DRAFT

Fee-for-Service Medicare

Quality and Resource Use Reports (QRUR)

For Individual Physicians

CMS is in the early stages of developing feedback reports that will provide physicians 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 professional's Medicare patients, compared to the average among medical professionals practicing in the same specialty in the same geographic area and across the U.S.

The sample draft report "template" shown here displays the type of information that will be available late in 2010 to *approximately sixteen hundred* physicians who filed Medicare claims under a group tax identification number and practiced in one of 12 metropolitan areas during 2007. At this time, confidential feedback reports will be created only for these physicians. In November, CMS will send letters to *these physicians,* informing them how they can obtain their confidential feedback reports. If you do not receive such a letter, you were not part of this sample, and therefore no feedback report will be available for you. Beginning in 2011, CMS will create and provide feedback reports for increasing numbers of physicians. You are likely to receive one in the next two or three years, as CMS expands this project across most of the several hundred thousand physicians who participate in fee-for-service Medicare. We expect to change both 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 draft template <u>are not real</u> and are included only to demonstrate how a typical report might look . The specific displays included in a physician's report will be determined by the types of medical conditions and the services provided to patients in a physician's practice during a calendar year.

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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.

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FEE-FOR-SERVICE MEDICARE QUALITY AND RESOURCE USE REPORT

Dr. Unidentified Physician in Internal Medicine
Affiliated with
ABC Healthcare Associates

National Provider Identifier (NPI) # xxxx

This confidential Medicare Quality and Resource Use Report (QRUR) is being provided to physicians and other medical professionals who are affiliated with a medical practice group (identified by a single tax identification number) that meets 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 informational purposes only.*
It *will not affect* Medicare payment or
Participation in the Medicare program

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FEE-FOR-SERVICE MEDICARE PERFORMANCE HIGHLIGHTS

Dr. Unidentified Physician in Internal Medicine

QUALITY INDICATORS

Compared to the average (mean) among medical professionals in your specialty area (including you) in the **Indianapolis** metropolitan area:

- Quality indicators for your patients were
  - ***Higher*** than average
    - on **4 out of 4** quality measures for patients with ***diabetes***
    - on **1 out of 3** quality measures for patients with ***cardiovascular conditions***
  - ***Lower*** than average
    - on **1 out of 3** quality measures for patients with ***cardiovascular conditions***
    - on **1 out of 2** ***preventive screening measures***

COSTS OF CARE

Compared to the average (mean) among medical professionals in your specialty area (including you) in the **Indianapolis** metropolitan area:

- The 2007 ***per capita costs*** (average annual treatment costs) for your Medicare patients were
  - ***Lower*** than the average costs of your peers' patients
- The per capita costs of your patients were
  - ***Lower*** than average for
    - ***evaluation and management services provided by <u>others</u> treating your patients***
    - ***procedures that <u>you</u> provided***
    - ***hospital inpatient services***
    - ***hospital outpatient and emergency services***
    - ***post acute care services***
  - ***Higher*** than average for
    - ***evaluation and management services that <u>you</u> provided***
    - ***procedures performed by <u>others</u> treating your patients***
    - ***all ancillary services***
- For your 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***
    - ***diabetes***
    - ***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 your Medicare patients, based on Medicare claims submitted in 2007 from all providers caring for patients **attributed** to you. It also tells you how the quality and costs of your patients' care compared to the average for Medicare patients of medical professionals in your specialty in the Indianapolis metropolitan area and in 12 designated metropolitan areas in the U.S.[1]

Part I provides summary information about **quality of care** indicators for your Medicare patients. 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' use of hospitals in the Indianapolis metropolitan area.

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 patients attributed to you, including providers who are not part of your medical practice group. 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 who treated patients attributed to you, 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 your 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 in detail how quality and cost information is 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 your Medicare patients, 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
- your patients' hospital admissions, 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 your performance on measures that reflect recommended preventive and clinical care for some common health conditions, compared to mean rates among medical professionals in your specialty in Indianapolis and across 12 metropolitan areas. These indicators are based on all Medicare claims submitted for your patients in 2007.

