

2005–2006

# PRACTITIONER UTILIZATION

Trends Among Privately Insured Patients

Released May 2008

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**MARYLAND  
HEALTH CARE  
COMMISSION**

The Maryland Health Care Commission (MHCC) is a public, regulatory commission established in 1999 by the Maryland General Assembly through a merger of the Health Care Access and Cost Commission and the Maryland Health Resources Planning Commission. The MHCC mission is to plan for health system needs, promote informed decisionmaking, increase accountability, and improve access in a rapidly changing health care environment by providing timely and accurate information on availability, cost, and quality of services to policymakers, purchasers, providers, and the public. The Commission is administratively located within the Maryland Department of Health and Mental Hygiene, and is composed of 15 members appointed by the Governor, with advice and consent of the Senate, for a term of four years.

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The MHCC is required under Health-General Article §19-133(g)(2-4) to issue a report describing the level of payments to physicians and other health care practitioners. Each year since 1996, the MHCC has published a *Practitioner Utilization* report that provides a detailed analysis of payments to physicians and other health care practitioners for the care of privately insured Maryland residents under age 65. The reports are based on health care claims and encounter data that most health insurance plans serving Maryland residents submit annually to the MHCC.

The Practitioner Report series benchmarks private sector spending changes over time and relative to Medicare fees for practitioner services in Maryland. This report makes comparisons using measures similar to those in previous reports. These measures include annual spending and service utilization on a per-patient basis, and service price, defined as total payment per relative value unit (RVU). Measures are compared by plan type (HMO versus non-HMO), source of coverage (individual policies, small group market, etc.), market share of the insurer (larger versus smaller), and patient risk status. Patient risk status is defined by the Chronic Illness and Disability Payment System (CDPS), developed by health services researchers at the University of California, San Diego, which categorizes a patient's risk based on the number and mix of diagnoses and the likelihood that those diagnoses would produce health care spending. Benchmarking private payer fees to Medicare fees in Maryland is captured through a ratio of the actual payment per patient to the payment that would have resulted if the Medicare fees had been applied.

The impact of physician reimbursement on a host of issues from physician supply to health care affordability has been hotly debated in the last several years and will undoubtedly continue in the future. We hope this report will offer new insight to participants in that debate. In addition to this report, MHCC soon will release an issue brief that examines the underlying causes of the significantly lower earnings for primary care physicians compared to other physician specialties.

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Center for Information Services and Analysis

## Acknowledgments

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Ms. Katie Merrell and Dr. Lan Zhao of SSS's Center for Health Research and Policy conducted the analyses described in this report. A programming team at SSS consisting of Mr. Adrien Ndikumwami, Ms. Sanee Maphunghong, and Mr. Po-Lun Chou edited the payer data submissions, organized the MCDB, and developed the data estimates included here. Dr. Z. Joan Wang and her staff at Avar provided data collection and processing support. Ms. Joan Holleman edited the report, and Ms. Laura Spofford and Ms. Kate Bryan assisted in the preparation of the report. The Commission thanks the SSS and Avar teams.

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# Executive Summary

This report describes the number, mix, and cost of practitioner services received by privately insured, nonelderly residents of Maryland in 2006. MHCC has published a *Practitioner Utilization* report each year since 1996, describing the use of privately insured practitioner services by residents and the associated payments for those services, as required by state law. The analyses in this report are based solely on fee-for-service payments; data on capitated services are not included.

The share of real personal income that was spent on practitioner services for privately insured, nonelderly Maryland residents fell slightly in 2006. Despite higher growth in practitioner service spending in 2006 than the previous two years, real net income also grew more than in recent years.

Overall, nominal per-user fee-for-service spending on practitioner services rose about 4 percent in 2006, to \$941 from \$904. Consumer-directed health plans (CDHP) continued to grow, with their share of users almost doubling in 2006.<sup>1</sup> However, CDHP users still only accounted for less than 2 percent of all users. Among non-CDHP plans, public employer plans account for a slightly larger share of users relative to 2005, with an offsetting drop in the share accounted for by private employers. In 2006, 43 percent of users were enrolled in private employer plans, followed by 34 percent in public employer plans, 17 percent through the Comprehensive Standard Health Benefit Plan (CSHBP) for small businesses, and 6 percent in individual plans. As a group, all non-CDHP plans reported per-user spending growth of about 4 percent. Similar to 2005, users in public employer plans had the highest per-user spending but the lowest share of spending paid out-of-pocket. The distribution of users between HMO and non-HMO products remained stable from 2005 to 2006, with about 60 percent of users enrolled in non-HMO plans.

There was a small shift in the share of users from the two largest payers to other payers in 2006, driven mainly by enrollment increases at the Cov-

entry Health Plan. These other payers had much higher growth in per-user payments and now have an average user payment higher than the large payers, despite lower average resource use, as captured by relative value units (RVUs) per user. Per-user payments continue to be higher in the Baltimore Metropolitan and National Capital areas than in the remainder of the state, which includes all of Maryland's rural counties. However, per-user payments in these rural and less metropolitan counties grew by 6 percent in 2006, faster than in the Baltimore (4 percent) or National Capital (3 percent) areas.

Among those users enrolled in an HMO or health insurance plan for the entire year, the average fee-for-service expenditure was \$1,046 in 2006, up about 3 percent from 2005. As in 2005, CDHPs attracted a higher share of low-risk full-year users and a lower share of high-risk users than non-CDHP plans as a whole. Within the group of non-CDHP plans, individual plans had a relatively healthy mix, particularly in comparison to public employer plans.

This difference in risk profile matches the pattern in per-user spending across plan characteristics. For example, even though payment per user was the highest within each risk group for individual plans, their healthier risk mix led to an overall mean payment lower than other non-CDHP plans.

Growth in fee-for-service expenditure per user and the relationships among volume, intensity, and total spending vary by payer characteristics. Overall, an increase in the number of services per user led to an increase in per-user spending, despite a drop in payment per RVU. Individual plans had the lowest per-user spending level in 2006 and is the only coverage type that reported a drop from 2005. CSHBP continues to have the highest per-user spending, although that for public employer plans grew more between 2005 and 2006.

The growth rate in per-user fee-for-service expenditure was much higher among other payers than the two largest payers in the state, with these other payers now paying more per full-year user (\$1,062 in other payers and \$1,041 in the two larg-

<sup>1</sup> Overall, users in the MCDB increased by 55,000 patients, from 2.35 million in 2005 to 2.41 million in 2006.

est payers). This is due to the 13 percent increase in service volume in other payers, since service intensity and payment per RVU both fell slightly among these payers.

Overall, the average payment rate per RVU for practitioner services covered by private payers remains close to the Medicare payment rate. The results for 2006 services are consistent with similar analyses conducted by the MHCC since 2000 that show private sector rates close to Medicare.

There are differences, however, associated with market share of a payer and some user characteristics. For example, other payers paid roughly

10 percent more than Medicare, but large payers paid 4 percent less than Medicare for the mix and number of services used by full-year users. Payment rates per RVU for services used by high-risk patients were equivalent to Medicare, while payment rates for lower-risk patients were about 4 percent below Medicare. This difference likely reflects, among other things, differences in the mix of services used by high- and low-risk patients and payment rate differences across service types. The largest payers appear to have relatively more high-risk users and more users in high-expenditure plans, suggesting that price-setting power is another factor leading to the difference in per-user spending.

