL PRACTICE GROUPS

Costs and ACSC Admissions

For the purposes of this Quality and Resource Use Report (QRUR), Medicare beneficiaries, and the **costs** and **ACSC hospital admission rates** associated with them, are **attributed to the single medical practice group** that billed for the **greatest number** of office-based, inpatient, emergency department, or consultation **evaluation and management (E&M) claims** (i.e., provider visits) in 2007, provided that the medical practice group billed for **at least 30 percent** of each beneficiary's **E&M costs** in 2007.

Clinical Quality

Medicare beneficiaries, and the primary care or specialty-specific **GEM clinical quality measures** associated with them, are **attributed to the single medical practice group** whose primary care or specialist providers (cardiologists, endocrinologists, nephrologists, neurologists, neuropsychiatrists, psychiatrists, or rheumatologists) billed for the **greatest number** of office-based, outpatient, or consultation **E&M claims** (i.e., provider visits) in 2007, provided that the medical practice group billed **at least two eligible E&M visits** for the beneficiary in 2007.

DESIGNATED METROPOLITAN AREAS

For the purposes of this QRUR, the following **designated metropolitan areas** are represented: Boston, MA; Cleveland, OH; Greenville, SC; Indianapolis, IN; Lansing, MI; Little Rock, AR; Miami, FL; Northern NJ; Orange County, CA; Phoenix, AZ; Seattle, WA; and Syracuse, NY. These are the 12 communities that were randomly selected for the Center for Studying Health System Change's Community Tracking Study to provide a representative profile of health systems across the United States (http://www.hschange.org).

Medicare beneficiaries are included in the QRURs if their Medicare enrollment data indicate they resided in one of the 12 metropolitan areas in 2006 and 2007.

Medical professionals were identified as practicing in a designated metropolitan area if their practice was listed as being located in that area in 2007 and they filed at least one 2007 Medicare Carrier claim for at least one Medicare beneficiary residing in the area in 2007.

Medical practice groups were identified as being located in a designated metropolitan area if at least one medical professional who practiced in the area in 2007 billed at least one Medicare Carrier claim under the medical practice group's tax identification number (TIN) in 2007.

MEDICAL PROFESSIONALS

In this report, **medical professionals** include Medicare physicians and other medical practitioners (including physician assistants and nurse practitioners) who are eligible for payment from Medicare for Medicare-covered services.

A medical professional is **affiliated with a medical practice group** if that medical professional:

- is listed as a performing provider on at least one 2007 Medicare Carrier claim for at least one beneficiary residing in the designated metropolitan area in 2007, and
- billed at least one 2007 Medicare Carrier claim under the medical practice group's tax identification number (TIN)

For purposes of this report, medical professionals are **affiliated with only one medical practice group**. Those who billed under more than one TIN were assigned to the TIN under which they billed the most Part B Medicare claims in 2007.

Medical professionals affiliated with your medical practice group are listed in Appendix A.

GENERATING MEDICARE PHYSICIAN QUALITY PERFORMANCE MEASUREMENT RESULTS (GEM)

This QRUR uses the methodology developed by the **Generating Medicare Physician Quality Performance Measurement Results** to provide 2007 performance rates on a set of clinical quality measures for Medicare beneficiaries attributed to a medical group practice or to an individual medical professional (http://www.cms.gov/GEM/). The GEM project uses 2006 and 2007 Medicare administrative data to generate performance rates for 12 ambulatory care quality measures, based on HEDIS® measures appropriate to the Medicare population:

(1) Breast Cancer Screening for Women up to 69 Years of Age

(2) LDL Screening for Beneficiaries up to 75 Years of Age with Diabetes

(3) Eye Exam (retinal) for Beneficiaries up to 75 Years of Age with Diabetes

(4) HbA1c Testing for Beneficiaries up to 75 Years of Age with Diabetes

(5) LDL-C Screening for Beneficiaries up to 75 Years of Age with Cardiovascular Conditions

(6) Colorectal Cancer Screening for Beneficiaries up to 80 Years of Age

(7) Medical Attention for Nephropathy for Diabetics up to 75 Years of Age

(8) Persistence of β-Blocker Treatment after Heart Attack

(9) Annual Monitoring for Beneficiaries on Persistent Medications (ACE Inhibitors or Angiotensin Receptor Blockers, Digoxin, Diuretics, and Anti-Convulsants)