Exhibit 1. Performance on GEM Measures, 2007*

Clinical or Preventive Service GEM Measure	Your Performance		Performance of Medical Professionals in Your Specialty			
			In Indianapolis Metro Area		In 12 Metro Areas	
	Number of Patients for Whom This Clinical Service Was Indicated	**Percent of Your Eligible Patients Who Received Designated Service***	*Number of Medical Professionals for Whom Measure Was Calculated**	**Mean Performance Rate****	*Number of Medical Professionals for Whom Measure Was Calculated**	**Mean Performance Rate****
LDL Screening for Beneficiaries ≤ 75 with Diabetes	*78*	**100%**	*54*	94%	*684*	92%
Eye Exam (retinal) for Beneficiaries ≤ 75 with Diabetes	*78*	**78%**	*54*	69%	*684*	60%
HbA1c Testing for Beneficiaries ≤ 75 with Diabetes	*78*	**82%**	*54*	76%	*684*	75%
Medical Attention for Nephropathy for Diabetics ≤ 75	*78*	**77%**	*54*	74%	*684*	72%
LDL-C Screening for Beneficiaries ≤ 75 with Cardiovascular Conditions	*47*	**100%**	*45*	82%	*570*	90%
β-Blocker Treatment after Heart Attack	*24*	**80%**	*42*	95%	*532*	98%
Persistence of β-Blocker Treatment after Heart Attack	*8*	*	*42*	78%	*532*	72%
Colorectal Cancer Screening for Beneficiaries ≤ 80	*266*	**48%**	*54*	56%	*684*	48%
Breast Cancer Screening for Women ≤ 69	*199*	**63%**	*54*	74%	*684*	82%
Annual Monitoring for Beneficiaries on Persistent Medications***	*85*	**100%**	*38*	96%	*481*	78%
Antidepressant Medication Management (Acute Phase)	*4*	*	*15*	**	*190*	75%
Disease-Modifying Anti-Rheumatic Drug Therapy in Rheumatoid Arthritis	*6*	*	*25*	**	*317*	68%

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

*** Mean rates for comparison groups are calculated only if the group includes at least 30 medical professionals with 11 or more patients for that measure.*

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

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 2. Information on the quality performance of hospitals is available on the Hospital Compare website (http://www.hospitalcompare.hhs.gov).

Exhibit 2. Hospitals in Indianapolis Metropolitan Area Admitting Your Medicare Patients, 2007

Hospital	For Your Medicare Patients	
	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' who were attributed to you, including:

- average annual per capita costs of care provided to your Medicare patients, compared to the average patient costs for medical professionals in your specialty area, and
- per capita costs for specific categories of service.

The cost information in this report is derived from all Medicare Part A and B claims submitted by all providers who treated your patients, including providers not affiliated with your medical practice group. These costs include

- claims that you filed for services provided to your patients,
- claims that all other health care providers filed for services provided to your patients, and
- payments made by Medicare, by beneficiaries (copayments and deductibles), and by third-party payers.

All cost data have been **risk adjusted** to account for differences among patient characteristics and **price standardized** to account for price 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 ## of your Medicare patients in 2007, risk adjusted and price standardized per capita costs for your Medicare patients were $**14,034**.

Exhibit 3 shows the per capita costs of your Medicare patients, before and after risk adjustment,[2] compared to the mean per capita costs of medical professionals in your specialty **in the Indianapolis metropolitan area** and **across all 12 designated metropolitan areas**.