# 1. Introduction

This report analyzes payments to physicians and other health care practitioners made for the care of privately insured Maryland residents under age 65. It is based on analyses using data from the Maryland Medical Care Data Base (MCDB). The MCDB contains health care claims and encounter data that most private health insurance plans serving Maryland residents submit annually to the Maryland Health Care Commission (MHCC). Data from 2005 and 2006 are used to track changes in the quantity of care and the price of care for individuals in private plans that report data to MHCC.

This introductory chapter explains key concepts used in the report and summarizes the legal mandate for the report. **Chapter 2** presents an overview of fee-for-service spending on practitioner services for privately insured individuals who used practitioner services in 2006. **Chapter 3** analyzes the relationship between price, volume, intensity, and total spending among service users who were enrolled in a private insurance plan for the entire year. **Appendix A** provides a technical background including a summary of data, methods, and caveats for this report. **Appendix B** lists the payers contributing data to this report. **Appendix C** contains data on per-user expenditure and relative value units (RVUs) for practitioner services. Technical detail on the methodology will be available on the MHCC Web site (<http://mhcc.maryland.gov>). **Appendix D** shows the distribution of expenditure risk scores among full-year users and how scores vary by coverage type.

## Mandate For This Report

Each year since 1996, the MHCC has published a *Practitioner Utilization* report describing the use of practitioner services covered by private insurance by nonelderly Maryland residents and the associated payments by insurance companies and recipients for those services, as required by Health-General Article §19-133(g)(2-4). The Medicare fee schedule is used to provide a uniform measure of service intensity for comparisons of payment rate by provider and user characteristics and to benchmark private insurance payments for practitioner services in Maryland relative to Medicare payment.

## Key Concepts

### Study Populations: All Users vs. Full-Year Enrollees

Private health insurance plans that serve Maryland residents, with the exception of a number of small payers, have been submitting provider claims and encounter data for inclusion in the MCDB annually since 1996. The MCDB includes information about individuals covered by private insurance who use provider services during each year. For reporting purposes, we call an individual in the MCDB who was a Maryland resident and less than 65 years old in the reporting year a *user*. Because an individual may be covered by more than one plan in the course of the year and it is impossible to identify a person across different plans, spending and utilization are measured by per user *within* a plan. As a result, some users may be double-counted and the number of individual users reported may be more than the actual net number of users of practitioner services covered by those insurance plans that contributed data to MCDB. Changes in the number of users included in the *Practitioner Utilization* report between years may reflect several factors such as changes in the number of individuals covered by private insurance, the share of insured individuals who use practitioner services, the share of users who were covered by more than one plan during the year, the number of insurers that submit data to the MCDB, and the completeness of submitted data.

*Practitioner Utilization* reports prior to last year's presented utilization and payment information using all users in the MCDB. The 2005 *Practitioner Utilization* report introduced the new concept of 'full-year enrollees,' who, in addition to being users, were enrolled in a single plan for the whole year. The distinction between *all users* and *full-year enrollees* was made possible because private insurers reported each enrollee's enrollment and disenrollment dates to the MCDB for the first time in 2006.<sup>2</sup>

<sup>2</sup> There is a one-year lag between the year in which encounters occur and the time insurers report the encounter data to the MHCC. For example, data used in this report were submitted to the MHCC in 2007 but reflect encounters that took place in 2006.

## Key Terms

### **TOTAL PAYMENTS FOR PRACTITIONER CARE**

Sum of payments from the insurer and patient, including deductible, coinsurance, and balance billing amounts paid directly out-of-pocket by the patient and reported on the claims data.

**COUNT OF SERVICES** A simple count of the number of services provided to patients (as listed on the bills), without regard to the cost, complexity, or intensity of those services.

### **TOTAL RELATIVE VALUE UNITS (RVUS) OF CARE**

A measure of the quantity of care, where more complex, resource-intensive (and typically more costly) services have higher RVUs. A more sophisticated measure of the quantity of care than a simple count of services, RVUs measure the level of resources used to produce a particular service. Medicare's physician payment system was used as the source of information on the number of RVUs for each

service. For this report, RVUs from the 2006 Medicare fee schedule were applied to both 2005 and 2006 data.

**COUNT OF SERVICE USERS** A count of the encrypted patient identifiers reported by payers. Because payers may use different numbering systems for their different insurance products, the count is done within each specific plan. Counts of users may overstate the actual number of users of practitioner services, because individuals who are insured under more than one product during a year will be counted separately under each.

### **PAYMENT AT MEDICARE PAYMENT LEVEL**

Medicare RVUs are merged to each service in the MCDB by CPT code, and the Medicare conversion factor is applied to calculate payment for the service at the Medicare payment level.

There are two scenarios in which individuals would be enrolled for only part of the year:

- They had private insurance coverage for only part of the year; or
- They changed insurers (or plans within an insurer) during the year, in which case they would show up as part-year enrollees in more than one plan.

Job turnover and the stability of plan offerings could contribute to part-year enrollment. In addition, some employers in all segments of the market may use coverage periods that are different from the calendar year (e.g., their own fiscal year or idiosyncratic enrollment cycles). If their employees change plans at open enrollment, they will appear as part-year enrollees in two plans—the one they started the year in and the one they switched to.

In 2006, there were about 2.4 million users, roughly 75 percent of whom were enrolled in a single plan for the entire year (Table 1-1). Individuals insured through public employers are more likely to be full-year enrollees, resulting in a higher share of public

employer plan enrollees among full-year users than among all users. On the other hand, those insured through the Comprehensive Standard Health Benefit Plan for Small Businesses (CSHBP) are much less likely to hold insurance with the same plan throughout 2006. Individual plans include about the same share of full-year users as of all users, while private employer plans have a slightly smaller share of full-year users than of all users.

The distinction between full-year and part-year users is important for analytic purposes. Data including part-year users are likely to understate the utilization of and payment for practitioner services on a per-user basis because data for these users are likely to be incomplete. Therefore, we use *all users* in Chapter 2 to provide an overview of 2006 practitioner services in Maryland but focus on *full-year users* in Chapter 3 where we decompose per-user spending on practitioner services into volume, intensity, and price. Including all users in Chapter 2 better captures utilization of and payments for practitioner services covered by private insurance at the aggregate level. It also generates descriptive statistics that are comparable to previ-

ous *Practitioner Utilization* reports, making trend analyses feasible. Focusing on full-year users, on the other hand, reduces biases for per-user analyses and allows for a more reliable study of the individual effects of volume, intensity, and price on total spending.

**TABLE 1-1: Distribution and Count of All and Full-Year Users by Coverage Type, 2006**

	Percent of All Users	Percent of Full-Year Users
<b>ALL</b>	2,406,093	1,804,558
<b>COVERAGE TYPE</b>		
1: Individual Plan	6%	6%
2: Private Employer Plan	43	41
3: Public Employer Plan	34	40
4: CSHBP	17	13

NOTES: 1. Users are those with at least one fee-for-service (HMOFFS or NONHMO) service.  
 2. Excludes encounter data provided by Great-West Life & Annuity Insurance Company (P330).  
 3. Enrollees who have more than one coverage type are assigned the coverage type associated with the highest payment or the highest number of services if the highest payment ties between coverage types.  
 4. There were 55,000 more users (All Users) in 2006 than in 2005, largely attributable to rapid growth in Coventry Health Plan and smaller increases in CareFirst products.