(10) Antidepressant Medication Management (Acute Phase)

(11) β-Blocker Treatment after Heart Attack

(12) Disease-Modifying Anti-Rheumatic Drug Therapy in Rheumatoid Arthritis

MEDICAL PRACTICE GROUPS

For purposes of this report, a **medical practice group** is a single provider entity, identified by its tax identification number (TIN), which meets three criteria:

(1) at least one primary care physician and at least one medical specialist or surgeon billed for evaluation and management (E&M) Medicare services under the TIN in 2007,

(2) at least one medical professional billing Medicare Carrier claims under the TIN in 2007 was identified as practicing in one of the 12 designated metropolitan areas; and

(3) at least 5,000 Medicare beneficiaries living in one of the 12 designated metropolitan areas were attributed to the TIN in 2007.

PEER GROUPS

An individual medical practice group's performance on a given measure is compared to the performance of its **peer group** for that measure. For the measures displayed in the medical practice group QRUR, the **peer group** is defined as medical practice groups in the 12 **designated metropolitan areas** that had a sufficient number of observations to report for that measure. To ensure useful comparisons, the peer group for each measure **must include at least 30 medical practice groups with enough observations to report**. Data for the Medicare patients attributed to the individual medical practice group targeted in the QRUR are included in peer group averages.

PER CAPITA COSTS

Per capita costs are the average (mean) of a medical practice group's 2007 Medicare FFS Parts A and B payments per attributed beneficiary. To the extent that Medicare claims include such information, costs are comprised of payments to providers from Medicare, from beneficiaries (copayments and deductibles), and from third-party private payers.

In this report, **overall per capita costs** were calculated 1) by summing all price-standardized, or (as specified in each exhibit) price-standardized and risk-adjusted, Medicare Parts A and B costs over a calendar year for all Medicare beneficiaries residing in the designated metropolitan area in 2007 who were attributed to the medical practice group, and 2) by dividing that sum by the sum of weights for attributed beneficiaries, where the weight for each beneficiary is equal to the portion of 2007 that the beneficiary was alive and enrolled in both Parts A and B FFS Medicare.

Subgroup-specific per capita costs are the average of 2007 Medicare FFS Parts A and B payments per attributed beneficiary with one or more of the five specific **chronic health conditions:**

(1) Chronic Obstructive Pulmonary Disease

(2) Coronary Artery Disease

(3) Diabetes

(4) Prostate Cancer

(5) Congestive Heart Failure

The per capita costs for each subgroup were calculated 1) by summing the price-standardized risk-adjusted Medicare Part A and Part B costs for attributed beneficiaries identified as having the given chronic condition and 2) by dividing that sum by the sum of weights for attributed beneficiaries with the condition, where the weight for each beneficiary is equal to the portion of 2007 that the beneficiary was alive and enrolled in both Parts A and B FFS Medicare.

These subgroup per capita costs **include all costs** and are **not limited to costs associated with treating the condition** itself.

PRICE STANDARDIZATION

Price standardization equalizes the costs associated with a specific service, such that a given service is priced at the same level across all providers of the same type, regardless of geographic location, differences in Medicare payment rates among facilities, or the year in which the service was provided. For most types of medical services, Medicare adjusts payments to providers to reflect differences in local input prices (for example, wage rates and real estate costs). "Medicare costs" refer to the total reimbursement paid to providers for services provided to Medicare beneficiaries. These may include discrete services (such as physician office visits) or bundled services (such as hospital stays). Costs shown in this QRUR are standardized to allow comparisons of costs for individual medical practice groups to those of peers who may practice in locations where reimbursement rates are higher or lower.