Exhibit 3. Medicare Patients' Per Capita Costs*

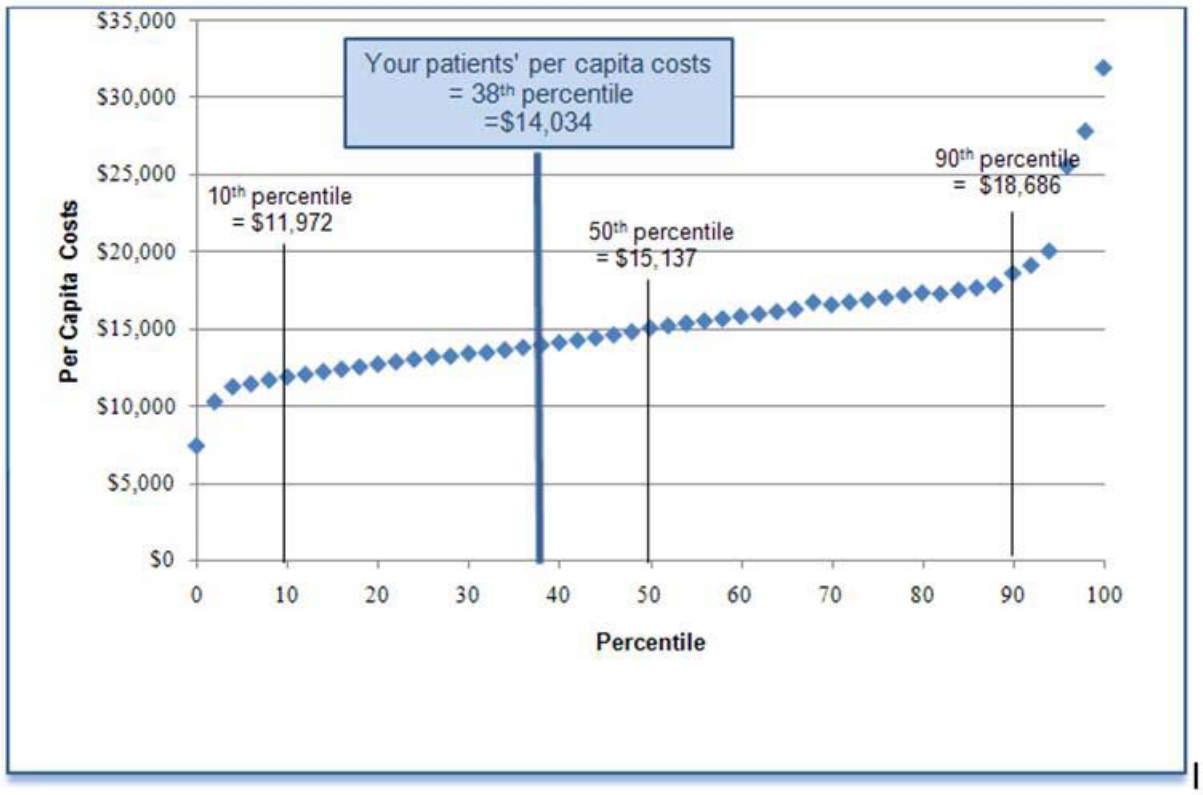
Per Capita Costs for Your Patients (Price Standardized)		Mean Per Capita Costs for Medical Professionals in Your Specialty (Price Standardized and Risk Adjusted)	
Before Risk Adjustment	After Risk Adjustment	In the Indianapolis Metropolitan Area (n=#)	Across 12 Designated Metropolitan Areas (n=#)
$XX,XXX	$14,034	$XX,XXX	$XX,XXX

**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 professional.*

[2] For medical professionals who 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 professionals 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.

The per capita costs in 2007 for Medicare patients of ## medical professionals in your specialty **in the Indianapolis metropolitan area** ranged from a low of $7,512 to a high of $32,123. Your Medicare patients' per capita costs were **at the 38th percentile** compared to the per capita costs of your peers in Indianapolis. (Exhibit 4**)**

Exhibit 4. Medicare Patients' Per Capita Costs* for Medical Professionals in Your Specialty in the Indianapolis Metropolitan Area (n=#), by Percentile, 2007

