MARYLAND HEALTH CARE COMMISSION

PRACTITIONER UTILIZATION:

Trends Within Privately Insured Patients 2003 2004

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Stephen J. Salamon, Chairman

MARYLAND HEALTH CARE COMMISSION

The **Maryland Health Care Commission** (MHCC) is a public, regulatory commission established in 1999 by the Maryland General Assembly by merging 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 decision-making, 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 policy makers, 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.

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 which 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. This year's report summarizes information on spending, volume of care, and number of users of care in health maintenance organizations (HMO) and non-HMO plans in 2004, and examines changes in these utilization and payment measures between 2003 and 2004. The last segment of the report examines the differences in cost-sharing between users and insurers, an important barometer of insurance coverage as well as an issue of current importance to policy-makers.

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Dr. Curt Mueller and Dr. Lan Zhao of the National Organization of Research at the University of Chicago (NORC) in Bethesda, Maryland, are the principal authors of this report. Dr. Chris Hogan of Direct Research, LLC, provided valuable suggestions on research approaches and commented on report drafts. A programming team at SSS consisting of Mr. Adrien Ndikumwami, Ms. Sanee Maphungphong, and Mr. Po-Lun Chou edited the payer data submissions, organized the MCDB, and completed the numerous data analyses included in this report. Ms. Priscilla Thompson and her staff at STI provided data collection and processing support. Ms. Janette Walters edited the report and Ms. Lauralynn Clay assisted in the preparation of the report. The Commission thanks the SSS and STI teams.

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Executive Summary

Maryland law directs the Maryland Health Care Commission to report on the level of practitioner utilization and spending each year. In this report, MHCC analyzes use of physician and health care practitioner services by the privately insured under 65 population.

The number of non-elderly privately insured Maryland residents who used any practitioner care is 1 percent lower in 2004 than in 2003. This finding is generally consistent with the decline in the share of the population insured through private insurance. The average total expenditure (including insurer and patient payments) for practitioner services among non-HMO users in 2004 was $985. Average per user spending among HMO enrollees, which does not include the value of their capitated services, grew by 1 percent to $723. Per patient spending for medical services provided by physicians and other health care professionals to insured Maryland residents under age 65 grew by 4 percent for non-HMO enrollees and by 1 percent for HMO enrollees. The increases in payment rates of 1 to 2 percent continue the trend of modest fee growth that MHCC first reported in 2002 and 2003 (Figure 2-1). Recent increases are in contrast to 1999 through 2001 when fees paid by private payers were essentially flat. Private payers' rates in Maryland in 2004 were quite close on average to the typical Medicare rate. Neither Medicare nor private payment rate increases have kept up with medical inflation as measured by the Medicare Economic Index (MEI).

Payment rates relative to Medicare rates vary by geographic region, by place/type of service, and by market share held by payers. Payment rates are closest to Medicare in the National Capital Area and lowest in the Baltimore Metro Area. Regional variations in the gap between Medicare and private-sector payment rates may reflect historical payment patterns and regional differences in the mix of payers. Private payer rates expressed as a percent of Medicare rates are higher in hospital settings than in office setting. Surgeries and diagnostic tests are reimbursed above Medicare rates, while cognitive services such as office visits and consultations are below. Higher reimbursement for surgeries helps explain higher rates in the hospital settings. This report also indicates that the two largest payers may be more effective than their smaller competitors in obtaining favorable rates from providers.

Per user expenditures for professional services differ by type of insurance coverage, age and gender, and the count of significant diagnoses per user.[1] Per user spending was about $878, which was about on par with national estimates. Average annual spending is lowest among users in the Comprehensive Standard Health Benefit Plan (CSHBP)– Maryland's small group market product – and highest among public employees. Enrollees in plans offered by the largest payers (71 percent of all enrollees) have lower annual spending, compared to other enrollees, for all coverage types except public employees. The report found that the number of significant diagnoses is a strong predictor of expenditures for professional services. Half of all service users had no significant diagnoses and averaged $333 per user, while the 8 percent of users with 3 or more significant diagnoses averaged $3,020 per user.

Cost sharing in CSHBP has traditionally been somewhat higher than that by enrollees in private plans and public employee plans. In 2004, 20 percent of fee-for-service payments for practitioner services under CSHBP coverage were paid by the enrollee, well below the out-of-pocket share under individually purchased fee-for-service coverage (38 percent), but higher than the out-of-pocket share under large group private plans (16 percent).

[1] Significant diagnoses are those identified by the Chronic Illness and Disability Payment System as falling into one of 19 different categories that have a demonstrable influence on a person's total annual health care spending.

1. Introduction

This report provides a detailed description of payments to physicians and other health care practitioners 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 2003 and 2004 are used to track changes in the quantity of care and the price of care, separately, for individuals in health maintenance organization (HMO) plans and individuals in other, non-HMO plans. Some data from earlier and later years supplement the main analyses of quantity and price of care.

This introductory chapter explains why and how this report was produced and presents an overview of what this report reveals about the utilization and payment of practitioner services in Maryland in 2004. The first part of this chapter provides a summary of the legal mandate for the report and several issues of current legislative and policy interest. This chapter then summarizes information on spending, volume of care, and number of users of care in total as well as by insurance plan type (HMO vs. non-HMO) in 2004 and examines changes in these utilization and payment measures between 2003 and 2004.

Chapter 2 addresses payment rate issues related to practitioner services in Maryland. It compares private payers' fees with Medicare payments; contrasts fees paid by HMO plans with those paid by non-HMO plans; presents trends in private insurers' fees; and compares the cost of providing practitioner services in Maryland to cost elsewhere. Material in this year's Chapter 2 includes estimates that correspond to key estimates presented in Chapters 2 and 3 in reports prepared in previous years. **Chapter 3** examines utilization and intensity of practitioner services in Maryland. Estimates focus on per capita use of practitioner services and, for the first time this year, include estimates on differences in utilization and intensity by patient and insurance market characteristics. **Chapter 4** summarizes analyses of cost sharing. 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 capita expenditure and RVUs for practitioner services. Appendix D defines Maryland regions for the purpose of presenting estimates. Technical detail on the methodology will be available in a document posted on the MHCC Web site (http://mhcc.maryland.gov).

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 2004 Medicare fee schedule were applied to both 2003 and 2004 data. Similarly, when data are reported for comparisons between earlier years, e.g., 2002-2003, RVU information for the more recent year (2003) has been applied to services of both years for analysis of that trend data point.
- 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 separately for HMO and non-HMO data. Counts of total HMO and non-HMO patient identifiers may overstate the actual number of users of practitioner services because individuals that are insured under more than one product during a year may be assigned multiple identifiers.
- Average fee level or payment per RVU — calculated as the ratio of total payments and RVUs for the relevant unit of service. Thus, the average fee level per RVU is the per-RVU price of practitioner care, using RVUs to measure units of care. This ratio is higher in areas where insurers' fee schedules are higher and increases when insurers raise their fee schedules.

MANDATE AND POLICY ISSUES FOR THIS REPORT

Each year since 1996, the MHCC has published a *Practitioner Utilization* report describing the use of insured practitioner services by residents and the associated payments by insurance companies and recipients for those services, as required by Health-General Article §19-133(g)(2-4). This report summarizes trends in the volume and pricing of the services of physicians and other practitioners received by privately insured, non-elderly residents of Maryland. To equitably compare Maryland fees across delivery systems (HMO and non-HMO) and coverage types, the Medicare fee schedule is used as a publicly available and convenient benchmark.

This report presents a limited amount of information on consumer-directed health plans (CDHPs). CDHPs typically include high deductibles without first dollar coverage, but

are offered at a lower premium than traditional products. CDHPs typically are coupled with a Health Reimbursement Account (HRA) that is funded by the employer or a Health Savings Account (HSA) that can be financed through employee contributions. An employer may contribute to the HSA, but is not required to do so. CDHP products that are compatible with HSAs must have deductibles of at least $1,050 for individuals and $2,100 for families in 2006. Consumers use funds from the CDHP HRAs or HSAs for meeting deductibles and other medical-related expenses. CDHP products are just taking root in the Maryland market. Aetna, CIGNA, and Golden Rule in the individual market offered these products in 2004.

This report also examines cost-sharing by users of care under different coverage types and with different states of health. The out-of-pocket shares paid by health care users have become a point of interest for policymakers as insurers and employers have begun to initiate changes in health insurance that increase the enrollees' contribution to their care through use of higher deductibles and higher co-payments for services. Future reports will continue an examination of out-of-pocket shares so that changes can be tracked over time.

OVERVIEW OF USERS, SERVICES, AND PAYMENTS

This section provides an overview of levels and trends in spending, services used, and numbers of users of care for 2004 and 2003-2004. Estimates are for privately insured users, under age 65. All payers and services that passed routine data quality edits are included in this analysis. Underlying data have been subject to various edits,[2] and claims that do not reflect full payment for services have been excluded from the analysis. In addition to aggregation across all plans, non-HMO plans and HMO plans are tabulated separately, with HMO services further broken out by fee-for-service (FFS) and services paid on a capitated basis (non-FFS). Since HMOs do not report payment information for capitated services, estimates on payments are not available for persons covered by these services.

HMOs in Maryland typically use a blend of capitation and FFS to reimburse physicians and other professionals. No HMO that operates in Maryland uses capitation for all services; even Kaiser Permanente of the MidAtlantic, a staff model HMO, uses FFS for some specialty services that its staff does not provide in a Kaiser center. Historically, physicians preferred fee-for-service to capitation payments, so the use of capitation by HMOs demonstrated that the plans had the leverage to negotiate capitation contracts with physicians. As consumers have expressed their preference for greater choice,

[2] See the document posted on the MHCC Web site (http://mhcc.maryland.gov) for technical details.

including large networks, capitation has become less desirable from the perspective of HMOs, regardless of the plan's overall strength in the market.

