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Women's Health Issues 16 (2006) 66–79

WOMEN'S  
HEALTH ISSUES

# WOMEN'S HEALTH CARE UTILIZATION AND EXPENDITURES

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Received 5 April 2005; revised 27 June 2005; accepted 24 October 2005

This study examines women's use and expenditures for medical care in the US. In 2000, 91% of women aged 18 years and older used any form of health care services. Overall, 82% of adult women reported an ambulatory care visit, and 11% had an inpatient hospital stay. Mean expense per person with expenses was \$3219 for that year. We examined use and expenditures by sociodemographic characteristics. The most notable findings indicate that women with private insurance and those on Medicaid are more likely to use health services than uninsured women. White women, compared to black and Hispanic women, are more likely to have an ambulatory care visit, buy prescription drugs, and use preventive health care services. In addition, white and Hispanic women pay a higher proportion of medical care expenses out-of-pocket than do black women. Finally, nearly 30% of older women in fair or poor health spent 10% or more of their income on medical care. Preventable disparities in access to and receipt of care are unacceptable. To improve the quality of health care for all women, it is important for policymakers to understand the factors that influence their utilization and expenditures for medical care. Data collection, analysis, and reporting by race, ethnicity, and primary language across federally supported health programs are essential to help identify, understand the causes of, monitor, and eventually eliminate disparities.

## Introduction

To develop strategies to improve women's health, it is important to understand women's health care use and expenditures in relation to their social, demographic, and health characteristics. Increased knowledge about which women have high health expenditures and their utilization patterns will aid policymakers and health care providers in developing services for specific populations of women. Which health services are the most costly for women and how do women finance their health care? As the US population continues to age the ramifications of older women's health care expenditures will also become increasingly important to policymakers concerned with Medicare spending. Medicare expenditures are likely to increase as an increase in the prevalence of

chronic conditions is expected as women age (Rice, 2000; Wyn & Solis, 2001a).

## Background

Earlier reports of women's use of health services have provided valuable information about many aspects of women's health. Studies have consistently found disparities in health status and use of health services by race/ethnicity and socioeconomic status (Altman & Taylor, 2001; Institute of Medicine [IOM], 1993, 2002; Kass-Bartelmes, Altman, & Taylor, 2001; Kaiser, 2004; Trevino & Moss, 1984). Many papers have examined the interactions between insurance coverage, access to care, and income (Almeida, Dubay, & Dewar, 2000; Ko, 2001; Berk & Schur, 1998; Kaiser Family Foundation, 2001, 2002; Lyons, Salganicoff, & Rowland, 1996; Reisenger, 1996; Salganicoff & Wyn, 1999; Wyn, Brown, & Yu, 1996; Wyn & Solis, 2001b). Still others have looked at managed care and the use of preventive services (Bernstein, 1996; Weinick & Beauregard, 1997; Weisman & Henderson, 2001; Wyn et al., 1996).

The views expressed in this article are those of the authors and do not necessarily represent the views of the Agency for Healthcare Research and Quality or the Federal government.

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1049-3867/06 \$-See front matter.  
doi:10.1016/j.whi.2005.11.001

A recent report by the Commonwealth Fund (Collins et al., 1999) addressed women's use of hormone replacement therapy, risk for depressive symptoms, and insurance status. A Kaiser Foundation (2002) study of women in the health care system reported that health care costs were often a significant problem for non-elderly women, with the cost prescription drugs of particular concern.

Although there have been many studies of women's use of medical care, there are fewer papers about spending for that care. A report from the Women's Research and Education Institute (1994) looked at out-of-pocket expenditures for reproductive and childbearing services among women of childbearing age. A recent paper by Sasser et al. (2005) examined the economic burden of selected diseases among postmenopausal women in an employed population. However, none of these studies examined expenditures for health services, by type of service and/or source of payment, for women by personal characteristics. This paper presents important new information by examining expenditures for health care by women in relation to their social, demographic, and health characteristics.

This study builds on earlier work on the use of health services by women and presents descriptive data on utilization of medical care and spending for health care by women in the US during the 2000 calendar year. Our main purpose was to identify differences in women's health care utilization and expenditures across socioeconomic and racial/ethnic groups in the US in 2000. There are a number of reasons that it is important to look at categories of health expenditures between different groups of women. Poor women may have less access and therefore less utilization of certain kinds of health care (Almeida et al., 2001; Lyons et al., 1996; Salganicoff & Wyn, 1999). Those who are uninsured have generally been found to have less access to health care services (Reisenger, 1996; Berk & Schur, 1998; Salganicoff & Wyn, 1999). Divorced women were twice as likely as married women to be uninsured, and also more likely to depend on Medicaid assistance (Berk & Taylor, 1984). It is unclear, however, how lack of access translates into differences in expenditures between subpopulations of women. Also, little is known about how women's increased longevity may be differentially experienced by subpopulations of women with respect to their health care expenses.

Findings presented here include the proportion of women who reported ambulatory medical care in office- and hospital-based settings, inpatient hospital stays, home health services, prescription drugs, and preventive care. Data on utilization and annual expenditures for health care are shown by characteristics of users. Mean expenses and sources of payment—including out of pocket, Medicare, Medicaid, and pri-

vate insurance—are examined by selected demographic, socioeconomic, and insurance characteristics. The proportion of income spent on health care is also shown by these characteristics. Specific comparisons are made by age, race/ethnicity, marital status, level of education, metropolitan versus nonmetropolitan residence, health insurance coverage, income, and perceived health status.