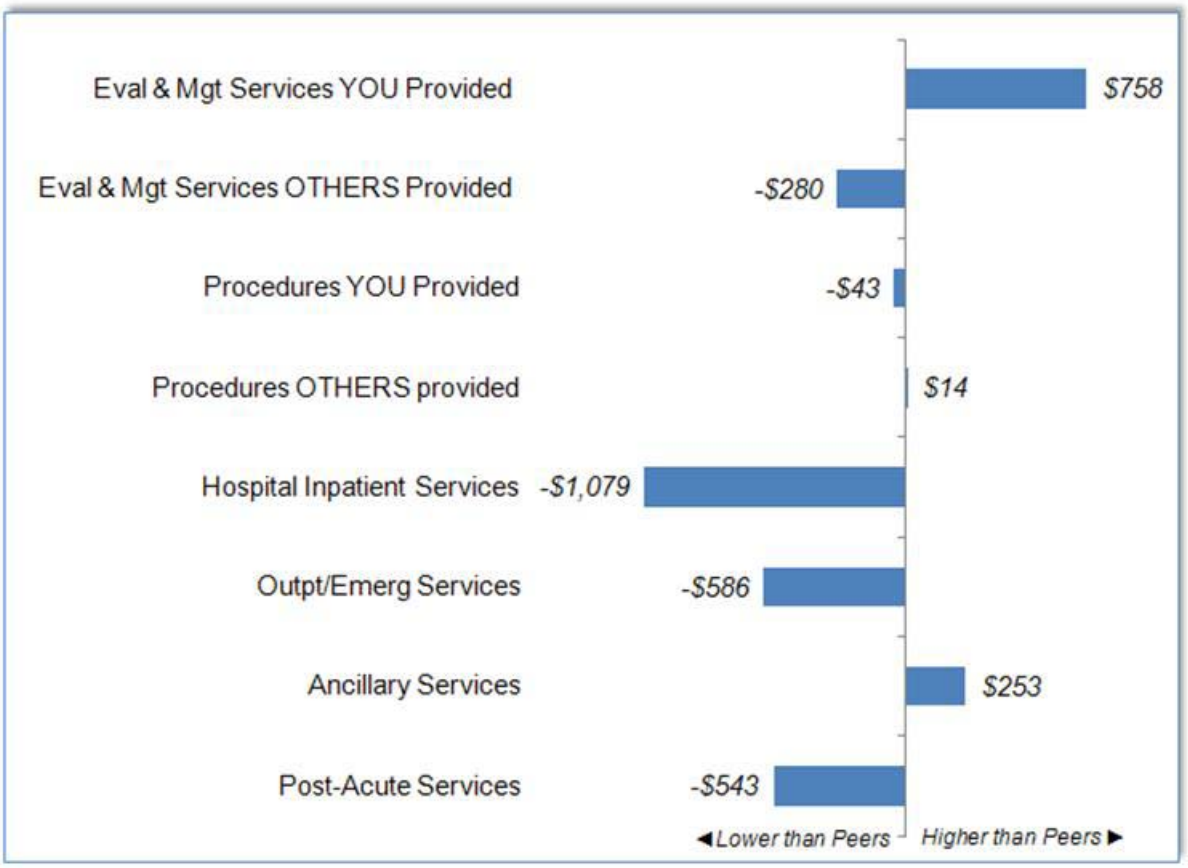


**Per capita costs shown here are risk adjusted and price standardized, and are based on all Medicare Part A and Part B claims submitted in 2007 by all providers (including professionals, hospitals, and post-acute care facilities) for Medicare beneficiaries attributed to a medical professional. Costs are calculated only for medical professionals with at least 30 attributed beneficiaries.*

Per Capita Costs for Specific Services

Exhibit 5 shows the difference between per capita costs of specific categories of service for Medicare patients attributed to you and the average (mean) among medical professionals in your specialty in the Indianapolis metropolitan area.

Exhibit 5. Difference Between Your Patients' Per Capita Costs* of Service and Mean Costs Among Medical Professionals in Your Specialty in the Indianapolis Metropolitan Area, 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 you. All per capita costs are price standardized and risk adjusted.*

Exhibit 6 shows additional detail on per capita costs of services for your Medicare patients, compared to the average per capita costs of patients of medical professionals in your specialty in the Indianapolis metropolitan area.

Exhibit 6. Your Medicare Patients' Per Capita Costs for Specific Services Compared to Mean Among Medical Professionals in Your Specialty in the Indianapolis Metropolitan Area, 2007

Service Category	Your Medicare Patients Using Any Service in This Category		Per Capita Costs* for Your Medicare Patients	Mean Per Capita Costs* for Medical Professionals in Your Specialty in Indianapolis (n=134)	Amount by Which Your Per Capita Costs are Higher or (Lower) than Mean Costs for Medical Professionals in Your Specialty in Indianapolis
	Number	Percent			
TOTAL	##	100%	$14,034	$15,137	($1,103)
Average number of professionals in all care settings other than you who treated each patient = 3					
Evaluation and Management Services in All Settings					
Provided by YOU for your patients	100%		$1,796	$1,038	$758
Provided by OTHER professionals treating your patients	89%		$1,923	$2,203	($280)
Procedures in All Settings					
Provided by YOU for your patients	24%		$168	$211	($43)
Provided by OTHER professionals treating your patients	41%		$84	$70	$14
Hospital Services					
Inpatient Hospital Facility Services	44%		$1,768	$2,847	($1,079)
Outpatient and Emergency Services	30%		$2,344	$2,930	($586)
Clinic or Emergency Visits	24%		$1,206	$1,156	
Procedures	22%		$538	$1,002	
Laboratory Tests	30%		$296	$242	
Imaging Services	26%		$304	$530	
Services in Ambulatory Settings					
All Ancillary Services	80%		$2,779	$2,526	$253
Laboratory Tests	80%		$1,000	$641	
Imaging Services	69%		$766	$889	
Durable Medical Equipment	18%		$1,013	$996	
Post-Acute Care					
All Post-Acute Services	20%		$814	$1,357	($543)
Skilled Nursing Facility	12%		$331	$548	
Psychiatric or Rehab Facility	5%		$268	$402	
Hospice	5%		$78	$218	
Home Health	16%		$137	$189	
Other Services					
All Other Services**	100%		$2,358	$1,955	$403