In 2004, there was a continuing shift from capitation as a method of payment to fee-for-service by HMO plans. The share of all reported services (measured in RVUs) reimbursed through capitation declined from 16 percent in 2003 to 15 percent in 2004 (data not shown). The share of HMO users receiving care via FFS increased by 5 percentage points (from 56 percent to 61 percent).

A decline in total number of users that started in 2003 continued through 2004. The number of non-elderly privately insured Maryland residents who used any practitioner care is 1 percent lower in 2004 than in 2003 (see Table 1-1). However, an average user received 5 percent more services (data not shown), but the services received in 2004 were less resource-intensive and thus less expensive than in 2003 — on average, one unit of service rendered in 2004 contained 4 percent fewer RVUs.[3] This may be explained by the addition of lower value, fee-for-service care which previously had been provided to HMO users as capitated care that was not reported to the MCDB.

Examining non-HMO plans and HMO plans separately reveals changing patterns in the number of users, as well as a shift in the mix of users, services, and RVUs by plan type. In 2004, 16 percent more users were covered by non-HMO plans than by HMO plans. However, relative to 2003, 2004 saw a 4 percent decline in non-HMO users and a 2 percent increase in HMO users resulting in a 1 percent increase in the HMO share of non-elderly users in MCDB.[4] Thus the rebound in HMO enrollment observed in 2003 after several years of declining HMO share appears to have continued into 2004. This finding is not consistent with the small percent decrease in total private-sector HMO enrollees reported in the Commission's recent State Health Care Expenditure (SHEA) report. The divergence in finding is likely due to continued migration away from capitation which leads to increased claim data. The trend away from capitation could also explain a gain in number of users in HMO plans. The share of the total number of services reimbursed by HMO plans grew by 1 percentage point to 40 percent and the number of RVUs contained in these services accounted for 39 percent of total RVUs in 2004, up by 2 percentage points from 2003.

An average user in an HMO plan received 6 percent more services in 2004 than in the previous year, while an average user in a non-HMO plan received 4 percent more services. However, as in the case of all plans combined, higher usage of services in 2004

[3] Calculation based on numbers for 2003 shown in Table 2-1 in last year's report and numbers for 2004 that are shown in Table 1-1.
[4] HMO users accounted for 45 percent of all non-elderly users in the MCDB in 2003 and 46 percent in 2004.

was accompanied by lower intensity of resources per unit of services. There was a 5 percent decline in RVUs per service between 2003 and 2004 for HMO plans and a 3 percent decline for non-HMO plans (data not shown). Per capita RVUs increased by 1 percent for both HMO and non-HMO plans, reaching about 18 and 25 for HMO plans and non-HMO plans in 2004 respectively.[5] Per capita payment grew by about 4 percent to $985 in 2004, as the increase in the average number of services received by a user more than offset the 1 percent decrease in payment per service in these plans. For HMO-FFS there was a 4 percent rise in the number of users accessing FFS-reimbursed services.[6] Per capita payment for HMO-FFS users saw a moderate 1 percent increase, from $714 to $723 between 2003 and 2004.

Table 1-1: Practitioner Services Data by Plan Type, 2003-2004

PLAN TYPE (see note)	2004			Percent Change		
	Users of Any Care (000)	RVUs Per User	Pymts Per User	Users of Any Care	RVUs Per User	Pymts Per User
Non-HMO Plans	1,379	24.7	$985	-4%	1%	4%
HMO Plans, All	1,184	18.4	-----	2	1	-----
HMO Plans, FFS Data	962	19.2	723	4	0	1
HMO Plans, Capitated Services	750	4.5	-----	2	-2	-----
All Plans, All Services	2,555	21.9	-----	-1	1	-----

Note: A "---" means not available. HMO-FFS is not a plan or type of coverage *per se*, but a method of payment (in contrast to capitation) used by HMO plans for certain services. Count of HMO persons served is based on unique patient identifiers, separately for individuals with fee-for-service (FFS) claims and capitated encounter data. Total number of users is less than the sum of the individual plan type user counts because some users may be covered by more than one type of plan during the year; total number of HMO users is less than the sum of HMO capitated service users and HMO-FFS users because most HMO patients with capitated services also receive HMO-FFS services; in addition, estimates of percent changes in users are affected by overlapping coverage.

[5] Although RVUs per user is significantly lower in HMOs, HMO plan data typically do not include capitated primary care. Therefore, estimates of RVUs per HMO user may be understated to the extent HMO plans capitate primary care.

[6] All HMO plans in Maryland are mixed or HMO-FFS only. Services paid under HMO-FFS examined in this report are mostly covered by mixed HMO plans.

2. Trends in Payment for Practitioner Services

As shown in the previous chapter, Maryland's privately insured, non-elderly users of practitioner care continued to shift from non-HMO plans to HMO plans in 2004. Meanwhile, HMO plans further reduced the share of their services covered under capitated arrangements in favor of FFS reimbursement. Changes in user mix by plan type and private insurers' payment arrangement with respect to practitioner services may have significant implications for payment rates for practitioner services rendered in Maryland. This chapter compares private payers' fees to the fees paid by Medicare and examines recent trends in private payers' fees.[7] Medicare's resource-based fee schedule provides a uniform framework for comparing the average level of Medicare and private practitioner fees, both regionally and by type of service. Medicare's fees are public information and are the most common benchmark against which private payers' fees are compared. In Maryland, Medicare is a large purchaser of practitioners' services in all geographic areas. Its payments account for about 25 percent of all spending on physician services in 2004.[8] At the practice level, Medicare payments account for between one-quarter and one-half of annual revenue for most specialties.[9]

Data published in *Practitioner Utilization* reports for the last few years show that statewide average private rates in Maryland were near Medicare levels, although the gap between Medicare and private fees has varied by region, type and place of service, and provider specialty. This pattern continues through 2004. As in prior years, Maryland private rates remain near the Medicare level on average. Fees paid by HMOs averaged about 3.0 percent below the Medicare level, while fees paid by the non-HMO plans were about 2.6 percent above the Medicare level.

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[7] Throughout this chapter, the term "fee" and "price" refer to the total payment physicians receive for a service, including payments from the insurer and patient, including any deductible or coinsurance paid directly by the patient.

[8] Maryland Health Care Commission (MHCC). *State Health Care Expenditures: Experience from 2004*. Baltimore, MD: MHCC, January 2006.

[9] While data from the Commission's recent report (*Uncompensated Charity and Under-Compensated Care Provided in Maryland: What We Know and Estimates of the Cost of Subsidizing This Care*, January 2006) indicate that overall, Maryland physicians provide about 34 percent of total RVUs to Medicare patients, current data on the share of physician practice revenue from Medicare for representative practices are not available. Medicare's share of practice revenue has been substantially below 25 percent only for obstetrics, pediatrics, and psychiatry. See Physician Marketplace Statistics 1997/1998, ML Gonzalez and P Zhang, editors (Chicago, IL: American Medical Association Center for Health Policy Research, 1998).

PAYMENT RATES

Statewide and by region. Table 2-1 shows the difference between private fee levels and Medicare rates in 2004, for both non-HMO plans and the FFS claims of HMO plans. The analysis of prices produces several interesting findings.

In 2004, private payers in Maryland paid practitioner fees that were quite close on average to the typical Medicare rate. FFS payments of HMOs were 3 percent below the Medicare rate, while payments from non-HMO plans averaged 3 percent above Medicare levels (Table 2-1). The small and offsetting differences between average HMO and non-HMO rates and between private and Medicare rates are consistent with findings from earlier years reported in previous *Practitioner Utilization* reports. For example, the average HMO-FFS payment rate was also approximately 3 percent below the Medicare rate in 2003 while the average non-HMO payment rate was about 2 percent above the Medicare rate.

Across Maryland regions, both non-HMO plans and HMO plans paid the highest rates in the National Capital Area ($42.98 and $39.54 per RVU respectively) and paid the lowest rates in the Baltimore Metro Area ($38.21 and $36.66 per RVU respectively). Payment rates exhibited less regional variation for HMO plans than for non-HMO plans. While payment per RVU for non-HMO plans was on average 12 percent higher in the National Capital Area (NCA) than in the Baltimore Metro Area (BMA), the difference for HMO plans was only 8 percent.

Regional variations in the gap between Medicare and private-sector payment rates may reflect differences in pricing strategies of HMO and non-HMO plans and regional differences in the mix of payers. Most private payers do not adjust fee schedules for regional differences in costs. In these instances, private fees will be lower relative to Medicare in the high-cost areas of Baltimore and Washington, D.C., and higher in the rest of the State. Offsetting payers' tendency to a single price is the trend to pay higher rates to a subset of providers in an area. Payers' decisions to pay higher rates may be driven by higher performance on internal efficiency and quality measures, the simple need to maintain an adequate network of certain specialists, or the payers response to the public's preference for care from specialists at certain facilities.