RISK ADJUSTMENT

Risk adjustment takes into account differences in patient characteristics that may make costs of care higher or lower, no matter where the patient is treated or how efficient the care is. For peer comparisons, a medical practice group's per capita costs are **risk adjusted** based on the unique mix of patients attributed to the group. Factors included in the risk-adjustment model include the patient's age, sex, original reason for Medicare entitlement (age or disability), presence of end-stage renal disease, past history of diseases or conditions known to increase costs (co-morbidities), and Medicaid entitlement. Costs for patients with high risk are adjusted downward, and costs for patients with low risk are adjusted upward. Thus, for medical practice groups that have a **higher than average proportion of patients with serious medical conditions** or other higher-cost risk factors, **risk adjusted per capita costs will be lower than unadjusted costs,** because costs of higher-risk patients are adjusted downward. For medical practice groups that treat comparatively lower-risk patients, risk adjusted per capita costs will be higher than unadjusted costs, because costs for lower-risk patients are adjusted upwards.

SPECIFIC CHRONIC HEALTH CONDITIONS

Chronic health conditions are diseases or illnesses that are commonly expected to last at least six months, require ongoing monitoring to avoid loss of normal life functioning, and are not expected to improve or resolve without treatment. For this report, subgroup-specific per capita cost measures were calculated for five **specific chronic health conditions** common to the Medicare population:

(1) Chronic Obstructive Pulmonary Disease

(2) Coronary Artery Disease

(3) Diabetes

(4) Prostate Cancer

(5) Congestive Heart Failure

CONCISE METHODOLOGY

(Medical Practice Groups)

Administrative Claims Data Used in the Quality and Resource Use Report

This Quality and Resource Use Report (QRUR) uses 2006 and 2007 Medicare claims data to provide feedback to medical practice groups about their performance on selected quality measures and resource use measures related to the care they provided to the Medicare beneficiaries attributed to their group. The quality measures consist of 12 measures for 2007 based on the Centers for Medicare & Medicaid Services' (CMS's) Generating Medicare Physician Quality Performance Measurement Results (GEM) project (described below) and rates of hospitalization for selected ambulatory care sensitive conditions (ACSCs) for all attributed beneficiaries (described below). The resource use measures consist of 2007 per capita cost measures for all attributed beneficiaries and particular subgroups of attributed beneficiaries who have one of five chronic conditions (described below).

The methodology used to calculate the 2007 GEM measures includes only those beneficiaries who were alive and enrolled in both Part A (Hospital Insurance) and Part B (Medical Insurance) of original fee-for-service (FFS) Medicare for the entire calendar year 2007 and for the fraction of 2006 captured in the measure's specifications. Part-year beneficiaries, including those who died, are excluded to ensure that a complete 12-month claims data record for 2007 is available for each beneficiary included in the database.

In contrast to GEM measures, calculations for the 2007 per capita cost and utilization measures include all beneficiaries who were enrolled in both Parts A and B of original FFS Medicare for any part of the calendar year 2007. Costs or services for part-year beneficiaries (for example, those who became eligible for Medicare during the year, were enrolled in a Medicare Advantage program for part of the year, or who died) for the part of the year observed in the claims data are summed with costs or services observed for full-year beneficiaries. However, costs and services counts are then weighted by the portion of the year that each beneficiary was enrolled in both Parts A and B FFS Medicare (described below). This weighting is done so that attributed beneficiaries with less than a full year's worth of FFS claims data do not contribute as much to the medical practice group's per capita costs or utilization rates as do beneficiaries with a full year of claims data.

Designated Metropolitan Areas Represented in the QRURs

The designated metropolitan areas represented in the QRURs include the following: Boston, MA; Cleveland, OH; Greenville, SC; Indianapolis, IN; Lansing, MI; Little Rock, AR; Miami, FL; Northern NJ; Orange County, CA; Phoenix, AZ; Seattle, WA; and Syracuse, NY. These are the same 12 communities that were randomly selected from among 48 metropolitan areas with populations over 200,000 to provide a representative profile of health systems across the United States, as part of the Center for Studying Health System Change's Community Tracking Study (http://www.hschange.org).

Medicare beneficiaries are included in the QRURs if their Medicare administrative data indicate they resided in one of the 12 designated metropolitan areas in 2006 and 2007.

Medical professionals were identified as practicing in a designated metropolitan area if their practice was listed as being located in that area and they filed at least one 2007 Medicare Carrier claim for at least one Medicare beneficiary residing in the area in 2007.