## User, Provider, and Insurance Plan Characteristics

Users, providers, and insurance plans all play a role in determining the utilization of and payment for practitioner services. Given what is available in the MCDB, we examine the impact of the following user and plan characteristics on payment and utilization.<sup>3</sup>

*User Characteristics* Health status is the most important characteristic that affects the utilization of practitioner services among privately insured users. With the availability of enrollment information in the MCDB since last year, we are able to construct a measure of risk status. As in the 2005 *Practitioner Utilization* report, the Chronic Illness and Disability Payment System (CDPS) has been used to categorize individuals according to the number

and mix of diagnoses recorded on their provider claims.<sup>4</sup> CDPS, developed by researchers at the University of California, San Diego, supports the creation of, essentially, an expenditure risk score from utilization data. Scores were calculated for each user enrolled for the entire year of 2006 in a data-reporting plan. The resulting distribution of risk scores was divided into thirds, and individuals were assigned into one of three categories —“low-risk,” “medium-risk,” and “high-risk”—based on their position in the distribution. In other words, each full-year user in the MCDB has been assigned a case-mix score, with high-risk status reflecting a mix of documented illness likely to be associated with high levels of health services spending.

*Plan Characteristics* Throughout the report, insurance plans are categorized in several key dimensions:

- *Plan type*: distinguishes between health maintenance organizations (HMOs), which use a mix of capitated and fee-for-service payment methods, and non-HMOs, typically preferred provider organizations (PPOs) that provide care on a fee-for-service basis through networks of providers;
- *Coverage type*: differentiates between consumer-directed health plans (CDHPs) and, among non-CDHPs, whether the private insurance is bought on an individual basis or through an employer. Among employer-sponsored plans, there are three groups—private employers, public employers, and the Comprehensive Standard Health Benefit Plan (CSHBP) for small businesses;
- *Market share*: separates the two largest insurers from all smaller plans, since they may, in some sense, be able to lead rather than follow market trends; and
- *Geographic region*: divides the state into three regions: the National Capital Area, Metropolitan Baltimore, and all other areas.

<sup>3</sup> The relationship between the payment for and the utilization of practitioner services and provider characteristics (provider specialty in particular) will be examined separately in an issue brief.

<sup>4</sup> “Improving Health-Based Payment for Medicaid Beneficiaries: CDPS,” Richard Kronick, Ph.D., Todd Gilmer, Ph.D., Tony Dreyfus, M.C.P., and Lora Lee, M.S., *Health Care Financing Review*, Spring 2000/Volume 21, No. 3, p. 29. The CDPS includes weights based on total spending, including inpatient, drug, and provider services. It is used here based on only provider claims.

*Utilization and Payment Measures* The report is based on payments for provider services made on a fee-for-service basis. Total spending is decomposed into the total number of users and total spending per user. Total spending per user reflects:

- *Payment levels:* tracked through comparisons with Medicare payment levels;
- *Volume:* measured as number of services; and
- *Intensity:* captured through the number of relative value units (RVUs) per service or group of services.

Practitioner services paid on a capitated basis are not included in this report. The share of total practitioner RVUs accounted for by capitated services has been falling in Maryland in recent years. Based on data in Table 1.1 in the 2004 *Practitioner Utilization* report, about 6 percent of total practitioner RVUs were paid on a capitated basis. The results reported here for non-HMO plans include all payments in these plans, while the exclusion of capitated services means that estimates for HMOs are not representative of total provider services for users with fee-for-service and capitated services.

## The Role of Volume, Intensity, and Prices in Total Spending

Payments for health care are determined by three factors: number of services, service intensity, and payment rate. As in last year's report, we attempt to disentangle the differential effects of these three factors on per-user spending. This was not feasible until last year when plans started to report enrollment and disenrollment dates of their users to the MCDB. Without enrollment date information, part-year users whose use and payment information may be incomplete could not be distinguished from full-year enrollees. A per-user spending decomposition analysis that includes both part-year and full-year enrollees may result in confusing or misleading results.

Price, volume, and intensity reflect decisions made by insurers, providers, and patients. Changes in users' health status, providers' practice style, and insurers' payment policy can all lead to changes in per-user spending. For example, HMOs presumably use capitated payment in an effort to control

all three factors simultaneously, while PPOs rely on negotiation and network formation to control prices and on other mechanisms such as cost-sharing requirements and prior authorization to control volume and intensity. As a result, enrollees in HMO products may face a different set of prices and therefore use a different amount of practitioner services and choose services of different intensity from enrollees in PPO products. The decomposition of total spending in different dimensions by provider, user, and payer characteristics can reveal the differential effects of price and other incentives on utilization.

Changes in measured price, volume, and intensity can result not only from changes in behavior by insurers, providers, and patients, but also from shifts in the number or mix of individuals included in the data analyzed. It is thus important to examine per-user spending when comparing payments by payer and provider, as both the number and mix of users can be controlled for. In the context of the MCDB, if there is a change in the number of individuals covered by private insurance and using at least one practitioner service during the year, or in their average underlying health status, then measured price, volume, or intensity might change in the absence of any policy or practice changes by plans and providers. For example, if relatively healthy individuals leave an insurer, whether by moving to another plan or by exiting the private insurance market, then measured volume and intensity per user for that insurer will increase even if there is no change in services used by those who remain enrolled. Therefore, changes in overall insurance coverage rates as well as the distribution of users and health risk across private plans can all lead to changes in price, volume, and intensity, as can changes in provider practice styles and the underlying health of insured individuals.

Since the exercise of decomposing total spending started only last year, this is the first year in which changes in the differential effects of price, volume, and intensity on total spending could be reported.

## 2. Overview of 2006 Practitioner Services in Maryland

In 2006, the amount paid by nonelderly Maryland residents and their private insurers for fee-for-service practitioner services was, on average, equivalent to about 2 percent of the real per capita income in Maryland. Spending as a percent of income has been falling since 2003, but the decline is limited, falling from 2.3 percent in 2003 to 2.1 percent in 2006. The peak in 2003 was the result of high growth of per-user real spending on practitioner services and coincident low growth of real per capita income. Although real spending per user increased slightly in 2006, its growth was outpaced by that of real per capita income.