The largest differential between HMO and non-HMO pricing occurs in the NCA, where non-HMO plans paid rates over 6 percent higher than the Medicare level and FFS service payments by HMOs were about 2 percent below Medicare rates. In the BMA, rates paid by non-HMO plans were comparable to Medicare rates while rates paid by HMO plans were almost 5 percent lower than Medicare rates. The differences between

private payer rates and Medicare rates were the narrowest outside of the NCA and BMA, where non-HMO plans and HMO plans paid almost the same rates as Medicare.[10]

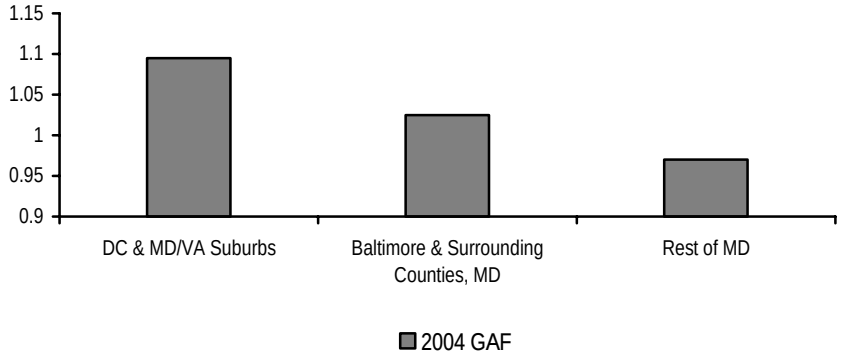
Table 2-1: Payment Rates for Private Non-HMO and HMO Fee-for-Service Claims versus Medicare, 2004

CLASSIFICATION	NON-HMO PLAN				HMO PLAN			
	Pymt Per RVU Using Medicare Rate	% of Pymt	Pymt Per RVU	% Diff from Medicare	Pymt Per RVU Using Medicare Rate	% of Pymt	Pymt Per RVU	% Diff from Medicare
Total	$38.82	100%	$39.82	2.6%	$38.95	100%	$37.76	-3.0%
Region								
National Capital Area	40.54	32	42.98	6.0	40.51	36	39.54	-2.4
Baltimore Metropolitan Area	38.32	50	38.21	-0.4	38.47	42	36.66	-4.7
Other Area	37.46	18	39.30	4.9	37.46	22	37.15	-0.8
Type of Service								
Evaluation & Management	38.91	43	37.74	-3.0	38.94	44	35.54	-8.7
Procedures	38.67	26	43.44	12.3	38.78	28	40.62	4.8
Imaging	39.25	16	38.17	-2.8	39.41	17	36.65	-7.0
Tests	38.06	11	43.76	15.0	38.66	6	44.41	14.9
Other/Not grouped	38.71	4	38.86	0.4	38.51	4	40.53	5.2
Place of Service								
Inpatient	38.44	11	48.13	25.2	38.66	16	47.18	22.0
Hospital Outpatient Dept.	38.20	14	48.58	27.2	38.51	13	48.67	26.4
Office/Other Places	38.95	75	37.60	-3.5	39.06	71	34.75	-11.0
Market Size								
Largest Payers	38.75	77	38.40	-0.9	38.90	68	36.08	-7.3
Other Payers	39.09	23	45.54	16.5	39.06	32	41.92	7.3
Physician Participation								
Participating	38.80	89	37.92	-2.2	38.96	94	37.06	-4.9
Non Participating	39.11	11	63.58	62.6	38.62	6	53.74	39.2
Note: Detail may not add to total due to rounding and omission of small "miscellaneous" categories.								

[10] At first glance, it may be perplexing that payment per RVU using Medicare rates (in the first and fifth columns of the plan sections of Table 2-1) varies within region. This variation reflects differences in the mix of services within each region and variation in Medicare rates by provider place of service. Observed differences are due primarily to the propensity/necessity of users to cross Medicare payment area borders to receive services. This propensity/necessity varies among HMO and non-HMO users, depending on requirements of plans and availability of providers and facilities.

Differences in payers' rates across regions reflect the supply of physicians, competition among plans, and other market forces that are difficult to quantify. The Medicare program, by contrast, sets rates intended to reflect the cost of inputs to medical practice, which vary across regions. When the Centers for Medicare & Medicaid Services (CMS) calculate Medicare payments, the three components of total RVUs for a service are each multiplied by its Geographic Practice Cost Index (GPCI). That is, separate GPCIs for the physician work, practice expense, and professional liability expense components of total RVUs are used to adjust payments for regional differences in the costs of physician work, practice expense, and professional liability insurance. Rather than analyzing how each of these three indices varies by geographic area, analysts use the Medicare Geographic Adjustment Factor (GAF), which is a weighted average of the three GPCIs.[11] The GAF shows how costs vary across the three Medicare payment areas in Maryland and how they compare with other payment areas in the country. According to CMS, the GAF for Maryland regions saw little change from the previous year — costs in the NCA were 9.5 percent above the U.S. average, costs in the BMA were 2.5 percent above the U.S. average, and costs in the rest of Maryland were 3 percent below the U.S. average.[12]

Medicare Geographic Adjustment Factor (GAF) for Maryland Payment Areas

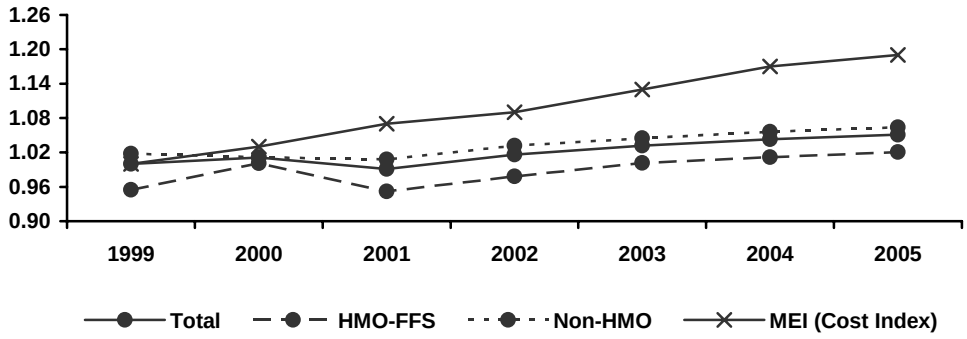


The Medicare program's RVUs have been used as the primary basis for comparison in *Practitioner Utilization* reports. Changes in RVUs across years may modestly affect the results of this price measurement. That is, resulting estimates reflect not only the change in private payers' fees, but also, to a lesser degree, changes in Medicare's RVUs. An alternative means of tracking changes in private rates is through a private-payer price index, which is not affected by changes in Medicare RVUs over time.[13] Based on this

[11] Weights are derived from the work-practice expense-professional liability composition of the average service.
[12] Addendum E, CMS, *Federal Register* , Vol. 68, No. 216, November 7, 2003, available at: http://www.cms.hhs.gov/quarterlyproviderupdates/downloads/cms1476fc.pdf.
[13] A weighted average of HMO FFS payments and non-HMO payments is calculated for each year in the time series, weighting the contribution of each service in proportion to typical private use rates. An index is constructed by dividing each weighted average by the average for the base year.

analysis, average private fees have been increasing since 2002 and continued to increase through early 2005 (Figure 2-1). As of April 2005, the price index was 1.05, or 5 percent higher than in 1999, the base year. In contrast, the Medicare Economic Index (MEI) — one of the factors considered by CMS when the yearly Medicare fee update is calculated — increased 19 percent over the same period of time.[14] Medicare fees, on the other hand, rose over the long run but did not increase in every year. Overall, Medicare fees increased by about 14 percent between 1999 and 2004. Medicare fees increased steadily from 1999 to 2001. In 2002, however, Medicare fees fell by nearly 5 percent and then increased by about 1.5 percent annually in the next three years.

Figure 2-1: Index of Private Payment Rates, 1999-April 2005
(1999 all private plans = 1.00)



By type and place of service. HMO and non-HMO plans appear to have similar pricing structures by type of service (Table 2-1). Consistent with previous years, both pay less than Medicare for evaluation and management services, most of which are provided in office-based settings, and generally pay more for procedures and tests, which are more likely to be provided in inpatient or outpatient locations. While non-HMO payments for imaging services were comparable to Medicare levels in 2003, they were almost 3 percent lower than Medicare rates in 2004. Meanwhile, HMO payments for imaging services continued to be lower than Medicare levels and the gap widened from 6 percent in 2003 to 7 percent in 2004.

[14] The process of updating Medicare fees is complicated, depending on a number of other factors, including real gross domestic product per capita, enrollment in the traditional, FFS Medicare program, changes in laws and regulations that impact payments and benefits, and adjustments for actual versus expected spending in previous years. See, for example, "Review of CMS's preliminary estimate of the physician update for 2005," in Medicare Payment Advisory Commission (MedPAC), *Report to the Congress; New Approaches in Medicare*, MedPAC, 2004, pp. 185-189.

Services provided in inpatient and outpatient settings command substantial payment premiums over Medicare rates, irrespective of the type of plan making payments. Private payments are highest relative to Medicare for outpatient services. They are about 27 percent higher under non-HMO plans and 26 percent higher under HMO plans. Non-HMO versus HMO differences in relative prices for inpatient and outpatient services are also narrower than the difference for services provided in physician offices and other settings. Payments by non-HMO plans for office-based and other services average about 3 percent less than Medicare payments, while payments by HMO plans average 11 percent less than Medicare payments. The difference between the latter percentages (8 percentage points) dwarfs the differences for inpatient services (3 percentage points) and outpatient services (1 percentage point). In addition, office-based services dominate inpatient and outpatient services in terms of total private insurers' payments to practitioner services in Maryland. In 2004, office-based services accounted for 75 percent of non-HMO payments and 71 percent of HMO payments. As a result, the overall private payment rates relative to Medicare rates for non-HMO and HMO plans and their difference are smaller in magnitude than differences between private and Medicare rates for inpatient and outpatient services.

By market size. To capture the impact of merger and acquisition activities among health insurance providers in recent years, this report introduces the concept of 'market size,' a descriptor derived from the total number of users of services covered under each health plan included in MCDB. Two categories of market size will be used to distinguish between persons covered by CareFirst or United HealthCare/MAMSI, the two largest insurers in the Maryland health insurance market; and persons covered by any other payer. The other payer category includes Aetna, CIGNA, Kaiser Permanente, and about 10 other plans that sell in Maryland.