**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 professional, not just those who used the service.*

***All Other Services include services not captured in other service 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

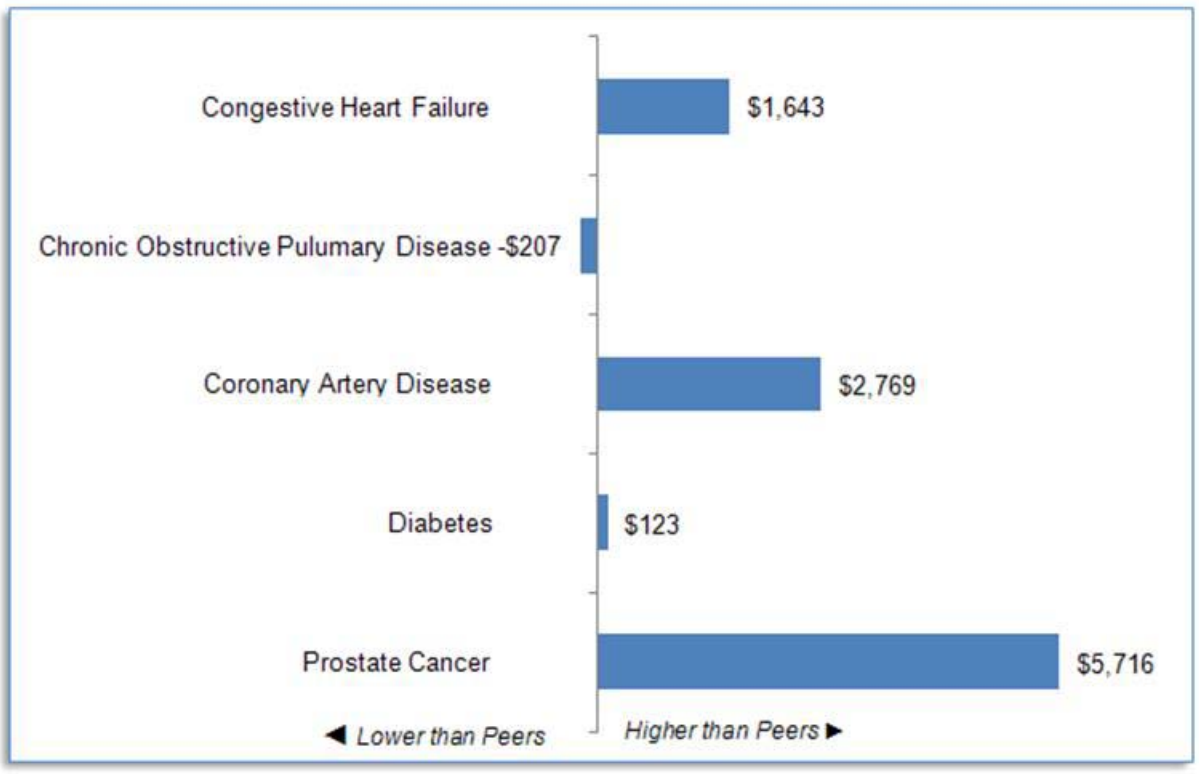
This section provides information on the total risk-adjusted and price-standardized per capita costs incurred by subgroups of your Medicare patients identified as having specific **chronic health conditions** in 2007. It also provides information on hospital utilization by subgroup. Costs and utilization statistics are calculated only for subgroups with a minimum of 30 attributed patients. <AS NEEDED: You did not have a sufficient number of attributed patients in any chronic condition subgroup to calculate these statistics. OR For this project, data were not available for at least 30 medical professionals in your specialty in Indianapolis who met the criteria to calculate these statistics. >

Total Per Capita Costs by Subgroup

Exhibit 7 shows the total per capita costs of your Medicare patients by chronic condition subgroup, compared to the average (mean) costs for each subgroup among all medical professionals in your specialty who treated patients with these conditions in the Indianapolis metropolitan area.