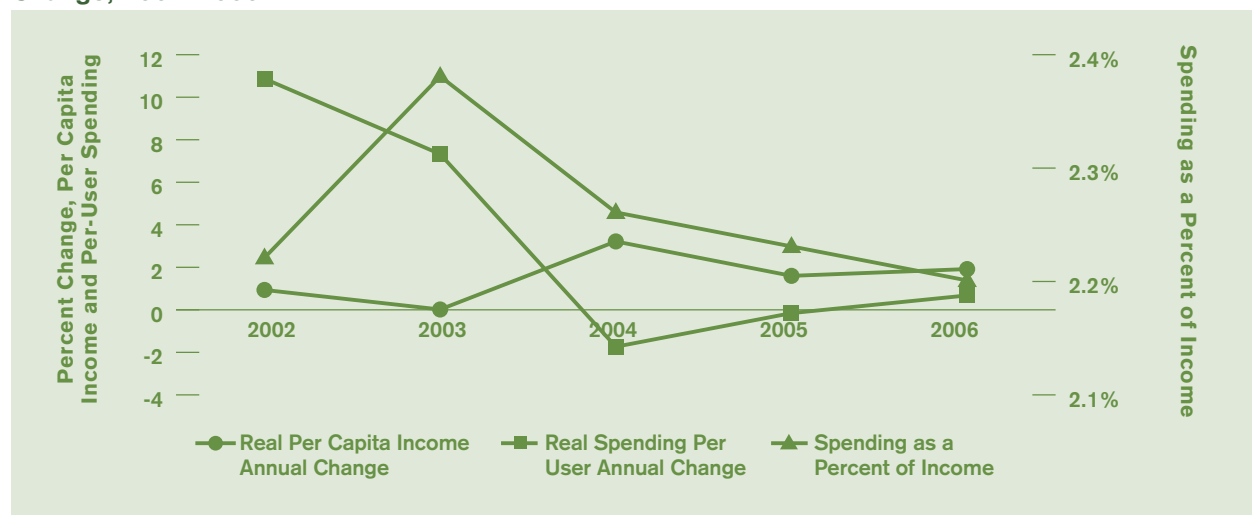
Real per-user fee-for-service spending experienced dramatic changes between 2002 and 2006. Its annual growth rate started at almost 11 percent at the beginning of the five-year period, slowed down to 7 percent in 2003, dived into negative territory in 2004, and hovered around 0 in 2005 and 2006. It should be noted that the trend in total

practitioner spending for the privately insured may be somewhat different from what is reported here due to the exclusion of all capitated services and users who received only capitated services.

Overall, nominal per-user fee-for-service spending on practitioner services rose about 4 percent in 2006, to \$941 from \$904 (Table 2-1). Consumer-directed health plans (CDHP) continued to grow rapidly with their share of users almost doubling in 2006. However, CDHP users still accounted only for less than 2 percent of all users. Per-user spending in CDHPs fell slightly (less than 1 percent). The share of spending on provider services paid out-of-pocket dropped more than 7 percentage points in these plans, but it is still more than twice the share in non-CDHP plans.

Among non-CDHP plans, the number of users insured through private employers dropped by about 2 percentage points while users insured through

**FIGURE 2-1: Fee-for-Service Per-User Spending on Practitioner Services and Per Capita Income, Annual Change, 2002–2006**



- NOTES: 1. Both "Real Per Capita Income" and "Real Spending Per User" are measured in 2000 dollars.  
 2. Population includes all enrollees with at least one fee-for-service service.  
 3. Capitated services are excluded.  
 4. Data on personal income were downloaded from the Bureau of Economic Analysis Web site at <http://www.bea.gov/regional/spi/default.cfm?satable=SA30>.  
 5. Per-user spending is calculated using the 2006 MCDB.  
 6. The CPI-U-RS series downloaded from [http://www.bls.gov/cpi/cpiurs1978\\_2007.pdf](http://www.bls.gov/cpi/cpiurs1978_2007.pdf) was used as the deflator for prices.

**TABLE 2-1: Distribution of Users and Fee-for-Service Expenditures by Coverage Type, Plan Type, and Market Share, 2005–2006**

	2005			2006			Percent Change in Per-User Expenditure, 2005–2006
	Percent of All Users	Expenditure Per User	Percent Paid Out-of-Pocket	Percent of All Users	Expenditure Per User	Percent Paid Out-of-Pocket	
<b>ALL</b>	100%	\$904	18%	100%	\$941	18%	4%
<b>COVERAGE TYPE</b>							
<b>Non-CDHP</b>	99	905	18	99	943	18	4
1: Individual Plan	6	846	39	6	842	40	0
2: Private Employer Plan	44	883	16	42	930	17	5
3: Public Employer Plan	33	974	16	34	1012	15	4
4: CSHBP	17	848	20	17	868	20	2
<b>CDHP</b>	1	867	48	1	859	40	-1
<b>PLAN TYPE</b>							
Non-HMO	59	1001	21	60	1030	20	3
HMO	41	768	13	40	809	13	5
<b>MARKET SHARE</b>							
Largest Payers	75	907	19	73	935	19	3
Other Payers	25	897	16	27	957	17	7

NOTES: 1. Population includes all enrollees with at least one fee-for-service service.  
 2. Capitated services are excluded because no payment information is available.  
 3. Detail may not add to total due to rounding.  
 4. 0% indicates <0.5%.

public employers increased by 1 percentage point in 2006. As a group, all non-CDHP plans reported per-user spending growth of about 4 percent (Table 2-1). There were differences across coverage type, with increases of more than 5 percent for the private employer plans and a slight drop (-.05 percent) among individual plans. As in 2005, users in public employer plans had the highest per-user spending but the lowest share of spending paid out-of-pocket. Users in individual plans were at the opposite end, incurring the least per-user spending but bearing the highest out-of-pocket burden. The gap in per-user spending between public employer plans and individual plans further widened from 15 percent in 2005 to 20 percent in 2006.

The distribution of users between HMO and non-HMO products remained stable from 2005 to 2006, with about 60 percent of users enrolled in non-HMO plans (Table 2-1). The level of per-user spending was higher but its growth rate was lower among non-HMO users than among HMO users. As a result, per-user fee-for-service spending among non-HMO users was 27 percent higher than

that among HMO users in 2006, compared to 30 percent in 2005. The share of spending paid out-of-pocket stayed the same for both groups of users.

There was a small shift in the share of users from the two largest payers to smaller payers in 2006 (Table 2-1). Payment for fee-for-service practitioner services on a per-user basis by smaller payers grew 7 percent, more than double the growth rate for the two largest payers. As a result, instead of being 1 percent lower in 2005, per-user spending among users insured by smaller payers became 2 percent higher than per-user spending among users insured by the two largest payers.

There was no change in the distribution of users and total fee-for-service practitioner spending by region in 2006 (Table 2-2). The Baltimore Metropolitan Area (BMA) accounts for almost half of both users and payments. Per-user fee-for-service practitioner spending in the National Capital Area (NCA) remains much higher than that in the other two regions of the state, although the gap closed somewhat. This is due to a slightly larger drop in payment per RVU in the NCA relative to the BMA

**TABLE 2-2: Fee-for-Service Expenditure and Payment Rate by Region, 2005–2006**

REGION	Share of Users		Percent of Payment		Fee-for-Service Expenditure Per User		RVUs Per User		Payment Per RVU	
	2005	2006	2005	2006	2006	%change from 2005	2006	%change from 2005	2006	%change from 2005
<b>TOTAL</b>	100%	100%	100%	100%	\$941	4%	24.0	5%	\$39.3	-1%
1: National Capital Area	32	32	34	34	1,000	3	24.1	5	41.6	-2
2: Baltimore Metropolitan Area	47	47	46	46	929	4	24.5	5	38.0	-1
3: Other Maryland Area	21	21	19	20	878	6	22.7	6	38.8	-1

NOTES: 1. Detail may not add to total due to rounding.