Medical Practice Group

For purposes of this report, a medical practice group is a provider entity, identified by one tax identification number (TIN) in the 2007 Carrier (physician/supplier) claims, which meets three criteria:

(1) at least one primary care physician and at least one medical specialist or surgeon billed for evaluation and management (E&M) Medicare services under the TIN,

(2) at least one physician or other medical professional (described below) billing under the TIN in 2007 was identified on his/her 2007 Carrier claims as practicing in one of 12 designated metropolitan areas, and

(3) at least 5,000 Medicare beneficiaries were retrospectively attributed to the TIN in 2007 (the attribution methodology is described below).

The main advantage of including a multispecialty mix is that the medical practice group is likely to have the specialty composition necessary to provide a broad spectrum of care. The 5,000 beneficiary attribution threshold increases the likelihood that this is a large enough patient pool to generate statistically stable results.

Medical Professionals Affiliated with a Medical Practice Group

For purposes of identifying medical practice groups and for attributing beneficiaries to medical professionals to calculate per capita cost measures displayed in this report, **medical professionals** include physicians and other medical practitioners from the 47 HCFA specialty codes listed in Appendix B who are eligible for payment from Medicare for Medicare-covered services. For GEM measure calculations, **medical professionals** include physicians and other medical practitioners from the 14 primary care and specialty codes listed in Appendix C.

A medical **professional** is said to be **affiliated with a medical practice group** if the medical professional:

- is identified as a performing provider on at least one 2007 Medicare Carrier claim for at least one beneficiary who resided in the designated metropolitan area in 2006 and 2007, and
- billed at least one 2007 Medicare Carrier claim under the medical practice group's tax identification number (TIN)

For this report, a medical professional can only be **affiliated with one medical practice group**. Those who billed under more than one TIN were assigned to the TIN under which they billed the most Part B Medicare claims in 2007.

Attribution of Medicare Beneficiaries to Medical Practice Groups and to Affiliated Medical Professionals

For these reports, Medicare beneficiaries residing in the 12 designated metropolitan areas in 2006 and 2007 were retrospectively attributed to a single medical practice group based on a "plurality-minimum rule." That is, a beneficiary was attributed to the medical practice group that billed for the greatest number (plurality) of observed E&M *claims* for that beneficiary in 2007, provided that the medical practice group billed for at least 30 percent of the total observed 2007 E&M *costs* for that beneficiary.

After beneficiaries were attributed to a medical practice group, they were attributed to a single affiliated medical professional within the medical practice group through a similar method. A beneficiary was attributed to the medical professional within the medical practice group who billed for the greatest number of observed E&M *claims* for the beneficiary in 2007, provided that the medical professional billed for at least 20 percent of the total observed 2007 E&M *costs* observed for that beneficiary.

QRUR Performance Measures

GEM (Clinical Quality) Measures

Using the methodology developed for the Generating Medicare Physician Quality Performance Measurement Results (GEM) project, CMS contracted with Masspro (the Quality Improvement Organization for Massachusetts) to identify practice groups (using TINs) and to generate performance results for 12 measures of clinical quality, based on 2006 and 2007 Medicare Part B and Part D claims data. These measures, based on HEDIS® measures appropriate to the Medicare population, reflect recommended preventive and clinical care for some common health conditions and provide a limited picture of a group's performance for a subset of its patients (http://www.cms.gov/GEM/).

Each performance measure is calculated by determining the number of beneficiaries attributed to the medical practice group for whom the particular health care service, screening test, medication, or other intervention was indicated (the denominator) and the number of attributed beneficiaries in the denominator who received the recommended health care service (the numerator). A measure rate is then calculated by dividing the numerator count by the denominator count and expressing the result as a percentage. The highest possible rate for a GEM quality measure is 100 percent and the lowest possible rate is 0 percent. Criteria for the GEM project stipulate that no statistics for a given measure be provided for medical group practices or individual medical professionals with fewer than 11 observations for a given measure.