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 7. Difference between Per Capita Costs* of Care for Your Patient Subgroups and the Mean Among Medical Professionals in Your Specialty in the Indianapolis Metropolitan Area, 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 you within each diagnostic subgroup, whether or not costs were related to treatment for that condition. All costs are price standardized and risk adjusted.*

***Costs are calculated only for chronic condition subgroups with a minimum of 30 attributed patients.*
*<NB: Use ** to denote missing subgroup data in Exhibit 7>*

Total Hospital Utilization by Subgroup

Exhibit 8 shows the number of your 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 8. Total Use of Inpatient and Emergency Hospital Services, by Chronic Condition Subgroup for Your Medicare Patients*, 2007

Chronic Condition Subgroup	Your Medicare Patients		
	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	#		
Chronic Obstructive Pulmonary Disease	#		
Coronary Artery Disease	#		
Diabetes	#		
Prostate Cancer	#		

**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.*
*<NB: Use ** to denote missing subgroup data in Exhibit 8>*

Total Per Capita Costs for Your Patients with Congestive Heart Failure

Based on all Medicare Part A and Part B claims submitted in 2007 for ## of your patients in the congestive heart failure (CHF) subgroup, per capita costs for your Medicare patients with this condition were **$3,854**.

Exhibit 9.CHF shows how the per capita costs of your Medicare patients with CHF, before and after risk adjustment[3], compared to the average per capita costs of CHF patients of medical professionals in your specialty **in the Indianapolis metropolitan area** and **across 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 9. CHF. Per Capita Costs* of Medicare Patients with CHF

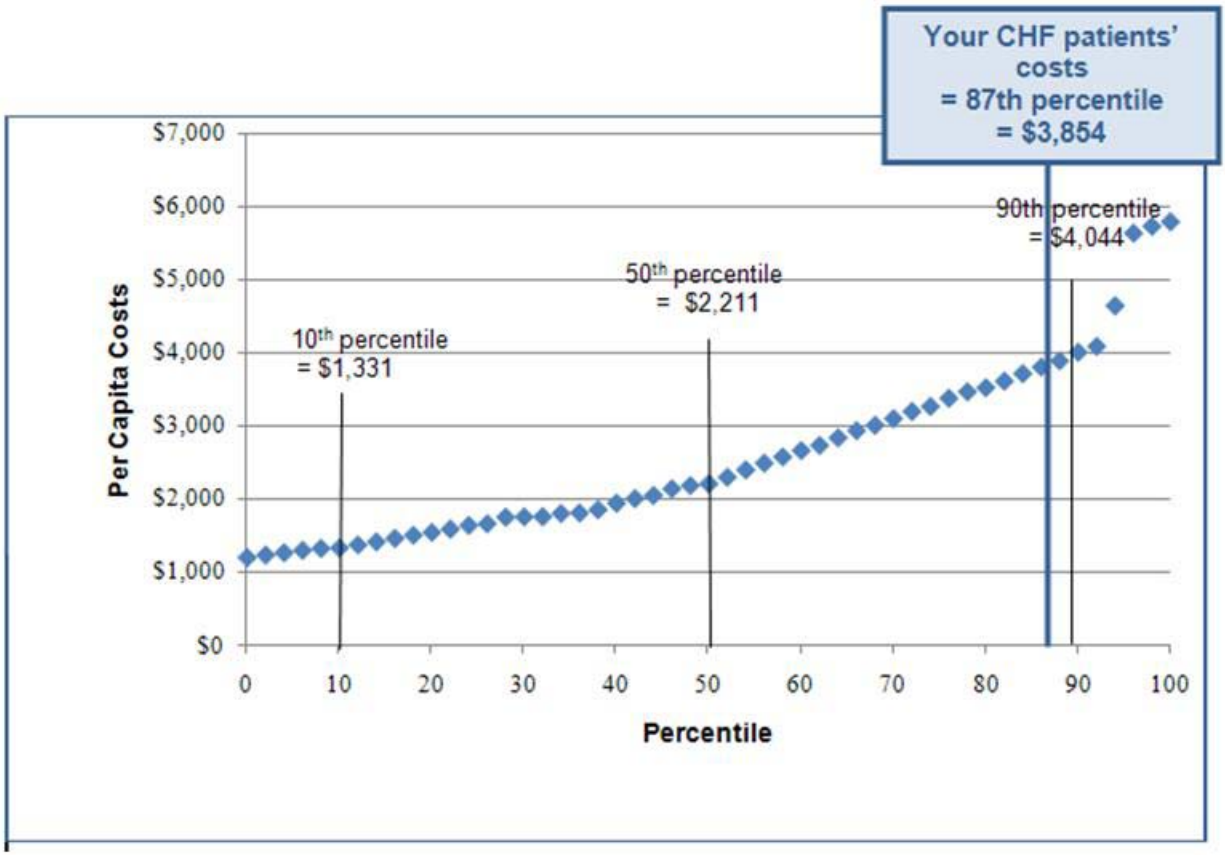
Per Capita Costs for Your Medicare Patients with CHF (Price Standardized)		Mean Per Capita Costs of the CHF Patients of Medical Professionals in Your Specialty (Price Standardized and Risk Adjusted)	
Before Risk Adjustment	After Risk Adjustment	In the Indianapolis Metropolitan Area (n=#)	Across 12 Designated Metropolitan Areas (n=#)
$XX,XXX	$3,854	$2,211	$XX,XXX