2. Includes services for "all enrollees" with payment >0 and RVU >0.

3. 2006 Relative Value Units (RVU\_2006) were applied to both years' data.

and Other Maryland Area (Table 2-2). RVU per user grew in all three regions at a higher rate than the drop in payment per RVU, leading to a modest increase in the fee-for-service spending per user in each region.

In 2006, 43 percent of the users were enrolled in private employer plans, followed by 34 percent in public employer plans, 17 percent in CSHBP plans, and 6 percent in individual plans (Table 2-3). The share of total payments displays a similar pattern as the share of users, although users in public employer plans account for a disproportionately high share of payment due to their higher-than-average per-user fee-for-service practitioner spending.

Users in public employer plans also consumed more resources—RVU per user was 26 percent higher than that for users in individual plans.

The two largest payers in the private insurance market in Maryland insured more than 70 percent of all nonelderly users (Table 2-3). Users covered by them used about 12 percent more resources (RVUs per user) than those in smaller insurers. However, payment per RVU was 13 percent lower for services rendered to users in the two largest payers. The net effect was slightly lower per-user fee-for-service spending among large payers than among their smaller competitors in 2006.

**TABLE 2-3: Fee-for-Service Expenditure and Payment Rate by Coverage Type and Market Share, 2006**

	Percent of Users	Percent of Payment	Fee-for-Service Expenditure Per User	RVUs Per User	Payment Per RVU
<b>TOTAL</b>	100%	100%	\$941	24.0	\$39.3
<b>COVERAGE TYPE</b>					
1: Individual Plan	6	6	846	20.8	40.6
2: Private Employer Plan	43	43	928	22.9	40.5
3: Public Employer Plan	34	36	1,011	26.3	38.4
4: CSHBP	17	15	868	23.1	37.6
<b>MARKET SHARE</b>					
Largest Payers	73	72	935	24.7	37.9
Other Payers	27	28	957	22.0	43.6

NOTES: 1. Detail may not add to total due to rounding.

2. Includes services for "all enrollees" with payment >0 and RVU >0.

### 3. Decomposition of Spending on Practitioner Services: Volume, Intensity, and Price

This chapter examines the role of service volume, intensity, and price in the overall spending on fee-for-service practitioner services described in the previous chapter. It is based on data for full-year users—users who were enrolled in a data-reporting plan for the entire year. Among full-year users, the fee-for-service expenditure per user was \$1,046 in 2006; by including part-year users whose data may be incomplete, the fee-for-service expenditure per user was only \$941 (Table 2-1). Between 2005 and 2006, expenditure per user grew by 3 percent for full-year users and 4 percent for all users.

Following widely used convention, volume is captured through the number of services; intensity is measured through the relative value units (RVUs)

represented by services; and price is estimated through payment in current-year dollars per RVU.

As described in other chapters, capitated services are not included in this report. The exclusion of capitated services could affect the estimates in this chapter through two channels. First, to the extent that some users (users in HMO plans who had a mix of fee-for-service and capitated services) have incomplete data because some of their care is paid on a capitated basis, the volume reported for these users is artificially low. Second, to the extent that certain types of services—such as primary care and laboratory tests—are more likely to be paid on a capitated basis than others, measured service intensity is likely to be artificially high because

**TABLE 3-1: Distribution of Fee-for-Service Users and Expenditures by Coverage Type, Plan Type, and Market Share, 2006**

	Percent of Users				Expenditure Per User				Spending Ratio: High-Risk to Low-Risk Users
	All Users	Low-Risk Users	Medium-Risk Users	High-Risk Users	All Users	Low-Risk Users	Medium-Risk Users	High-Risk Users	
<b>ALL</b>	100%	35%	31%	33%	\$1,046	\$381	\$791	\$1,998	4.9
<b>COVERAGE TYPE</b>									
<b>Non-CDHP</b>	100	35	31	33	1,048	381	791	1,998	4.9
1: Individual Plan	100	42	31	27	982	402	839	2,072	3.2
2: Private Employer Plan	100	36	32	32	1,045	393	804	2,015	4.6
3: Public Employer Plan	100	34	31	35	1,052	360	762	1,967	5.7
4: CSHBP	100	35	31	33	1,068	393	815	2,019	4.8
<b>CDHP</b>	100	42	31	26	963	412	826	2,003	3.0
<b>PLAN TYPE</b>									
Non-HMO	100	35	31	33	1,142	414	862	2,179	4.9
HMO	100	36	32	33	895	330	681	1,711	4.8
<b>MARKET SHARE</b>									
Largest Payers	100	35	31	33	1,041	371	784	1,988	5.1
Other Payers	100	36	31	33	1,062	410	812	2,028	4.4

NOTES: 1. Population includes full-year enrollees with at least one fee-for-service (NONHMO or HMOFFS) service.

2. Includes services with payment >0 and RVU >0.

3. The resulting risk status groups do not each include exactly one-third of the population, since the cutoff score values applied to many users.

these lower-intensity services are excluded. Such a bias could affect the comparisons of volume and intensity by users' health status or insurer characteristics if there are systematic differences in the distribution of certain types of services by user or payer characteristics.

Table 3-1 shows the composition of full-year users, overall and by risk status, within each group of insurers defined by coverage type, plan type, and market share. As in 2005, CDHPs attracted a higher share of low-risk users and a lower share of high-risk users than non-CDHP plans as a whole. Within the group of non-CDHP plans, individual plans had healthier-than-average users while public employer plans are at the opposite end of the risk distribution. Neither plan type nor market share appears to be strongly associated with risk mix. HMO plans and other payers had only slightly healthier users than non-HMO plans and the two largest payers in the state, respectively.

Data in Table 3-1 suggest user risk mix contributes to the differences in fee-for-service expenditure per user among insurers of different characteris-

tics. Users in CDHP plans were relatively healthy (the share of low-risk users is 7 percentage points higher than average, while the share of high-risk users is 7 percentage points lower than the average). As a result, the overall average expenditure for CDHP plan users was the lowest among all plans despite the fact that CDHP plans paid more on a per-user basis than non-CDHP plans as a group within each risk category. There is a similar pattern among the non-CDHP plans—even though individual plans paid more per user than private employer, public employer, and CSHBP plans in each risk category, their overall expenditure per user was lower.