The 12 GEM ambulatory care measures include the following:

(1) Breast Cancer Screening for Women up to 69 Years of Age

(2) LDL Screening for Beneficiaries up to 75 Years of Age with Diabetes

(3) Eye Exam (retinal) for Beneficiaries up to 75 Years of Age with Diabetes

(4) HbA1c Testing for Beneficiaries up to 75 Years of Age with Diabetes

(5) LDL-C Screening for Beneficiaries up to 75 Years of Age with Cardiovascular Conditions

(6) Colorectal Cancer Screening for Beneficiaries up to 80 Years of Age

(7) Medical Attention for Nephropathy for Diabetics up to 75 Years of Age

(8) Persistence of β-Blocker Treatment after Heart Attack

(9) Annual Monitoring for Beneficiaries on Persistent Medications (ACE Inhibitors or Angiotensin Receptor Blockers, Digoxin, Diuretics, and Anti-Convulsants)

(10) Antidepressant Medication Management (Acute Phase)

(11) β-Blocker Treatment after Heart Attack

(12) Disease-Modifying Anti-Rheumatic Drug Therapy in Rheumatoid Arthritis

For calculation of data for the 2007 GEM measures, the GEM project used Health Plan HEDIS® 2008 with denominator exclusions made mandatory for the project. With these mandatory exclusions, Health Plan HEDIS® is equivalent to Physician Measurement HEDIS® ambulatory performance measures.[4] Beneficiaries were included in the measures only if they were fully enrolled in FFS Medicare for the entire 12 months of 2007 (and for the fraction of 2006 included in a "look back" period if the 2007 GEM measure had a 2006 "look back"). Additionally, the GEM project included only FFS beneficiaries enrolled in both Parts A and B for the entire 12 months of 2007. That is, beneficiaries were excluded if for any part of the year they were ineligible for Medicare benefits, resided outside the United States, were enrolled in Medicare Advantage, took part in the Medicare Hospice benefit, or if Medicare was a secondary payer.

In order to be attributed to a medical practice group for purposes of calculating GEM measures, a beneficiary must have had a minimum of two office visits attributed to the group during 2007. Office visits were determined by office or outpatient E&M codes or consultation codes. For primary care GEM measures, beneficiaries were attributed to only one medical group with primary care providers. For GEM measures reflecting specialty care, a beneficiary could be attributed to only one medical group with the requisite specialties.

[4] The Beta Blocker Treatment after a Heart Attack measure was subsequently dropped by HEDIS® 2008. However, CMS and Masspro included this measure using Health Plan HEDIS® 2007 criteria, with mandatory denominator exclusions.

Ambulatory Care Sensitive Conditions Quality Measures

The Agency for Healthcare Research and Quality (AHRQ) developed a set of Prevention Quality Indicators (PQIs) that includes measures of potentially avoidable hospitalizations for Ambulatory Care Sensitive Conditions (ACSCs). These are conditions for which good outpatient care can prevent complications or more severe disease. The measures rely on hospital discharge data but are not intended as measures of hospital quality. Rather, they reflect access to high quality ambulatory care within a larger system of care.

The QRURs include rates of hospital admission for Medicare beneficiaries attributed to medical practice groups, calculated from 2007 Medicare Part A claims data, for the following six ACSCs:

(1) Congestive heart failure

(2) Bacterial pneumonia

(3) Urinary tract infection

(4) Chronic Obstructive Pulmonary Disease

(5) Dehydration

(6) Diabetes – a composite measure, based on short term diabetes complications; uncontrolled diabetes; long term diabetes complications; and lower extremity amputation for diabetes

For each ACSC, the number of beneficiaries attributed to the medical group who were identified as having been hospitalized for that condition in 2007 (the numerator) is divided by the sum of attributed beneficiary weights, where a beneficiary's weight is equal to the portion of the year the beneficiary was alive and enrolled in both Parts A and B FFS Medicare in 2007 (the denominator). (Note that the denominator is not restricted to the number diagnosed with the specific condition.) Per capita rates of admission for ACSCs are reported only if there were at least 30 observations (attributed beneficiaries) in the denominator. A medical practice group's hospital admission rate for each ACSC is compared to the mean admission rate of its peer group.