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

[3] For medical professionals who 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 professionals 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 ## medical professionals in your specialty in the Indianapolis metropolitan area who treated patients with CHF in 2007, the per capita costs for patients with CHF ranged from a low of $1,209 to a high of $5,796. For your patients with this condition, per capita costs were at the **87th percentile**, compared to the per capita costs of your peers. (Exhibit 10.CHF)

Exhibit 10.CHF. Per Capita Costs of Care* for Medicare Patients with CHF Among Medical Professionals in Your Specialty Area Treating Patients with This Condition in the Indianapolis Metropolitan Area (n=#), 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 professional, 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 professionals with a minimum of 30 attributed patients in the subgroup*

Total Per Capita Costs for Chronic Obstructive Pulmonary Disease

Exhibit 9.COPD
Exhibit 10.COPD

Total Per Capita Costs for Coronary Artery Disease

Exhibit 9.CAD
Exhibit 10.CAD

Total Per Capita Costs for Diabetes

Exhibit 9.Diabetes
Exhibit 10.Diabetes

Total Per Capita Costs for Prostate Cancer

Exhibit 9.Prostate Cancer
Exhibit 10.Prostate Cancer

DRAFT

GLOSSARY

(Medical Professionals)

ATTRIBUTION OF BENEFICIARIES

Costs

For purposes of this Quality and Resource Use Report (QRUR), Medicare beneficiaries and their associated **costs** are **attributed to the single medical professional** who 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 professional billed for **at least 20 percent** of each beneficiary's **E&M costs** in 2007.

Clinical Quality

Medicare beneficiaries, and the **GEM clinical quality measures** associated with them, are **attributed to the single medical professional** who billed for the **greatest number** of office-based, outpatient, or consultation **E&M claims** (i.e., provider visits) in 2007, provided that the medical professional billed **at least two eligible E&M visits** for the beneficiary in 2007. GEM clinical quality measures are attributed only to medical professionals who are primary care providers (eligible for all 12 GEM measures) or to medical specialists associated with particular GEM measures (i.e., cardiologists, endocrinologists, nephrologists, neurologists, neuropsychiatrists, psychiatrists, or rheumatologists).

DESIGNATED METROPOLITAN AREAS

For the purposes of this QRUR, the following **designated metropolitan areas** are included: 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 eligible provider 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 PROFESSIONAL

In this report, **medical professionals** include 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.

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 defined as a 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 professional's performance on a given measure is compared to the average performance of that person's peer group for that measure. There may be two different **peer groups** for each measure:

(1) **medical professionals in the same specialty who practice in the same designated metropolitan area** and have a sufficient number of observations on a given measure to calculate their performance

(2) **medical professionals in the same specialty who practice across all 12 designated metropolitan areas** who have a sufficient number of observations on a given calculate to calculate their performance

Medical specialty is determined by the HCFA specialty code listed on the majority of a medical professional's 2007 Medicare Carrier claims. In order to ensure useful peer group comparisons, the **peer group for each measure must contain at least 30 medical professionals with enough observations to be calculated**.