Relatively small statewide average differences between private and Medicare payment rates mask larger differences by insurers' market size. In Maryland, two insurers, CareFirst and United Healthcare/MAMSI, dominate the private health insurance market. In 2004, these two firms together were responsible for more than three-quarters of private payments for practitioner services covered under non-HMO plans and about two-thirds of payments for practitioner services covered under HMO plans (Table 2-1). The average of these two firms' payment rates were comparable to Medicare rates among their non-HMO plans, but their average rates were 7 percent less than Medicare rates for services under their HMO plans. In contrast, smaller insurers, whose combined market share in terms of total payments was less than one-quarter among non-HMO plans and less than one-third among HMO plans, paid significantly higher rates than Medicare. Non-HMO and HMO rates by these smaller insurers averaged 17 and 7 percent above Medicare rates respectively. Relative payment rates were therefore

17 percentage points lower for non-HMO plans and about 15 percentage points lower for HMO plans under the two largest insurers than under the other insurers in the State.

By participation status. HMO and non-HMO rates are much closer to Medicare rates for participating than for nonparticipating (out-of-network) physicians. For participating physicians, non-HMO plans pay 2 percent less than Medicare, while HMO plans pay 5 percent less than Medicare, on average (Table 2-1). By contrast, the differences in payment relative to Medicare are large for nonparticipating physicians. Under non-HMO plans, nonparticipating physicians accounted for 11 percent of payments and were paid about 63 percent above the Medicare level. Under HMO plans, nonparticipating physicians accounted for 6 percent of payments and were paid about 39 percent above the Medicare level. As was the case for previous years, most of the difference between the average HMO and non-HMO payment rates (shown in the top row of Table 2-1) can be attributed to the higher payment rates and the larger share of payments made to nonparticipating physicians by non-HMO plans.

HOW DO MARYLAND PRIVATE INSURANCE PAYMENTS COMPARE WITH PRIVATE INSURERS' PAYMENTS ELSEWHERE?

Available information indicates that Maryland private insurers' practitioner payments continue to be below the national average. Data reported by the Medicare Payment Advisory Commission (MedPAC) suggest that nationwide, the ratio of Medicare fees to private fees was about 83 percent in 2004.[15] In other words, private payments exceed Medicare payments by about 20 percent (the implied, private-to-Medicare payment ratio is about 1.20). (Medicare's average fee increased by about 2 percent, whereas private rates increased by less than 1 percent on average.) By contrast, private payments in Maryland exceeded Medicare payments for services under non-HMO plans by 2.6 percent in 2004 (Table 2-1), and were 3 percent less than Medicare rates under Maryland HMO coverage.[16]

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[15] MedPAC, *Report to the Congress: Medicare Payment Policy*, March 2006.

[16] Nationwide, the difference between private and Medicare fees has remained relatively stable in recent years. In 2002 and 2003, Medicare fees were about 81 percent of private fees nationwide (MedPAC, *Report to the Congress: Medicare Payment Policy*, March 2005). Between 2002 and 2003, Medicare and private fees increased at about the same rate overall, attributed in part to slight increases in enrollment in plans with higher physician payments (e.g., PPOs and traditional insurance). The later report cites Gabel, J et al., "Health Benefits in 2004: Four Years of Double-Digit Premium Increases Take Their Toll on Coverage," *Health Affairs*, 23 (September/October 2004), pp. 200-209. Data in this *Practitioner Report* indicates a shift in 2004 away from non-HMO but towards HMO-FFS payment.

Factors that characterize the health care environment in Maryland may contribute to Maryland's fee structure.[17] Evidence suggests that private payment rates are influenced by location, the supply of physicians, and HMO penetration.[18] The ability to obtain adequate physician participation is an important factor affecting plans' fee update decisions, and a large supply of physicians helps contain costs of providing enrollees with adequate access to physician care. In 2003, Maryland ranked third in the nation with respect to the number of patient-care medical doctors per capita, having 43 percent more than the U.S. overall.[19] Previous *Practitioner Utilization* reports also noted that as managed-care penetration helps to contain premiums for other types of plans,[20] a higher HMO penetration rate is expected to help contain physician service price levels. Even though the HMO penetration rate declined by 24 percent in Maryland between July 2003 and July 2004, Maryland still ranked 17th in the nation in terms of total HMO market penetration.[21] In short, a relatively large supply of physicians and moderately high HMO penetration are factors that have not dramatically changed in recent years and likely help sustain lower fees in Maryland than in the U.S. as a whole.

Another barometer that enables comparisons between practitioner environments in Maryland and elsewhere is Medicare's GAF, a composite measure that captures geographic differences in input costs faced by physicians across the country. GAFs for the NCA, BMA, and the remainder of Maryland are 1.132, 1.039, and 0.982, respectively. In other words, Medicare estimates that input costs to provide practitioner services in the NCA are 13 percent higher than the national average, and in the BMA they are 4 percent higher. In the remainder of Maryland, these costs are 2 percent lower than the national average.

Figure 2-2 shows the distribution of the U.S. population by GAF.[22] About half of the U.S. population resides in areas where the GAF is below the lowest GAF among the three Maryland regions (rest of Maryland, GAF=0.97) while only 7 percent of the U.S.

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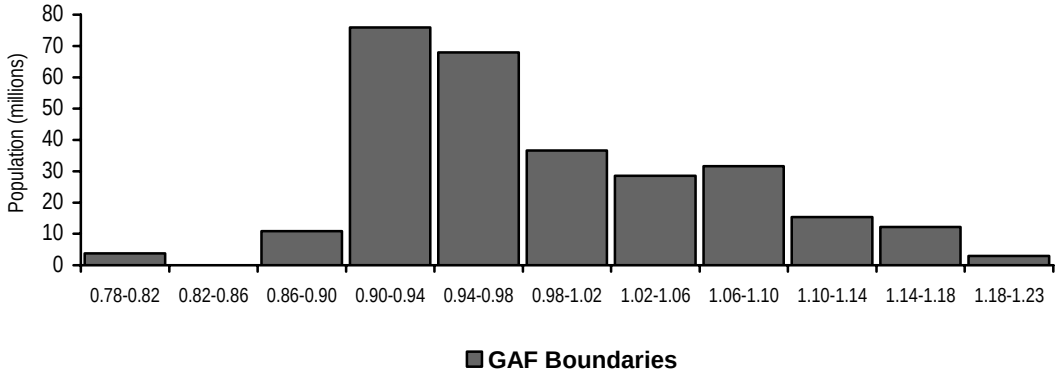
[17] Maryland Health Care Commission (MHCC). *Practitioner Utilization: Trends Within Privately Insured Patients, 2001-2002*. Baltimore, MD: MHCC, March 2004.
[18] Dyckman, Z, and Hess, P. *Survey of Health Plans Concerning Physician Fees and Payment Methodology* (Washington, DC: Dyckman and Associates), June 2003.
[19] In 2003, Maryland was also the third ranking State with respect to total physicians, including non-patient care physicians and doctors of osteopathy. Data are presented in National Center for Health Statistics, *Health, United States, 2005 With Chartbook on Trends in the Health of Americans.* Hyattsville, MD: 2005. http://www.cdc.gov/nchs/data/hus/hus05.pdf#summary.
[20] Baker LC, Cantor JC, Long SH, Marquis MS. "HMO Market Penetration and Costs of Employer-Sponsored Health Plans," *Health Affairs*, 19 (September/October 2000), pp. 121-128.
[21] State rankings of 2004 HMO penetration rates were compiled by InterStudy and published at the Kaiser Family Foundation State Health Facts Web site, http://www.statehealthfacts.org. Data for 2003 were obtained at the same Web site for last year's *Practitioner Utilization* report.
[22] Population by Medicare payment carrier and locality was calculated from a population by Census Bureau Zip code tabulation area downloaded from the Census Bureau Web site at http://factfinder.census.gov/servlet/DCGeoSelectServlet?ds_name=DEC_2000_SF1_U&_ts=157653894747. Source for this file is the 2000 U.S. population Census.

population resides in areas where the GAF is higher than the most expensive region in Maryland (NCA, GAF=1.095).[23]

Furthermore, the cost of providing practitioner services in Maryland regions appears to be growing in recent years relative to the rest of the country. The most recent estimate of GAF by CMS shows that in 2006, it is 13 percent and 4 percent more expensive to provide practitioner services in NCA and BMA and 2 percent cheaper in the rest of Maryland than the national average respectively. These data, combined with previously noted trends in the MEI that track movement of input prices over time (at rates that have exceeded the rates at which Medicare payments have been rising) suggest that the gap between costs and reimbursement may be narrowing.

Figure 2-2: The Distribution of the U.S. Population Relative to Physician Input Costs



ARE PRIVATE INSURER PAYMENT LEVELS ADEQUATE?

One of the most consistent findings of reports in this series is that Maryland private insurers' fees appear to be stable and are relatively low compared to private insurers' fees in other parts of the U.S. With the exception of 2002, the average prices that private insurers pay for individual medical services have not increased noticeably from year to year since 1999. In 2002, prices did increase significantly; total payments rose by 18 percent and payment per user rose by 9 percent. For at least the past few years, average private insurers' rates in Maryland are close to the rates paid by Medicare, while for the U.S. as a whole, private insurers' rates significantly exceed those paid by Medicare. In

[23] One caveat is that the GAF reflects costs for Medicare services, and may not apply to all costs of treating the non-Medicare population, e.g., due to differences in need for resources to treat different (for example, younger) populations.

recent analyses of data from private payers, private payment rates nationwide averaged 123 percent of Medicare rates in both 2002 and 2003.[24]

The adequacy of physician reimbursement has been an issue of continuing interest for the Maryland legislature. In 2004, for example, the MHCC and the Health Services Cost Review Commission (HSCRC) reported findings to the Maryland General Assembly from studies of the adequacy of private-sector reimbursement relative to provider costs.[25] In general, the studies surveyed found that private payers' rates in Maryland in 2002 significantly exceeded the average practice and malpractice expenses associated with providing care, but that Maryland Medicaid rates were often set below average cost.[26] Yet malpractice premiums have continued to increase, increasing the costs of practice, especially for a number of surgical care specialists.