Per Capita Cost Measures

Per capita cost measures were calculated using 2007 Medicare Part A (Hospital Insurance) and Part B (Medical Insurance) claims for all FFS Medicare beneficiaries residing in the 12 designated metropolitan areas in 2007. Part D (Outpatient Prescription Drug) claims were not included in the 2007 cost measure calculations. Medicare costs were obtained from 2007 administrative claims data using inpatient, outpatient, skilled nursing facility, home health, hospice, durable medical equipment, and Medicare Carrier (non-institutional provider) claims. To the extent that Medicare claims include such information, costs are comprised of payments to providers from Medicare, from beneficiaries (copayments and deductibles), and from third-party private payers.

Per capita costs were calculated by first summing the price-standardized or (as labeled for a given Exhibit in the report) price-standardized and risk-adjusted Medicare Parts A and B costs during the

2007 calendar year for all Medicare beneficiaries residing in one of the 12 designated metropolitan areas in 2006 and 2007 who were attributed to the medical group (the numerator). This numerator was then divided by the weighted number of beneficiaries attributed to the medical group (the denominator). That is, costs for part-year beneficiaries (for example, those who became eligible for Medicare during the year, were enrolled in a Medicare Advantage program for part of the year, or who died in the year) for the part of 2007 the beneficiary was enrolled in both Parts A and B FFS Medicare are summed with 2007 annual costs for full-year beneficiaries. This sum is then divided by the sum of weights for attributed beneficiaries, where the weight for each beneficiary is equal to the portion of 2007 that the beneficiary was alive and enrolled in both Parts A and B FFS Medicare. For example, if a beneficiary had Parts A and B FFS Medicare for January - March in 2007, with total observed costs of $300, and then joined a Medicare Advantage plan in April and remained there for the rest of 2007, the beneficiary's cost for the per capita cost numerator is $300 and the beneficiary's weight for the per capita cost denominator is 3/12 (or 0.25).

Per capita cost measures are calculated only for medical practice groups that had at least 30 observations (attributed beneficiaries) in the cost measure's denominator. A medical group's per capita cost measures are presented in the QRUR compared to the mean (average) performance of all medical practice groups in the 12 designated metropolitan areas.

Subgroup-Specific Per Capita Cost Measures

Subgroup-specific per capita cost measures were calculated for Medicare FFS beneficiaries residing in one of the 12 designated metropolitan areas in 2006 and 2007 who were diagnosed as having one or more of the following chronic conditions in 2007: chronic obstructive pulmonary disease, coronary artery disease, diabetes, prostate cancer, or congestive heart failure. Data from the CMS Chronic Condition Warehouse were used to identify patients with the five conditions of interest.

The per capita costs for each subgroup were calculated by first summing all 2007 price-standardized and risk-adjusted Medicare Part A and Part B costs for beneficiaries attributed to the medical practice group who were identified as having the given chronic condition (the numerator), and then by dividing the result by the weighted number of attributed beneficiaries with the condition (the denominator). Costs and weights for part-year beneficiaries are treated the same as for the per capita cost measures described above. The subgroups are not mutually exclusive, which means that a beneficiary's costs may be included in the per capita costs for more than one condition subgroup. This subgroup per capita cost calculation represents the average price-standardized and risk-adjusted costs of treating Medicare beneficiaries with a specific condition. However, it does not reflect the average cost of treating the condition itself, because all Medicare costs for each beneficiary are included in the total (not just costs related to treatment for the chronic condition of interest).

Subgroup-specific per capita costs are calculated only for medical groups that had at least 30 observations (attributed beneficiaries) in the subgroup's denominator. A medical practice group's subgroup-specific per capita cost measures are presented in the QRUR compared to the mean (average) performance of its peer group.

Peer Groups and Minimum Numbers of Observations Per Measure

To provide a comparative context for the information in this QRUR, a medical practice group's performance on quality and cost measures is compared to that of its peers, provided: (1) that each measure meets CMS's criterion for a minimum number of observations (attributed beneficiaries), and (2) that the peer group contains at least 30 medical practice groups in the 12 designated metropolitan areas that meet the criteria.