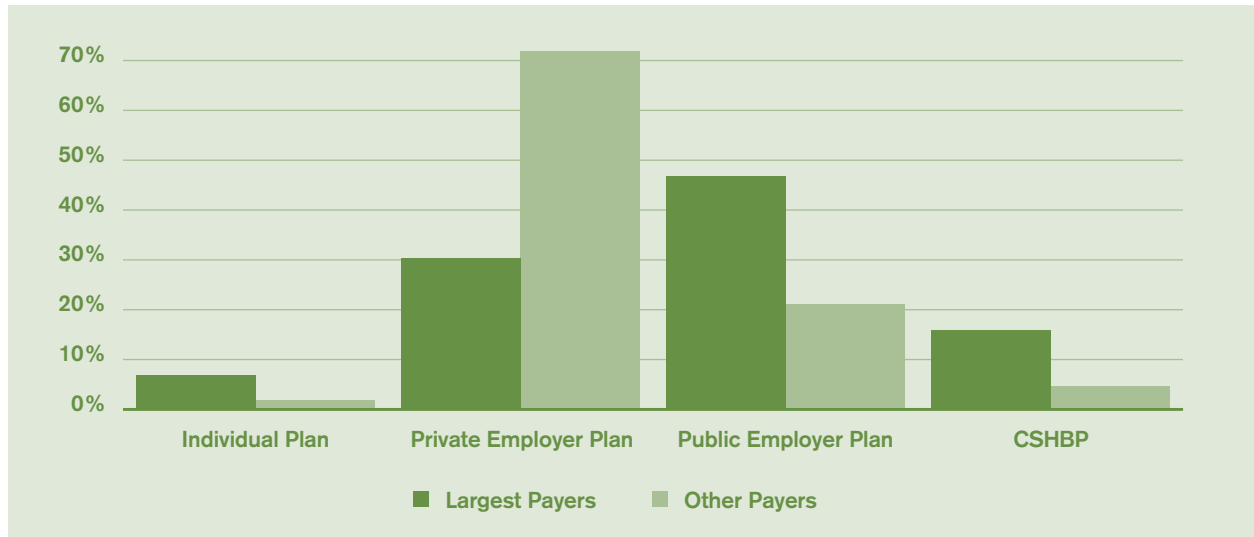
The growth in the fee-for-service expenditure per user and the relationships among volume, intensity, and total spending vary by payer characteristics (Table 3-2). Similar to the pattern observed in 2005, individual plans had the lowest per-user spending while the CSHBP plans had the highest in 2006. However, individual plans are the only group that experienced a decline in per-user spending (1.2 percent) from 2005 to 2006. Private employer plans saw the fastest growth at 4.4 percent, fol-

**TABLE 3-2: Decomposition of Expenditure Per User by Coverage Type, Plan Type, and Market Share, 2005–2006**

	Percent of Users		Fee-for-Service Expenditure Per User		Number of Services Per User		RVU Per Service		Payment Per RVU		Ratio of Expenditure Per User to Expenditure Per User at Medicare Payment Rate	
	2005	2006	2005	2006	2005	2006	2005	2006	2005	2006	2005	2006
<b>ALL</b>	100%	100%	\$1,015	\$1,046	15	16	1.8	1.8	\$36.4	\$36.0	0.99	1.00
<b>COVERAGE TYPE</b>												
1: Individual Plan	6	6	998	986	15	15	1.7	1.7	38.2	37.3	1.04	1.02
2: Private Employer Plan	43	41	998	1,042	14	16	1.8	1.8	37.7	37.6	1.02	1.03
3: Public Employer Plan	39	40	1,028	1,052	16	17	1.8	1.8	35.1	34.7	0.97	0.98
4: CSHBP	13	13	1,049	1,068	15	16	1.9	1.9	35.6	35.1	0.96	0.96
<b>PLAN TYPE</b>												
Non-HMO	60	61	1,119	1,142	18	19	1.6	1.6	38.3	37.9	1.01	1.01
HMO	40	39	857	895	11	12	2.1	2.1	36.1	35.6	0.96	0.98
<b>MARKET SHARE</b>												
Largest Payers	74	74	1,026	1,041	16	16	1.8	1.8	35.3	34.8	0.97	0.96
Other Payers	26	26	987	1,062	13	15	1.9	1.8	40.2	40.0	1.09	1.10

NOTES: 1. Population is full-year users with at least one fee-for-service (NONHMO or HMOFFS) service.  
2. Includes services with payment >0 and RVU >0.

**FIGURE 3-1a: Distribution of Coverage Type by Market Share**



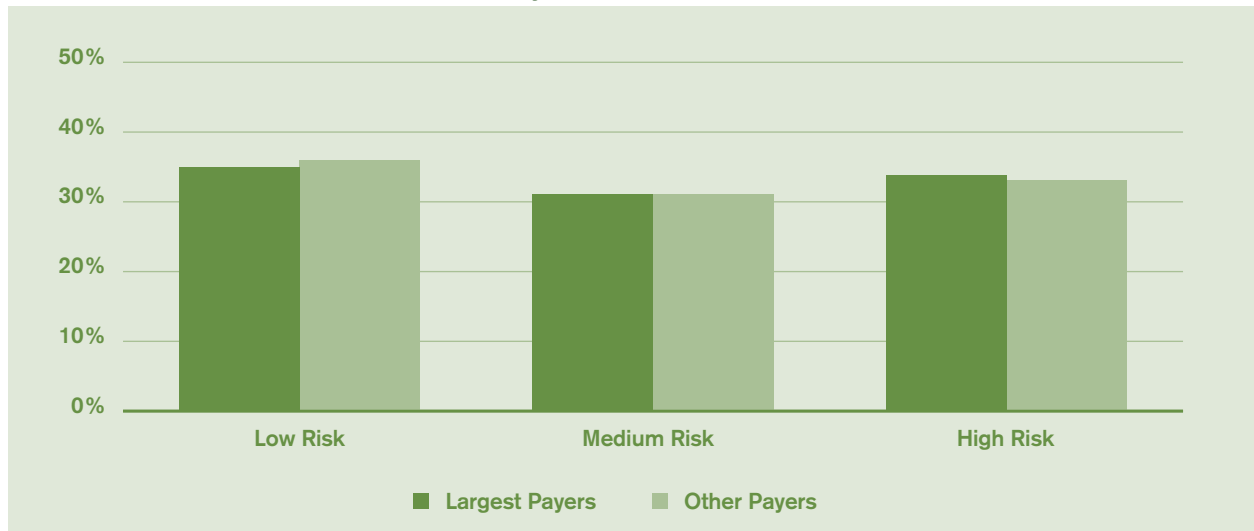
NOTE: Population includes only full-year enrollees.

lowed by a 2.4 percent and a 1.8 percent increase among public employer and CSHBP plans, respectively. Payment per RVU fell across the board, although the maximum decline was only 2 percent (for the individual plans).<sup>5</sup> In contrast, number of services per user not only grew for plans of all coverage types but the growth rate ranged from

1 percent in the individual market to more than 8 percent in the private employer market. Service intensity measured by RVUs per service was fairly stable from 2005 to 2006. It appears that the fall in payment per RVU was the main driver for the lower per-user spending among individual plans, while among private employer plans, the significant increase in service volume not only offset the decrease in payment rate but contributed to the net effect of the highest increase in per-user spending among all coverage types.

<sup>5</sup> The relative shares of the largest and other payers within each coverage type impact payment per RVU. In all types except private employer plans, the largest payers dominate with 86–91 percent of the users.

**FIGURE 3-1b: Distribution of Risk Status by Market Share**



NOTE: Population includes only full-year enrollees.

**TABLE 3-3: Decomposition of Expenditure Per User by Payer Characteristics and Plan Type, 2006**

CATEGORY	Non-HMO	All
<b>LARGEST PAYERS</b>		
Percent of Users	63%	100%
Expenditure Per User	\$1,137	\$1,041
Number of Services Received Per User	19	16
RVU Per Service	1.6	1.8
Payment Per RVU	\$37.6	\$36.9
Ratio of Expenditure Per User to Expenditure Per User at Medicare Payment Rate	0.97	0.97
<b>OTHER PAYERS</b>		
Percent of Users	55%	100%
Expenditure Per User	\$1,161	\$1,062
Number of Services Received Per User	17	15
RVU Per Service	1.6	1.8
Payment Per RVU	\$43.6	\$43.8
Ratio of Expenditure Per User to Expenditure Per User at Medicare Payment Rate	1.12	1.09

NOTES: 1. Population is full-year users with at least one fee-for-service (NONHMO or HMOFFS) service.