Data for the Medicare patients attributed to the individual medical professional targeted in the QRUR are included in peer group averages.

PER CAPITA COSTS

Per capita costs are the average (mean) of a medical professional's 2007 Medicare fee-for-service (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 professional, 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 fee-for-service 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 professionals 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 professional's per capita costs are **risk adjusted** based on the unique mix of patients attributed to the provider. 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 professionals who 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 professionals who 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

DRAFT

CONCISE METHODOLOGY

(Medical Professionals)

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 professionals about their performance on selected quality measures and resource use measures related to the care they provided to the Medicare beneficiaries attributed to them. 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). The resource use measures consist of 2007 per capita cost measures for all attributed beneficiaries and for 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 hospital 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 together 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 professional'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 enrollment 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 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 Group

For the 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 in 2007,

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

(3) at least 5,000 Medicare beneficiaries were 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 Professional 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 A 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 B.

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 TIN

For this report, a medical professional can only be **affiliated with one medical practice group**. Those who bill under more than one TIN are 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 this report, 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 medical practice groups (using TINs) and individual medical professionals (using Unique Physician Identification Numbers or National Provider Identifiers) 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 or medical professional's performance for a subset of their patients (http://www.cms.gov/GEM/).

Each performance measure is calculated by determining the number of beneficiaries attributed to the medical practice group or medical professional 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 calculated 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 or medical professional for purposes of calculating GEM measures, a beneficiary must have had a minimum of two office visits attributed to the group or medical professional 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 or to one primary care medical professional. For GEM measures reflecting specialty care, a beneficiary could be attributed to only one medical group with the requisite specialties or to one medical professional with the requisite specialty.

[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.

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 all 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 professional (the numerator). This numerator was then divided by the weighted number of beneficiaries attributed to the medical professional (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 professionals who had at least 30 observations (attributed beneficiaries) in the cost measure's denominator. A medical professional's per capita cost measures are presented in the QRUR compared to the mean (average) performance of medical professionals in the same specialty.

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 first by summing all 2007 price-standardized and risk-adjusted Medicare Part A and Part B costs for beneficiaries attributed to the medical professional 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 professionals who had at least 30 observations (attributed beneficiaries) in the subgroup's denominator. The per capita costs of patients with specific chronic conditions are displayed in the QRUR compared to the mean (average) per capita costs of similar patients attributed to peer groups of medical professionals in the same specialty.

Peer Groups and Minimum Numbers of Observations per Measure

To provide a comparative context for the information provided in this QRUR, a medical professional'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 professionals (each of whom meets the minimum observation criterion for the measure).

For medical professionals and peer groups that meet the above criteria, two peer groups are constructed:

(1) all same-specialty medical professionals who practice in the same designated metropolitan area and whose performance is calculated for the measure

(2) all same-specialty medical professionals who practice across all 12 designated metropolitan areas whose performance is calculated for the measure

A medical professional's specialty is determined by the HCFA specialty code reported on the majority of the medical professional's 2007 Medicare Carrier claims. A medical professional'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 and for subgroup-specific per capita cost measures is 30 attributed beneficiaries. For GEM measures, the minimum number of observations required is 11 attributed beneficiaries, as stipulated by the GEM project.

In addition, performance is calculated only on measures for which at least 30 medical professionals meet the criterion for the minimum number of observations to be included in the peer group. Data for the Medicare beneficiaries attributed to the individual medical professional 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 professional's per capita costs are **risk adjusted** based on the unique mix of patients that provider 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 professional. 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 of Costs

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:

(1) E&M services provided in all settings

   a. by the medical professional who receives the report and

   b. by all other professionals who treated that medical professional's patients

(2) Procedures performed in all settings

   a. by the medical professional who receives the report and

   b. by all other professionals who treated the medical professional's patients

(3) Inpatient hospital facility services

(4) Hospital outpatient and emergency services including clinic or emergency visits, procedures, laboratory tests and imaging services

(5) All ancillary services provided in ambulatory settings including laboratory tests, imaging services, and durable medical equipment

(6) Post-acute services including skilled nursing care, psychiatric or rehabilitation care, hospice care, and home health care

(7) 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 professional 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 professional's beneficiary count and utilization statistics are presented in the QRUR relative to the mean performance of that provider's peer groups (described above).

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

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 B

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)