A medical practice group's performance on a measure is calculated and reported in the QRUR and included in the peer group only if it meets the minimum number of observations required for that measure. The minimum number of observations required for per capita cost measures, subgroup-specific per capita cost measures, and ACSC hospitalization rates is 30 attributed beneficiaries. For GEM measures, the minimum number of observations required is 11 attributed beneficiaries as required by the GEM project.

In addition, performance is reported only on measures for which at least 30 medical group practices meet the criteria for minimum numbers of observations to be included in the peer group. Data for the Medicare beneficiaries attributed to the medical practice group targeted in the QRUR are included in all peer group totals.

Risk Adjustment of Costs

Clinical (case-mix) differences among patients can affect their medical costs, regardless of the care provided. For peer comparisons, a medical practice group's per capita costs are **risk adjusted** based on the unique mix of patients the group treated during a given time period.

For these reports, we used the HCC model developed for CMS that assigns ICD-9 diagnosis codes (each with similar disease characteristics and costs) to 70 clinical conditions. For each Medicare beneficiary enrolled in FFS Medicare for all of 2006, the HCC model generates a 2006 score based on the presence of these conditions in 2006—and on sex, age, original reason for Medicare entitlement (either age or disability), and Medicaid entitlement—as predictors of costs in 2007 based on beneficiary morbidity. Scores for beneficiaries enrolled in FFS Medicare for only part of 2006 are based only on sex, age, original reason for Medicare entitlement (either age or disability), and Medicaid entitlement status. Risk adjustment of 2007 costs also takes into account 2006 ESRD status (presence of end-stage renal disease) for both full-year and part-year beneficiaries.

A statistical risk adjustment model estimates the independent effects of these factors on absolute beneficiary costs and adjusts 2007 annual beneficiary costs for each beneficiary prior to calculating per capita risk-adjusted cost measures for a medical practice group. To ensure that extreme outlier costs do not have a disproportionate effect on the cost distributions, costs below the 1st percentile are eliminated from the cost calculations, and costs above the 99th percentile are rounded down to the 99th percentile.

Price Standardization

Geographic variations in Medicare payments to providers may also reflect factors unrelated to the care provided to patients. All unit costs have been adjusted (standardized) such that a given service is priced at the same level across all providers of the same type, regardless of geographic location, differences in Medicare payment rates among facilities, or the year in which the service was provided. "Unit costs" refer to the total reimbursement paid to providers for services provided to Medicare beneficiaries. These may include discrete services (such as physician office visits or consultations) or bundled services (such as hospital stays). For most types of medical services, Medicare adjusts payments to providers to reflect differences in local input prices (for example, wage rates and real estate costs). The costs reported in the QRUR are therefore price standardized to allow for comparisons to peers who may practice in locations or facilities where reimbursement rates are higher or lower. Price standardization is performed prior to calculating per capita price-adjusted and risk-adjusted cost measures.

Cost of Service Breakdowns

To provide more detail on the per capita cost measures displayed in the QRURs, additional breakdowns are provided by service category, for the following categories:

- All professional E&M services provided by primary care physicians, medical specialists, surgeons, and emergency room physicians
- All procedures performed by primary care physicians, medical specialists, surgeons, and emergency room physicians
- Inpatient hospital facility services
- Hospital outpatient and emergency services, including clinic or emergency visits, procedures, laboratory tests, and imaging services
- All ancillary services provided in ambulatory settings, including laboratory tests, imaging services, and durable medical equipment
- Post-acute services including skilled nursing care, psychiatric or rehabilitation care, hospice care, and home health care
- All other Medicare-covered services (services not captured in other categories, such as anesthesia, ambulance services, chemotherapy, other Part B drugs, orthotics, chiropractic, enteral and parenteral nutrition, vision services, hearing and speech services, and influenza immunization)

Hospital Utilization Statistics for Chronic Condition Subgroups

To provide more detail on the subgroup-specific per capita costs for the selected five chronic conditions displayed in the QRURs (chronic obstructive pulmonary disease, coronary artery disease, diabetes, prostate cancer, and congestive heart failure), hospital utilization statistics are provided for each measure as follows:

(1) The **number of beneficiaries** attributed to the medical practice group who had the chronic condition in 2007

(2) The **average number of inpatient hospital admissions per attributed beneficiary with the chronic condition** in 2007 (whether or not hospital admissions were for that chronic condition)

As with per capita cost measures, hospitalizations for part-year beneficiaries with the chronic condition for the part of 2007 the beneficiary was enrolled in both Parts A and B FFS Medicare are summed with 2007 hospitalizations for full-year beneficiaries with the same condition. This sum is then divided by the sum of weights for attributed beneficiaries, where the weight for each beneficiary is equal to the portion of 2007 that the beneficiary was alive and enrolled in both Parts A and B FFS Medicare.