2. Includes services with payment >0 and RVU >0.

HMO and non-HMO plans both exhibited slightly falling payment rates for fee-for-service practitioner services (Table 3-2). However, increases in service volume (4 percent for non-HMO plans and 6 percent for HMO plans) dominated and led to a 2 percent and a 5 percent increase in per-user spending in 2006 for non-HMO and HMO plans, respectively. It should be noted, however, that since practitioner services that are paid on a capitated basis are not included in this report, the comparison between non-HMO and HMO plans should be made with caution. The faster growth in service volume and the slower decline in service intensity by HMO plans could reflect real differences in behavioral changes by users, providers, and payers that are associated with HMO and non-HMO plans. They could also be the result of HMOs shifting from paying practitioner services on a capitated basis to a fee-for-service basis. In the latter case, full-year users in HMO plans might have more services captured in this exercise in 2006 than in 2005, hence the higher growth rate in the number of services per user. Service intensity could be affected in either direction by the shift from capitated to fee-for-service payment method, depending on the intensity of services that were added to the fee-for-service group relative to that of services that had always been paid on a fee-for-service basis.

The growth rate in per-user fee-for-service expenditure was much faster among other payers than the two largest payers in the state, resulting in a reversed order in terms of per-user spending between the two groups in 2006 compared to 2005 (\$1,062 in other payers and \$1,041 for the two largest payers). This is primarily due to the 13 percent increase in service volume in other payers, which is 10 percentage points higher than the percentage increase in the two largest payers.

The largest and other payers differ in the composition of their users due to product characteristics and employer and consumer preferences. Compared to users insured by smaller payers, users enrolled through the two largest payers are more likely to be covered under individual, small group (CSHBP), and public employer contracts (Figure 3-1a). The two largest payers in the state also have a slightly higher proportion of users in the high-risk group than other payers (Figure 3-1b). These patterns were the same in 2006 as in 2005 and for the two largest payers, the distribution of coverage type was virtually unchanged. For other payers, on the other hand, there was a 7 percentage point drop in the share of users in private employer plans and a 6 percentage point and a

2 percentage point increase in the share of users in public employer plans and CSHBP plans, respectively. Such a shift may have contributed to the noticeable increase in per-user spending among smaller payers as public employer plans tend to offer more generous benefits.

Data in Table 3-3 seem to suggest that the higher per-user expenditure among users enrolled in non-HMO products is mainly the result of more services, regardless of payer market share. Compared to all users (HMO and non-HMO users combined), non-HMO users had 16 percent and 17 percent more services in the two largest and other payers, respectively. The services obtained by non-HMO users were relatively less intensive than those obtained by all users, having 11 percent and 12 percent fewer RVUs per service in the largest and other payers, respectively. Sixty-three percent of users in the largest payers were enrolled in non-HMO plans in 2006, a slight drop from 2005 (data not shown). In contrast, the share of users in other payers who were enrolled in non-HMO plans increased from 52 percent in 2005 to 55 percent in 2006. These shifts in HMO versus non-HMO enrollment could have contributed to the more rapid growth in expenditure per user among other payers.

Service volume is also mainly responsible for the wide variation in the distribution of per-user expen-

diture by risk status. In 2006, the high-risk group spent one and a half times more on practitioner services than the medium-risk group and more than four times more than the low-risk group (Table 3-4). The service intensity received (RVUs per service) was 14 percent and 22 percent higher than that of the medium- and low-risk groups, respectively. Payment per RVU for services rendered to the high-risk users was about 9 percent and 11 percent higher than the payment rate for services rendered to medium- and low-risk users. In comparison, service volume differed on a much more sizeable scale. High-risk users had two times the number of services per person as medium-risk users and almost four times as many as low-risk users.

The overall payment rate for practitioner services covered by private payers remains close to the Medicare payment schedule (Table 3-2). However, there are variations in payment rate relative to Medicare by payer market share. Relative to what they would have paid had they used the Medicare payment schedule, other payers continued to pay more in 2006 as in 2005, while the two largest payers as a group seem to have lowered their payments further between 2005 and 2006. The gap between other payers and the two largest payers in the ratio of per-user spending relative to Medicare payment reflects the fact that payment per RVU was higher for other payers than for the two largest payers.

**TABLE 3-4: Decomposition of Expenditure Per User by Risk Status, 2006**

	Percent of Users	Mean of Fee-for-Service Expenditure Per User	Mean of Number of Services Per User	RVU Per Service	Payment Per RVU	Ratio of Expenditure Per User to Expenditure Per User at Medicare Payment Rate
<b>ALL</b>	100%	1,046	16	1.8	34.4	1.00
<b>RISK STATUS</b>						
High Risk	33	1,998	28	2.0	35.7	1.01
Medium Risk	31	791	14	1.8	32.8	0.96
Low Risk	35	381	7	1.7	32.1	0.96

NOTES: 1. Population is full-year users with at least one fee-for-service (NONHMO or HMOFFS) service.

2. Includes services with payment >0 and RVU >0.

3. The resulting risk status groups do not each include exactly one-third of the population, since the cutoff score values applied to many users.

## APPENDIX A:

# Technical Background: Summary of Data, Methods, and Caveats for This Report

Tables and figures in this report are based on services and payments captured in the MCDB. The MCDB contains extracts of insurance claims<sup>6</sup> for the services of physicians and other medical practitioners such as podiatrists, psychiatrists, nurse practitioners, and therapists. Insurance companies and HMOs meeting certain criteria<sup>7</sup> are required to submit these data to MHCC under the Code of Maryland Regulations (COMAR) 10.25.06 on health care practitioner services provided to Maryland residents. For calendar year 2006, the Commission received usable data from 23 payers, including all major health insurance companies.<sup>8</sup> Data from Great-West Life & Annuity Insurance Company were excluded this year due to incompleteness. A list of these 23 payers is included in Appendix B.

Each practitioner service generates a separate record in the MCDB. Patients are identified by concatenating the payer ID, plan-specific user ID (an encrypted number generated by each payer), the birth year and month of the user, and the user's gender. Insurers use a standard format for reporting the data. Each data record identifies the service provided; payments from the insurer and patient (for noncapitated care); physician specialty; user characteristics such as age, gender, and ZIP code of user residence; clinical diagnosis codes; and other attributes of care such as site of service and type of insurance coverage.

This report uses categories and definitions for region, coverage type, plan type, and market share comparable to those in previous reports. However, one methodological change is adopted this year. For users who were enrolled in more than one plan in a year, the plans they were enrolled in could differ in terms of region, coverage type, plan type, or market share. In previous reports, these

users were counted as many times as the regions or 'types' of plans (coverage type, plan type, or market share) they were enrolled in. For example, if a user was insured by one of the two largest payers but switched to one of the smaller payers in the middle of the year, he would be counted as a user in both the 'largest payers' group and the 'smaller payers' group when utilization or payment is compared by market share. This double-counting leads to the sum of number of users by market share being greater than the actual total number of users. This year, we grouped these users to the region or 'type' of plan that is associated with the highest total payment. If two regions or two types of plans tie in terms of total payment, we assign the user to the region or 'type' of plan with the highest total number of services. This methodological change mainly affects part-year users. It should also be noted that the distribution of utilization and payment by coverage type is calculated with the inclusion of Medicare and Taft-Hartley. But these 'other' payers account for such a small share of the market that their numbers are not reported in the tables.