From 2003-2004, malpractice insurance was one of the most rapidly growing physician costs, especially for surgical specialties. Increasing malpractice premiums are of serious concern to many policymakers in State government. A number of proposals to deal with rising premiums were discussed in 2004, culminating in legislation that capped malpractice increases at 5 percent in 2005 and 2006 and established a short-term rate stabilization program for physicians starting at $41 million per year to finance premium increases above the 5 percent ceiling. It is too early to examine the impact of the new law, MHCC reported in 2005 that services with high malpractice expense warrant careful monitoring.

In the adequacy-of-payment studies cited above, the MHCC and HSCRC recommended against setting minimum and maximum physician payment rates other than in those circumstances already defined in law. One such law, passed in 2002 (Chapter 250 of the Acts of 2002), established a floor on payments for nonparticipating physicians at the greater of 125 percent of the HMO's fee schedule or 100 percent of what the HMO pays any other similarly licensed provider for the same specific service in a given geographic region. This law was renewed in the 2005 session of the Maryland General Assembly without significant debate.

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[24] Medicare Payment Advisory Commission (MedPAC), *Medicare Payment Policy: Report to the Congress, 2004*, (Washington, DC: MedPAC, March 2005), p. 94.
[25] Maryland Health Care Commission and Health Services Cost Review Commission. *Study of Reimbursement of Health Care Providers, Required Under HB 805 (2002)*, Baltimore, MD: MHCC and HSCRC, January 2004.
[26] For this analysis, average cost was defined as average practice and professional liability expense per RVU. Payments per RVU divided by costs per RVU that were less than 1 were below average costs.

3. Utilization and Intensity of Practitioner Services in Maryland

This chapter focuses on per capita use of practitioner services in 2004, measured by both expenditures per user and RVUs per user. It first reports how average per capita expenditures and RVUs vary over expenditure quintiles. Users of non-HMO plans and HMO plans are examined together as well as separately. Utilization and the intensity of practitioner services is then reported for the privately insured, non-elderly population as a whole; and by market size, coverage type, and user characteristics including age, sex, and diagnosis count.

THE CONCENTRATION OF PRACTITIONER SERVICES

Figure 3-1 depicts the distribution of expenditures per user across per capita expenditure quintiles. Overall, the average and median per capita expenditures by quintile show a skewed distribution of expenditures per user. The average expenditure for each quintile is between two and three times that of the quintile below (e.g., the average expenditure for the second quintile is 2.5 times that of the first quintile, the average expenditure for the third quintile is a little over twice that of the second quintile, and so on). The average per capita expenditure increased the most (three-fold) between the top two quintiles. As a result, expenditures per user in the top 20 percent of the population averaged $2,939, a number 40 times greater than the average of $72 among users in the lowest quintile (Appendix Table C-1). For the top-most quintile, the average expenditure is significantly higher than the median, indicating a long upper tail in expenditures per user. These patterns are consistent with findings from extant research that shows a relatively small fraction of the U.S. non-institutionalized civilian population accounting for a large proportion of health expenditure. For example, data from the 1996 Medical Expenditure Panel Survey (MEPS), Berk & Monheit (2001), demonstrate that 5 percent of the U.S. population was responsible for 55 percent of total expenditures. The data also showed that this relationship had remained stable since as early as the 1920s.[27]

[27] Berk, ML and Monheit, AC. The Concentration of Health Care Expenditures, Revisited. *Health Affairs*. 2001; 20(2):9-18.

Earlier in this report, Table 1-1 shows that, on average, non-HMO users have higher average expenditures than HMO users.[28] This is true within each per capita expenditure quintile, as shown in Figure 3-1 (and Appendix Table C-1). The difference in average per capita expenditures between the non-HMO and HMO users varied from 30 percent in the first quintile to 43 percent in the third quintile. Interestingly, the distribution of per capita expenditures across quintiles displays similar patterns by plan type. The non-HMO user group and the HMO user group saw a cumulative 10-fold and nine-fold increase in average per capita expenditures from the lowest quintile to the second highest quintile respectively; and then a three-fold jump from the fourth quintile to the top quintile. For both non-HMO and HMO user groups, the average per capita expenditure of the top quintile is roughly 40 times higher than that of the lowest quintile.

Figure 3-1: Per Capita Expenditure on Practitioner Services by Population Quintile of per Capita Expenditures, 2004

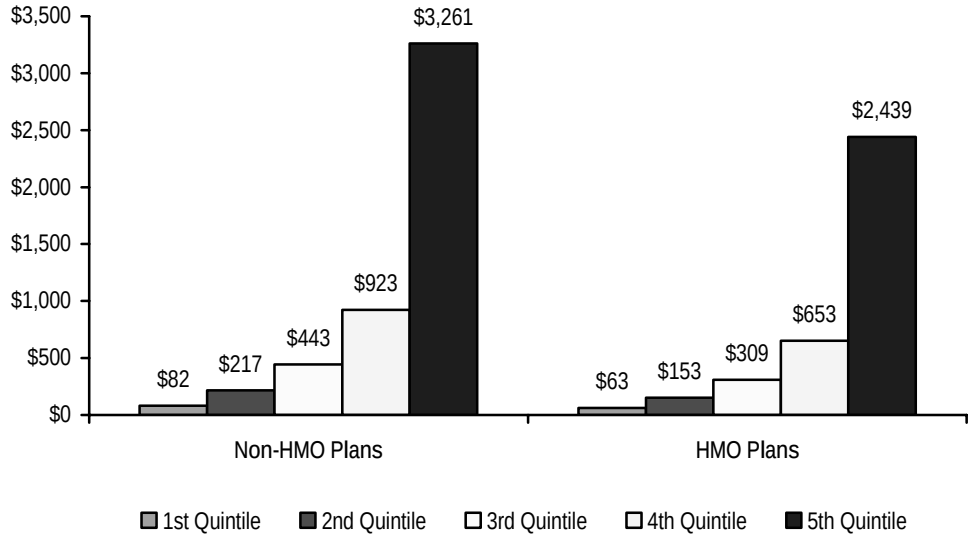
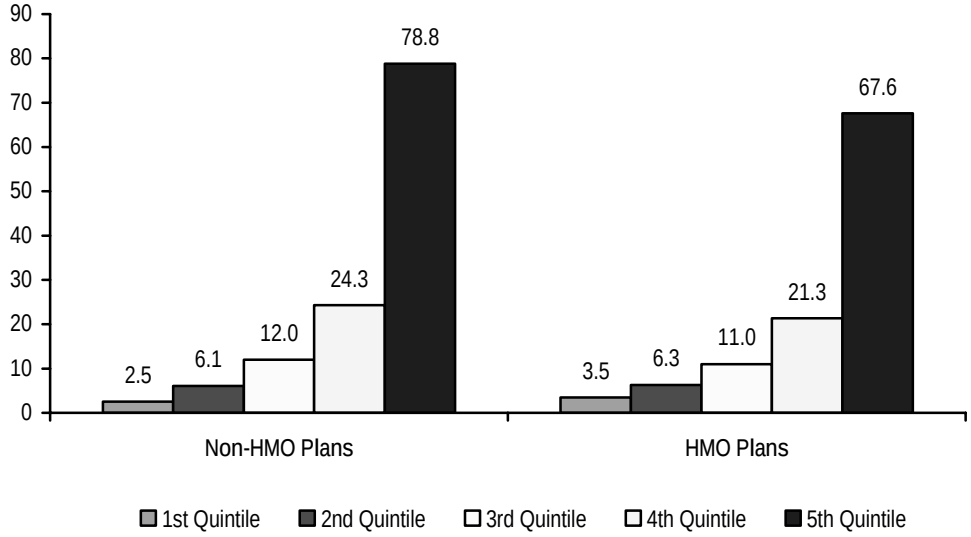


Figure 3-2 shows per capita RVUs for the same population as in Figure 3-1. Users are ranked according to their total expenditures and sorted into quintiles. The distribution of per capita RVUs follows closely that of per capita expenditure in Figure 3-1. Users in the top quintile on average consumed as much as 72 RVUs in 2004 (Appendix Table C-2), 31 times more than those in the bottom quintile. The difference in the average RVUs per capita between non-HMO and HMO plans is lowest (20 percent) in the bottom quintile and highest in the third quintile (37 percent). The difference in average RVUs per capita for the top quintile is about 26 percent (data not shown).

[28] HMO expenditures are understated because most HMO enrollees use both capitated and FFS services but only payments for services provided on a FFS basis are reported by Maryland insurers.

Figure 3-2: Per Capita RVUs on Practitioner Services by Population Quintile of per Capita Payments, 2004



UTILIZATION AND INTENSITY

This section analyzes the relationship between certain market and user characteristics and the utilization and intensity of practitioner services. Total person-level payments were higher in 2004, and averaged $878 for all privately insured, non-elderly users in Maryland (Table 3-1).[29] MEPS reveals that average total person-level expenditures on provider services for the non-institutionalized civilian population nationwide who had ever had private insurance and used provider services in 2003 was $854.[30] This suggests that Maryland residents spend about the same amount on practitioner services as a typical user elsewhere in the country. The resources embedded in practitioner care received by an average Maryland user was 22 RVUs.