(3) The **average number of hospital emergency department (ED) visits** (that did not lead to an inpatient admission) **per attributed beneficiary with the chronic condition** in 2007 (whether or not ED visits were related to that chronic condition).

As with per capita cost measures, hospital ED visits for part-year beneficiaries with the chronic condition for the part of 2007 the beneficiary was enrolled in both Parts A and B FFS Medicare are summed with 2007 hospital ED visits for full-year beneficiaries with the same condition. This sum is then divided by the sum of weights for attributed beneficiaries, where the weight for each beneficiary is equal to the portion of 2007 that the beneficiary was alive and enrolled in both Parts A and B FFS Medicare.

A medical practice group's beneficiary count and utilization statistics are presented in the QRUR relative to the mean performance of its peer group.

Hospital utilization statistics include all inpatient admissions and ED visits incurred by beneficiaries with a given chronic condition, whether or not such utilization was directly related to the specific condition of interest.

APPENDIX A

MEDICAL PROFESSIONALS IDENTIFIED AS AFFILIATED
WITH ABC HEALTHCARE ASSOCIATES

National Provider Identifier (NPI) Number	Name
	John Smith
	Jane Doe

APPENDIX B

HCFA SPECIALTY CODES FOR MEDICARE BENEFICIARY ATTRIBUTION FOR PER CAPITA COST MEASURES AND FOR IDENTIFYING MEDICAL PRACTICE GROUPS

HCFA Specialty Code	HCFA Specialty Description
1	General Practice
2	General Surgery
3	Allergy/Immunology
4	Otolaryngology
6	Cardiology
7	Dermatology
8	Family Practice
10	Gastroenterology
11	Internal Medicine
12	Osteopathic Manipulative Therapy
13	Neurology
14	Neurosurgery
16, 9, 15	Obstetrics/Gynecology
18, 17	Ophthalmology
19	Oral Surgery (dental only)
20	Orthopedic Surgery
24	Plastic and Reconstructive Surgery
25	Physical Medicine and Rehabilitation
26	Psychiatry
28	Colorectal Surgery (formerly Proctology)
29	Pulmonary Disease
33	Thoracic Surgery
34	Urology
38	Geriatric Medicine
39	Nephrology
40	Hand Surgery
44	Infectious Disease
46	Endocrinology
50	Nurse Practitioner
66	Rheumatology
72	Pain Management
76, 23	Peripheral Vascular Disease
77	Vascular Surgery
78	Cardiac Surgery
79	Addiction Medicine
81	Critical Care (Intensivists)
82	Hematology
83	Hematology/Oncology
84	Preventive Medicine
85	Maxillofacial Surgery
86, 27	Neuropsychiatry
89	Certified Clinical Nurse Specialist
90	Medical Oncology
91	Surgical Oncology
93	Emergency Medicine
97	Physician Assistant
98	Gynecology/Oncology

APPENDIX C

HCFA SPECIALTY CODES ELIGIBLE FOR BENEFICIARY ATTRIBUTION FOR GEM MEASURES

HCFA Specialty Code	HCFA Specialty Description
Specialty Attribution for Primary Care Measures	
01	General Practice
08	Family Practice
11	Internal Medicine
16	Obstetrics/Gynecology
38	Geriatric Medicine
70	Multi-Specialty Clinic or Group Practice
84	Preventive Medicine
Specialty Attribution for Specific Measures	
06	Cardiology
13	Neurology
26	Psychiatry
39	Nephrology
46	Endocrinology
50	Nurse Practitioner (follows specialty designation of associated physicians)
66	Rheumatology
86	Neuropsychiatry
97	Physician Assistant (follows specialty designation of associated physicians)