This report continues to employ two new analytic tools that were introduced in the 2005 *Practitioner Utilization* report: risk status and enrollment period. Users have been grouped into low-risk, medium-risk, and high-risk groups based on their scores from the Chronic Illness and Disability Payment System (CDPS). This algorithm, developed by researchers at the University of California, San Diego, creates person-level risk scores from the service utilization data of the MCDB. It has been applied only to users who were enrolled in reporting plans for the entire year, to avoid developing biased scores based on partial-year data. Resulting scores were used to categorize users as "low risk," "medium risk," or "high risk," based on the scores of the top third and bottom third of the distribution.<sup>9</sup> Plans reported enrollment data for the first

<sup>6</sup> The MCDB also includes information on capitated services, but some capitated primary care is not submitted to MHCC.

<sup>7</sup> The companies are licensed in the State of Maryland and collect more than \$1 million in health insurance premiums.

<sup>8</sup> A number of small payers received waivers from contributing data, but these payers together account for less than 1 percent of total health insurance premiums reported in Maryland.

<sup>9</sup> The resulting risk status groups do not each include exactly one-third of the population, since the cutoff score values applied to many users. Overall, about 32 percent of users were in each of the low-risk and medium-risk groups, while about 36 percent fell in the high-risk group.

time in 2005, making it possible to analyze those users who were enrolled all year. As a result, the decomposition of spending into volume, intensity, and payment level reported in Chapter 3 is not distorted by the anomalies introduced by including part-year enrollees.

This report includes data on services paid on a fee-for-service basis only. Reporting of capitated services by several plans was incomplete or otherwise problematic. Since capitated services are provided only through HMO plans, reported measures for non-HMO plans are unaffected by the exclusion of capitated services while those for HMO plans are affected in different, sometimes unknown, ways. Fee-for-service spending and volume per user clearly understate total per-user values in HMO

plans among those who use any fee-for-service care, since capitated services are omitted. However, there are also users who use only capitated services, so they are omitted from the analysis entirely. If complete data not only added costs and utilization for those included in the analysis but also allowed for inclusion of these individuals, it is difficult to predict how overall mean spending and volume would compare to that reported here. Similarly, it is not clear how service intensity (RVUs per service) is affected, both for those HMO users included here and through the omission of those who use only capitated services. The role of HMO plans differs across coverage type and region, so the relationships between the fee-for-service measures reported here and total per-user measures in these dimensions are difficult to predict.

## APPENDIX B: Payers Contributing Data to This Report

**TABLE B-1: Payers Contributing Data to This Report**

<b>PAYER</b>	<b>Payer Identification Number</b>
Aetna Life and Health Insurance Co.	P020
Aetna U.S. Healthcare	P030
American Republic Insurance Co.	P070
CareFirst BlueChoice, Inc.	P130
CareFirst of MD, Inc.	P131
CIGNA Healthcare Mid-Atlantic, Inc.	P160
Time Insurance Co. (Assurant Health)	P280
Golden Rule Insurance Co.	P320
Graphic Arts Benefit Corporation	P325
Guardian Life Insurance Company of America	P350
Unicare Life and Health Insurance Co.	P471
Kaiser Foundation Health Plan of Mid Atlantic States, Inc.	P480
MAMSI Life and Health Insurance Co.	P500
Fidelity Insurance Co.	P510
MD-Individual Practice Association, Inc.	P520
MEGA Life & Health Insurance Co.	P530
Optimum Choice Inc.	P620
Coventry Healthcare of Delaware, Inc.	P680
State Farm Mutual Automobile Insurance Co.	P760
United Healthcare Corporation	P820
Trustmark Insurance Co.	P830
Union Labor Life Insurance Co.	P850
United Healthcare of the Mid-Atlantic, Inc.	P870

## APPENDIX C: Per Capita Payment and RVUs for Practitioner Services

TABLE C-1: Per Capita Payment for Practitioner Services by Quintile of Payment, 2006

PER CAPITA PAYMENT QUINTILE	PAYMENT					
	All Plans		Non-HMO Plan		HMO Plan	
	Mean	Median	Mean	Median	Mean	Median
<b>TOTAL</b>	\$941	\$416	\$1,030	\$465	\$809	\$352
1	82	83	90	90	74	75
2	212	209	237	233	181	178
3	425	416	474	465	359	352
4	879	849	976	944	743	717
5	3,109	2,284	3,374	2,500	2,685	1,944

NOTE: Population does not include HMO capitated services.

TABLE C-2: Per Capita RVUs for Practitioner Services by Quintile of Payment, 2006

PER CAPITA PAYMENT QUINTILE	RVUs					
	All Plans		Non-HMO Plan		HMO Plan	
	Mean	Median	Mean	Median	Mean	Median
<b>TOTAL</b>	24.0	11.1	25.8	12.3	21.2	9.6
1	2.4	2.4	2.6	2.6	2.2	2.2
2	5.9	5.8	6.5	6.4	5.1	5.0
3	11.5	11.3	12.8	12.5	9.9	9.7
4	23.6	22.6	25.9	24.8	20.3	19.4
5	76.4	58.4	81.4	62.7	68.3	51.8

NOTE: The population in this table is the same as in Table C-1. Persons are in the same quintiles for the purpose of analyzing RVUs.

## APPENDIX D: Distribution of Expenditure Risk Scores

TABLE D-1: Distribution of Expenditure Risk Scores, 2006

RISK SCORE PERCENTILE	Risk Score
01	0.20
05	0.20
10	0.23
25	0.26
50	0.77
75	1.64
90	2.86
95	3.71
99	7.03

NOTES: 1. Population is full-year users with at least one fee-for-service (NONHMO or HMOFFS) service.  
2. Risk scores were generated using the Chronic Illness and Disability Payment System (CDPS), which takes into account the impact of both the number and mix of diagnoses on health care expenditures.

TABLE D-2: Comparison of Expenditure Risk Scores by Coverage Type, 2006

CATEGORY	Median Risk Score	Ratio of Group Median Risk Score to Overall Median Risk Score
<b>ALL</b>	<b>0.77</b>	<b>1.00</b>
<b>COVERAGE TYPE</b>		
<b>Non-CDHP</b>	<b>0.78</b>	<b>1.01</b>
1: Individual Plan	0.58	0.75
2: Private Employer Plan	0.75	0.97
3: Public Employer Plan	0.81	1.05
4: CSHBP	0.78	1.01
<b>CDHP</b>	<b>0.58</b>	<b>0.75</b>

NOTES: 1. Population is full-year users with at least one fee-for-service (NONHMO or HMOFFS) service.  
2. Risk scores were generated using the Chronic Illness and Disability Payment System (CDPS), which takes into account the impact of both the number and mix of diagnoses on health care expenditures.







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