By type of coverage and market size. Private and public employers in Maryland were the main source of coverage for privately insured, non-elderly users of practitioner services in 2004 (Table 3-1). Almost half (48 percent) of all users were in private plans (including both self-funded and insured) and 30 percent were in public employee plans. The Comprehensive Standard Health Benefit Plan (CSHBP) covered another 16 percent of users. The remaining 6 percent of users were covered by individual and other plans.

[29] Since payments for capitated services were not available, only payments for non-capitated services were included in the calculation of person-level total payments. Consequently, users with only capitated services in 2004 are excluded in this calculation.
[30] The most recent data available from MEPS are for 2003.

Compared with a year ago, private plans gained 2 percentage points in market share while public employee plans saw a 2 percentage point decline. Market shares for other types of coverage remained stable from 2003 to 2004. CareFirst and United Healthcare/MAMSI, the two largest insurers in Maryland, together reimbursed practitioner services on behalf of 71 percent of users in 2004. But this average does not convey the extent of market concentration. The largest insurers jointly had a market share of over 80 percent for all types of coverage except under private plans. For private plans, their market share was lower but was still over 50 percent (Table 3-1A).

Table 3-1: Utilization by Coverage Type and Market Size, 2004

	Number of Users	Percent of Users	Mean Pymt per User	Mean RVU per User
Total	2,555,120	100%	$878	21.9
Coverage Type				
Individual Plan	152,400	6	799	19.1
Private Plan	1,238,000	48	851	20.2
Public Employee	754,410	30	980	24.9
CSHBP	408,610	16	789	21.1
Market Size				
Largest Payers	1,816,530	71	875	23.5
Other Payers	738,590	29	884	17.9

Note: Total number of users may be less than the sum of user counts in coverage type categories if some users are covered by more than one type of insurance. Capitated care fees and users are excluded from the calculation of the "Mean Payment per User." Taft-Hartley Trust estimates have been calculated separately but are not displayed in this table.

On average, utilization by users covered by public employee plans had the highest intensity, reaching almost $1,000 and 25 RVUs per user, 12 percent and 14 percent higher than the State average of per capita expenditure and per capita RVUs respectively.[31] For users with at least some FFS services (total person-level payment greater than 0), those in private plans had a total expenditure of $851 on average, 13 percent less than those in public employee plans but 8 and 6 percent higher than those in CSHBP and individual plans, respectively. Among all users, including those using both FFS services and capitated services and those with capitated services only, mean RVUs per user was actually higher in CSHBP than in private plans, suggesting that a higher proportion of users covered under CSHBP might have had capitated HMO services.

[31] Due to the absence of capitated services in the calculation of mean expenditures per user, the distribution of mean expenditures per user is not always consistent with the distribution of mean RVUs per user across the types of coverage.

Table 3-1A: Largest/Other Payers by Coverage Type

	Number of Users	Percent of Users	Mean Payment per User	Mean RVU per User
Total	2,545,330	100%	$877	21.8
Largest Payers	1,812,540	71	875	23.3
Other Payers	732,790	29	882	17.9
Individual Plan	152,400	100	799	19.0
Largest Payers	128,660	84	794	20.4
Other Payers	23,740	16	834	11.8
Private Plan	1,238,000	100	851	20.2
Largest Payers	686,520	55	815	21.6
Other Payers	551,480	45	899	18.6
Public Employee	754,410	100	980	24.9
Largest Payers	640,460	85	999	26.6
Other Payers	113,950	15	815	15.4
CSHBP	408,610	100	789	21.1
Largest Payers	364,860	89	787	21.5
Other Payers	43,750	11	805	18.2

Note: Only records with payment amount greater than zero are included in calculating the "Mean Payment per User." Users enrolled in Taft-Hartley Trust are excluded from tabulations in this table.

Table 3-1 also shows that average per capita expenditures do not differ significantly by market size. Users covered by the two largest payers had slightly lower per capita expenditures on average than users covered by other payers. However, the relative intensity of use measured by per capita RVUs is 32 percent higher for enrollees in the largest payers than for users enrolled in other payers. This finding suggests that large payers use their market share to obtain favorable discounts as well as capitation to a greater extent than other payers.

With the exception of those users enrolled in public employee plans, users covered by the two largest insurers tend to spend less on average than users covered by other payers (Table 3-1A). The difference in average per capita expenditures between users covered by the largest payers and users covered by other payers ranges from 2 percent for CSHBP to 10 percent for private plans. The relatively smaller average per capita expenditures for users covered by the largest payers may partly reflect the bargaining power of the two largest insurers in the insurance market in negotiating fees with providers and cost-sharing schemes with insurance purchasers. In public employee plans, however, users covered by the largest payers actually outspent users covered by other payers by almost 23 percent on average.

When all services including both FFS and capitated services are examined, RVUs per user is systematically higher among users in the largest payers. The difference in average RVUs per user by market size could be as high as 72 percent for users in public employee plans and 73 percent for users in individual plans, indicating that the ratio of enrollees in FFS plans to those in non-FFS plans may be much higher in plans offered by the largest payers than in other payers' plans.

By user age, sex, and diagnosis count. This year's report examines relationships between certain patient characteristics and the utilization of practitioner services that have not been documented in previous *Practitioner Utilization* reports. These characteristics include a user's age and gender as well as his or her diagnosis count. Six age groups (under 1, 1-4, 5-14, 15-24, 25-44, and 45-64) are examined for males and females separately. Diagnosis count is defined by applying the Chronic Illness and Disability Payment System (CDPS)[32] to the diagnoses information collected in MCDB. CDPS classifies diagnoses based on their predictive power for current or future health care expenditures and identifies a group of diagnoses that may significantly influence expenditures. These diagnoses fall into 19 different broad categories, including pregnancy, diabetes, cardiovascular problems, pulmonary problems, cancer, and infectious diseases. Users are characterized by the count of CDPS diagnoses identified in the MCDB for a patient in 2004. The categories are: no CDPS diagnoses; one or two CDPS diagnoses; and three or more CDPS diagnoses.

Table 3-2 shows that, as a group, female users constituted 56 percent of all users of practitioner services. Since the share of women in the State population was 51 percent in 2004, women appear to have been more likely to use practitioner services than men. On average, women also spent more on practitioner services. The average per capita expenditure among all female users was $948, which is 20 percent higher than the average among male users. As in the case of all users in Maryland, the average per capita expenditures for both gender groups was close to the national average calculated from the MEPS ($919 for females and $772 for males in 2003).

Two-thirds of the users were 25 or older, with those between 25 and 44 and those between 45 and 64 each accounting for about one-third of all users (data not shown). Per capita expenditures varied widely by user age. Users in the 45-64 age group, on average, spent $1,234 on practitioner services in 2004, more than three times the $389 spent by an average user in the 5-14 age group. Average expenditures in the other four age groups fell between these extremes. Infants had an average expenditure of $1,149, followed by those aged 25-44, who spent $845 on average. Children aged 1-4 spent $734

[32] For a detailed description of CDPS, please refer to http://www.medicine.ucsd.edu/fpm/cdps/cdps_hcfr.pdf.

on average, and those in the 15-24 age group spent $542 on average. This distribution of per capita expenditures by age is largely consistent with MEPS expenditure data for the national population; although in MEPS, infants had lower per capita expenditures than those in the 24-44 age group.

Table 3-2: Utilization by Patient Characteristics, 2004

	Number of Users	Percent of Users	Mean Payment per User	Mean RVUs per User
Total - All Users	2,555,120	100%	$878	21.9
Patient Characteristics				
Male	1,126,600	44	788	19.3
<1 year	7,710	0	1,217	24.4
1-4 years	76,160	3	767	18.3
5-14 years	180,660	7	411	10.2
15-24 years	144,530	6	495	12.2
25-44 years	316,740	12	653	16.3
45-64 years	400,800	16	1,155	28.3
Female	1,427,370	56	948	23.9
<1 year	7,330	0	1,078	22.9
1-4 years	73,590	3	699	16.8
5-14 years	171,860	7	365	9.2
15-24 years	188,650	7	578	14.7
25-44 years	498,970	20	967	24.7
45-64 years	486,970	19	1,297	33.0
Count of Significant Diagnoses				
No significant diagnoses	1,269,010	50	333	8.6
1-2 significant diagnoses	1,072,780	42	1,015	26.5
3 or more significant diagnoses	213,330	8	3,020	77.7

Note: Capitated care fees and users are excluded from the calculation of the "Mean Payment per User." A zero (0) indicates less than or equal to .05%.

Age appears to play a somewhat different role in per capita expenditures on practitioner services between male and female users. On average, younger males (less than 15 years old) spent more than their female counterparts, while older males (15 or older, but under 65) spent less. Among female users, those older than 44 spent the most. On average, per capita expenditures in the 45-64 female age group was 20 percent higher than that of the infant female group (the female group with the second highest expenditure). In contrast, the average per capita expenditures for the male infant group exceeded those of the 45-64 male age group by 5 percent.

As shown in Table 3-2, the average RVUs per user is consistent with the average expenditures per user (i.e., the higher the mean per capita expenditures, the higher the mean per capita RVUs). This relationship holds both across and within patient age and gender groups. This suggests once again the consistency between RVU and private insurers' measurement of resources when determining payments for practitioner services and provides empirical support for the validity of using Medicare RVU as one of the measurements for utilization of practitioner services covered by private payers.

Table 3-2 also compares utilization by users' count of significant diagnoses. Users' diagnosis count was derived from clinical diagnoses reported in MCDB using the same approach as was used in the CDPS.[33] CDPS classifies diagnoses according to their predictive power for concurrent health care expenditures and identifies a group of diagnoses that may have significant effects on current expenditures. About half of the users had no significant diagnosis and about 8 percent were identified as having three or more in 2004. The number of significant diagnoses has a profound impact on utilization. Expenditure for those with no significant diagnosis was $333, a value 38 percent of the State average. In contrast, expenditure per user with three or more significant diagnoses was more than $3,000 on average, three times that for a typical user with one or two diagnoses, which in turn was three times that for a user with no significant diagnosis. In total, 8 percent of users (those with three or more diagnoses) accounted for about 30 percent of practitioner payments. Average RVUs per person with three or more diagnosis confirms that persons with a higher number of diagnoses use a disproportionate number of resources.

[33] For a detailed description of CDPS, refer to Kronick et al., "Improving Health-based Payment for Medicaid Beneficiaries: CDPS," Spring 2000, *Health Care Financing Review*, available at http://www.medicine.ucsd.edu/fpm/cdps/cdps_hcfr.pdf.

4. Differences in Cost-Sharing

This chapter examines cost-sharing between users and insurers, an important barometer of insurance coverage and an issue of current importance to policymakers. Out-of-pocket expenditure as a percentage of total expenditure is compared across coverage types for all privately insured, non-elderly fee-for-service users as well as by plan type (non-HMO versus HMO) and by users' diagnosis counts. Since Consumer Directed Health Plans (CDHP) have increased in popularity as a potential means of curbing health care costs and improving the availability of affordable insurance coverage, expenditures for cost-sharing for users enrolled in CDHPs are tabulated separately.

As has been well documented in the media, heath care expenditures in the U.S. have increased dramatically over the past several years. The annual growth rate of national health expenditures has been above 7 percent since 2003 and is projected to remain high in the coming decade.[34] Health expenditures accounted for about 14 percent of the U.S. Gross Domestic Product (GDP) in 2004 and are projected to increase further to 20 percent of GDP by 2015.[35] It is reasonable to expect that employers and insurers may respond to high and growing costs by changing the structure of insurance products over time in order to shift a larger portion of the costs to the insured. This section examines out-of-pocket expenditures as a percentage of total expenditures on practitioner services for different types of insurance coverage in 2004, and compares the burden of cost-sharing on users in 2003 and 2004.

COST-SHARING BY COVERAGE TYPE

Overall, the out-of-pocket share of total payments for practitioner services averaged 17 percent among all FFS users in 2004 (Table 4-1). There is considerable variation in patients' cost-sharing burden across coverage types. On average, users with individual coverage paid more than one-third of the total cost for practitioner services he or she received, almost three times the 14 percent share paid by enrollees in public employee plans. Users covered by traditional private employer-sponsored plans, including both fully-insured and self-insured products, on average shared 16 percent of total payments for practitioner services.

[34] Borger et al. "Health Spending Projections through 2015: Changes on the Horizon," *Health Affairs*, February 2006 Web edition.
[35] Borger et al. "Health Spending Projections through 2015: Changes on the Horizon," *Health Affairs*, February 2006 Web edition.

Table 4-1: Expenditure per User and Percent Paid Out-of-Pocket
by Coverage Type and Type of Plan, 2004

	Total Users	% of Total Users	ALL FEE-FOR-SERVICE		NON-HMO		HMO-FFS	
			Payment Per User	% Paid Out-of-Pocket	Payment Per User	% Paid Out-of-Pocket	Payment Per User	% Paid Out-of-Pocket
Total	2,341,000	100%	$878	17%	$985	20%	$723	12%
Coverage Type								
Individual Plan	143,960	6	799	38	819	44	729	13
Private Plan	1,124,160	48	851	16	941	18	731	12
Public Employee	681,870	29	980	14	1,113	16	701	10
CSHBP	393,920	17	789	20	887	24	718	16
Note: Taft-Hartley Trust estimates have been calculated separately but are not displayed on this table.								

To help small businesses in the State to provide insurance coverage to their employees, the Maryland legislature created the Comprehensive Standard Health Benefit Plan (CSHBP) as a standard and regulated insurance product. Traditionally, cost-sharing by CSHBP enrollees is somewhat higher than that by enrollees in private plans and public employee plans, but is substantially lower than cost-sharing by those enrolled in individual plans. Almost all participating small employers add insurance riders that "buy-down" deductibles and co-payments below what is required in the CSHBP so that they are more in line with benefits offered in the large group market. This practice continued in 2004.

Slightly higher cost sharing (20 percent versus 19 percent) from 2003 may be expected as the MHCC modified the standard plan to meet the affordability cap required under Maryland law. Some changes increased cost-sharing and are reflected in practitioner utilization such as raising non-HMO deductibles and increasing co-payments for primary and specialty care under HMO plans. Changes to the pharmacy benefit and emergency room co-payment level are not reflected in this analysis because these services are not part of practitioner services. However, over 90 percent of employers purchase riders to reduce co-payments and deductibles. These riders may have mitigated some of the changes to the base plan. The 20 percent average out-of-pocket burden for participants in the CSHBP was 4 percentage points and 6 percentage points higher than the average out-of-pocket burden for users in a private plan and a public employee plan respectively, but was significantly lower than that for users enrolled in an individual plan where the patient pays for 38 percent of costs associated with practitioner services.

Compared to 2003, privately insured, non-elderly users of practitioner services in Maryland experienced little or no change in cost-sharing in 2004, depending on the type of insurance they had. The ratio of out-of-pocket expenditures to total expenditures for users covered by individual plans decreased by 5 percent, from 40 percent in 2003 to 38 percent in 2004, while that for public employee plan users remained the same at 14 percent in both years. CSHBP enrollees and private plan enrollees, on the other hand, saw their out-of-pocket burden increase slightly. On average, CSHBP users paid 1 percentage point, or 5 percent, more out-of-pocket for practitioner services in 2004 than in 2003. Direct comparison between 2003 and 2004 for private plans cannot be made because private plans were broken up into two subcategories ("private employee–self-insured" and "private employee–insured") in last year's report. However, the average out-of-pocket share for the "private employee–self-insured" subcategory and the "private employee–insured" subcategory was 16 and 13 percent in 2003 respectively, which is the same or lower than the average out-of-pocket share for all private plans in 2004. This indicates that users in private plans experienced some increase in cost-sharing.

Table 4-1 displays the out-of-pocket burden for non-HMO users and HMO-users separately. On average, total costs shared by HMO-FFS users were 8 percentage points lower than those shared by non-HMO users, possibly because more expenditure data for HMO enrollees are not available. Across coverage types, the difference in percentage paid out-of-pocket between non-HMO and HMO-FFS users ranged from 6 percentage points for private and public employee plan enrollees to 31 percentage points for individual plan enrollees. The difference in out-of-pocket costs as a percentage of total costs is much smaller across coverage types for HMO-FFS users than for non-HMO users. The largest difference in percentage paid out-of-pocket was between individual plans and public employee plans in the non-HMO group (a 28 percentage point difference), while for the HMO-FFS group the largest difference in percentage paid out-of-pocket was between CSHBP and public employee plans (a 6 percentage point difference). The difference in ranges probably reflects the differing benefit structures of HMO and non-HMO plans. The benefit structures of HMOs tend to be similar regardless of coverage type while the benefit structures for non-HMO plans exhibit much more variation across many dimensions, including coverage type.

For the non-HMO group, the pattern of cost-sharing across coverage types in 2004 is consistent with that observed in 2003.[36] Users in individual plans paid the highest out-of-pocket share of expenditures for practitioner services (46 and 44 percent in 2003 and

[36] For the distribution of out-of-pocket share by coverage type and plan type for 2003, refer to Table 4-2, p. 32 in the 2003 *Practitioner Utilization* report.

2004, respectively) while public employee plan enrollees paid the lowest share (15 and 16 percent in 2003 and 2004 respectively). For the HMO-FFS group, the pattern of cost-sharing rates changed slightly between 2003 and 2004. While users in CSHBP continued to bear the highest out-of-pocket burden (14 and 16 percent in 2003 and 2004 respectively), in 2004 the lowest burden was borne by public employee plan users rather than private plan users. As with all FFS services examined together, no significant change in cost-sharing is observed by coverage type within each plan type in 2004.

Table 4-2 shows users' out-of-pocket share for practitioner services by coverage type and diagnosis count. On average, users with fewer significant diagnoses paid a higher percentage out-of-pocket for practitioner services. Cost-sharing for those with no CDPS diagnoses averaged 22 percent, 9 percentage points higher than that for users with three or more diagnoses. The difference in cost-sharing between users with no CDPS diagnoses and one or two diagnoses is smaller than the difference between users with one or two diagnoses and three or more.

Table 4-2: Patient Out-of-Pocket Share of Fee-for-Services Practitioner Payments by Significant Diagnoses, 2004

	All Users Payment Per User	All Users % Paid Out-of-Pocket	0 significant DX		1-2 significant DX		3+ significant DX	
			Payment Per User	% Paid Out-of-Pocket	Payment Per User	% Paid Out-of-Pocket	Payment Per User	% Paid Out-of-Pocket
Total	$878	17%	$333	22%	$1,015	18%	$3,020	13%
Coverage Type								
Individual Plan	799	38	355	48	1,080	38	3,278	24
Private Plan	851	16	330	19	996	17	3,000	12
Public Employee	980	14	344	17	1,066	15	3,034	11
CSHBP	789	20	309	23	930	20	2,875	16

Note: Taft-Hartley Trust estimates have been calculated separately but are not displayed on this table.

COST-SHARING IN CONSUMER DIRECTED PRODUCTS

CDHPs are a new product aimed at curbing health care costs while also making insurance more affordable to consumers. CDHPs offer insurance coverage at a lower premium level, but require higher patient deductibles. If the CDHP product is an HSA-qualified plan, the deductible must be at least $1,050 (in 2004 dollars) for individuals and $2,100 for families. An employee may contribute up to the full value of the deductible to the HSA, but an HSA account can not exceed $2,650 for individuals and $5,250 for families. Employers and employees are permitted to contribute to the HSA. Health Reimbursement Accounts (HRA) are similar to HSAs, but only employers may contribute to an HRA. As the HRA is completely funded by the employer, the account is not portable if the employee changes job. For this initial examination of CDHPs, MHCC does not distinguish between HSA-qualified, HRA-qualified, and non-qualified CDHP plans.

The larger deductibles in CDHPs encourage enrollees to be more prudent and effective purchasers of care. Increasingly, CDHPs are paying for preventive care services on a first-dollar basis (with or without a co-pay). Preventive care typically includes routine pre-natal and well-child care, child and adult immunizations, and various screenings such as mammograms and Pap smears. CDHPs often assist enrollees in making more informed decisions with regard to care by providing them with information on providers as well as up-to-date information on disease states, disease treatment options, and drug treatment regimens.

Like many other states, Maryland has seen CDHP enrollment start slowly. About 13,000 CDHP participants (Table 4-3), representing about 1 percent of all patients, used practitioner services in 2004. Three insurers reported selling CDHPs in the large group or individual market in 2004, but CDHPs were not available in the small group or public employee market. As more carriers develop CDHP offerings across all markets, enrollment is expected to climb.

Table 4-3: Expenditure per User and Percent Paid Out-of-Pocket by CDHP, 2004

	Total Users	% of Total Users	ALL FEE-FOR-SERVICE		NON-HMO		HMO-FFS	
			Pymt Per User	% Paid Out-of-Pocket	Pymt Per User	% Paid Out-of-Pocket	Pymt Per User	% Paid Out-of-Pocket
Total	2,341,000	100%	$878	17%	$985	20%	$723	12%
New Insurance Products								
Consumer Directed Health Plan	12,640	1	1,155	30	1,155	30	-----	-----

CDHP enrollees' average expenditures were $1,155, which is 32 percent higher than the average for all users. The higher-than-average person-level expenditures suggest that the CDHP enrolled population could have a higher illness burden than the overall privately-insured under-65 population. It is also possible that CDHPs were offered in defined segments of the insured population that differ from the overall insured population on other characteristics. CDHP enrollees' average out-of-pocket burden is about 30 percent. This share is about double that of all users, but still less than one might expect given that that higher cost-sharing is a part of the high-deductible design of CDHPs. Patients are expected to pay for services below the deductible amount, although first dollar coverage is sometimes provided for preventive care. The smaller than expected patient share when total practitioner spending is below $1,000 may also mean that pharmacy and hospital services account for the rest of the deductible.

Individuals covered by CDHPs experience a pattern of cost-sharing that declines as the number of significant diagnoses increase. Although the level of average out-of-pocket spending increases as the number of diagnoses go up, it does not increase as rapidly as overall average payments. As a result, the patient share of payments falls from 44 percent to 15 percent as the number of significant diagnoses increases to 3 or more. The pattern of a declining share is more dramatic for users covered by CDHP products than for the under-65 privately insured population.

Table 4-4: Patient Out-of-Pocket Share of Fee-for-Services Practitioner Payments by CDHP and Significant Diagnoses, 2004

	All Users Payments Per User	All Users % Paid Out-of-Pocket	0 significant DX		1-2 significant DX		3+ significant DX	
			Payment Per User	% Paid Out-of-Pocket	Payment Per User	% Paid Out-of-Pocket	Payments Per User	% Paid Out-of-Pocket
Total	$878	17%	$333	22%	$1,015	18%	$3,020	13%
New Insurance Products								
Consumer Directed Health Plan	1,155	30	460	44	1,294	34	4,105	15

This short analysis on use of practitioner services is a first look at the new product. As the number of CDHP participants is quite low and this is the first year that MHCC has reported on the products, the results on cost sharing must be viewed cautiously as patients may be responsible for cost sharing for pharmacy and hospital services that are not included in this analysis. It is also important to keep in mind that for HRA and HSA-compatible products, an employer may contribute to the account used by the employee/patient for allowed medical expenses. Therefore, some percentage of the patient's out-of-pocket may be absorbed by the employer. Firm conclusions will require more in-depth analysis, increased numbers of CDHP patients, and additional years of data.

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[37] for the services of physicians and other medical practitioners such as podiatrists, psychiatrists, nurse practitioners, and therapists. Insurance companies and HMOs meeting certain criteria[38] 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 2004, the Commission received usable data from 23 payers, including all major health insurance companies.[39]

Each practitioner service generates a separate record in the MCDB. Patients are identified only by an encrypted number generated by each payer. Insurers use a standard format for reporting the data. Each data record identifies the service provided; payments from the insurer and patient (for non-capitated care); physician specialty; patient characteristics such as age, gender, and county of residence; clinical diagnosis codes, and other attributes of care such as site of service and type of insurance coverage.

The comparison between the *level* of Medicare and private fees in this report is based on total payments divided by total RVUs of care. The Medicare RVU scale — a metric of resources used to produce services and procedures — is a means by which the comparative values of products can be assessed. Each service has an associated private payment and RVU, and the analysis of prices is based on private payment per RVU compared to the Medicare ratio for the same service.

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[37] The MCDB also includes information on capitated services, but some capitated primary care is not submitted to MHCC.
[38] The companies are licensed in the State of Maryland and collect more than $1 million in health insurance premiums.
[39] 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.

The analysis of *trends* in private fees, by contrast, is based on price indices constructed solely from private plan data. For this analysis, the value of a procedure is not based on the Medicare RVU benchmark, but instead is based on the average private payment for the procedure. As is typical with analysis of price index data, the value of the price index is set to 1.00 for the initial year of data (e.g., 1999 in Figure 2-1), and the price level in subsequent years is expressed relative to the value of 1.00 for the base year. For example, a 2 percent increase in rates between 1999 and 2000 would result in a price index value of 1.02 for 2000.

As the trend of replacing the use of capitation as a method of payment with fee-for-service payments by Maryland HMOs continued in 2004, one caveat should be heeded when interpreting the reported growth in total HMO service use. For capitated care, payers are required to report specialty services but not primary care. This difference in reporting inflates reported growth in total HMO service use when fee-for-service payment method substitutes capitation.

While the way payments and quantities are measured in this report are consistent with previous *Practitioner Utilization* reports, some changes have been made to the way these data are reported. This report employs revised definitions of region, place of service, and coverage type and it introduces a new concept of market size. In addition, this report summarizes payment and quantity data by patient characteristics including age, gender, and health status in its analyses.

Region, place of service, and coverage type are all more aggregated in this year's *Practitioner Utilization* report tabulations than in tabulations published in previous years. Instead of five regions, this year's report groups Maryland residents into three regions. The National Capital Area and the Baltimore Metro Area are retained but Eastern Shore, Southern Maryland, and Western Maryland are combined into a single region labeled 'Other Area' (see Appendix C: Map of Maryland Regions for counties constituting each region). For place of service, the 'other' category is combined with the practitioner 'office' category. As a result, place where practitioner services were rendered in 2004 falls into one of the following three categories: hospital inpatient, hospital outpatient, or office/other. For coverage type, the categories 'employer–self-funded' and 'employer–insured,' which were previously treated separately, have been consolidated into a single category labeled 'private'. As a result, there are now five coverage categories: individual, private, public employee, the Comprehensive Standard Health Benefit Plan (CSHBP), and Taft-Hartley Trust (health insurance plans offered by unions to their members). While Taft-Hartley Trust was tabulated as a separate coverage type in all tables except for Table 3-1A, statistics for Taft-Hartley may not always be displayed.

Appendix B

Payers Contributing Data to This Report

Table B-1: Payers Contributing Data to This Report

Payer
Aetna Life and Health Insurance Co.
Aetna U.S. Healthcare
American Republic Insurance Co.
Carefirst DC
Carefirst MD
CIGNA Healthcare Mid-Atlantic, Inc.
Fortis Insurance Co.
Golden Rule Insurance Co.
Graphic Arts Benefit Corporation
Guardian Insurance Company
Unicare Life and Health Insurance Co.
Kaiser Foundation Health Plan of Mid Atlantic
MAMSI Life and Health Insurance Co.
Maryland Fidelity Insurance Co.
MD-Individual Practice Association, Inc.
MEGA Life & Health Insurance Co.
Optimum Choice Inc.
Coventry Healthcare of Delaware, Inc.
State Farm Mutual Automobile Insurance Co.
United Healthcare Corporation
Trustmark Insurance Co.
Union Labor Life Insurance Co.
United Healthcare of the Mid-Atlantic, Inc.

Appendix C

Per Capita Expenditure and RVUs on Practitioner Services

Table C-1: Per Capita Expenditure on Practitioner Services by Population Quintile of per Capita Expenditures, 2004

POPULATION QUINTILE	EXPENDITURE					
	All Plans		Non-HMO Plan		HMO Plans	
	Average	Median	Average	Median	Average	Median
Total	$878	$375	$985	$435	$723	$303
1	72	73	82	82	63	62
2	186	183	217	214	153	150
3	383	375	443	435	309	303
4	808	779	923	890	653	627
5	2,939	2,141	3,261	2,399	2,439	1,753

Table C-2: Per Capita RVUs on Practitioner Services by Population Quintile of per Capita Payments, 2004

POPULATION QUINTILE	RVUs					
	All Plans		Non-HMO Plans		HMO Plans	
	Average	Median	Average	Median	Average	Median
Total	23.6	11.2	24.7	11.5	22.0	10.8
1	3.0	2.5	2.5	2.5	3.5	2.5
2	6.2	5.5	6.1	5.9	6.3	5.3
3	11.6	10.8	12.0	11.7	11.0	9.9
4	23.0	21.8	24.3	23.4	21.3	20.0
5	74.2	57.0	78.8	60.3	67.6	52.2

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

Appendix D

Map of Maryland Regions

Figure D-1: Map of Maryland Regions