## Methods

### Data

The data used in this study come from the 2000 Medical Expenditure Panel Survey (MEPS), conducted by the Agency for Healthcare Research and Quality (AHRQ) in conjunction with the National Center for Health Statistics. MEPS is a nationally representative survey of the US civilian, noninstitutionalized population and includes detailed information on health care use and expenditures (including sources of payment), as well as demographic characteristics, health conditions, health status, access to care, health insurance coverage, income, and employment. Detailed descriptions of the survey and its methodology have been previously published (Cohen et al., 1996; Cohen, 1997; Cohen, 2003). Expenditure data in MEPS are obtained from both the household interview and the Medical Provider Component. This component collects data from a sample of respondents' hospitals, physicians, home health care providers, and pharmacies (see Machlin & Taylor [2000] for more details).

### Measures

*Use of health services.* Any use of health care services includes at least 1 event by any type of service, including inpatient hospital and physician services, ambulatory physician and nonphysician services, prescribed medicines, home health services, and various other medical equipment, and supplies and services purchased or rented during the year. Over-the-counter medications, alternative care services, and telephone contacts are excluded.

*Ambulatory care.* Ambulatory care visits include both physician and nonphysician medical provider visits where the patient is seen in an office-based setting or clinic, hospital outpatient department, emergency room (except visits resulting in an overnight hospital stay), or clinic owned and operated by hospitals.

*Inpatient care.* Inpatient stays include all hospital admissions including those that did not involve an overnight stay.

*Home health visits.* Home health care includes care provided by home health agencies and independent home health providers. Estimates in this paper exclude unpaid, informal care provided by friends, neighbors, or family members.

*Prescription drugs.* Prescription drug expenses refer to all prescribed medicines initially purchased or otherwise obtained during 2000, as well as refills and free samples.

*Preventive health care.* This measure refers to preventive health care services obtained during the 2 years preceding 2000 including blood pressure check, cholesterol check, complete physical, flu shot, pap smear, breast examination, and mammogram for women  $\geq 40$  years.

*Other medical equipment and services.* This category includes expenses for eyeglasses, contact lenses, ambulance services, orthopedic items, hearing devices, prostheses, bathroom aids, medical equipment, disposable supplies, alterations/modifications, and other miscellaneous items or services that were obtained, purchased, or rented during the year. About two thirds of the expenditures in this category were for vision items.

*Expenditures.* Expenditures in this paper refer to what is actually paid for health care services. More specifically, in MEPS, expenditures are defined as the sum of direct payments for care received including out-of-pocket payments and payments made by private insurance, Medicare, Medicaid, and other sources. Payments for over-the-counter drugs and alternative care services are not included in total expenditures. This definition of expenditures differs from many other studies, including MEPS predecessor surveys, in which charges rather than payments were used to measure medical expenditures.

*Health insurance status.* Women are considered to have public coverage only if they were not covered by private insurance at any time during the year and they were covered by one of the following programs: Medicare, Medicaid, or other public hospital/physician coverage. Private health insurance is defined as insurance that provides coverage for hospital and physician care. Insurance that provides coverage for a single service only, such as dental or vision coverage, is not counted. Individuals with both public and private insurance and those with TRICARE (Armed Forces-related coverage) are classified as having private insurance. The uninsured are defined as people not covered by Medicare, TRICARE, Medicaid, other public hospital/physician program, or private hospital/physician insurance at any time during the year.

*Income.* Women were classified according to total 2000 family income. Personal income from all family members was summed to create family income. In this study, income is expressed in terms of poverty status, the ratio of family income to the Federal poverty thresholds, which control for family size and the age of the head of the family. Poor refers to incomes at or below the poverty line; near poor, over the poverty line through 125% of the poverty line; low income, over 125% through 200% of the poverty line; middle income, over 200% through 400% of the poverty line; and, high income, over 400% of the poverty line. In 2000, the poverty line for a family of 4 with 2 children was \$17,463; for a single person over age 65 it was \$8,259.

*Place of residence.* Rural–Urban is a 4-category continuum intended to reflect differences in population density and access to health services. These 4 categories were derived from the Urban Influence Code established by the US Department of Agriculture. Metropolitan (Metro) represents counties that have large population bases with an urbanized area of at least 50,000 persons and a total population that exceeds 100,000. Near metro includes counties that are adjacent to a metropolitan area. These counties are mix of counties with a city or town of 10,000 people or more and those without this population base. Near rural represents counties that are nonadjacent to a metropolitan area, but have a city or town of 2500 or more people. Rural counties are those that are not adjacent and without a city or town of 2500 or more.

*Perceived health status.* The MEPS respondent was asked to rate the health of each person in the family compared to other people their age, into 1 of 5 health status categories, namely, excellent, very good, good, fair, and poor.

#### *Analysis*

The findings presented in this study are for women 18 years and older in the civilian noninstitutionalized population of the US during calendar year 2000. Bivariate descriptive analysis was used to examine health care use and expenditures and related sociodemographic characteristics of varying subgroups of women. Only differences between estimates that are statistically significant at  $p = .05$  are discussed in the text.

## **Results**

### *Women's Health Care Service Utilization in the US*

Table 1 shows the use of health care services for adult women by socioeconomic and personal characteristics. Table 2 shows use of medical services according

**Table 1.** Use of Health Care Services by Women: US, MEPS Data 2000

	Total Population	Any use of health care services (%)	Any ambulatory care visits (%)	Any inpatient stays (%)	Home health visits (%)	Prescription drug expenses (%)	Percent with preventive health care services
Total	107,310	91.0	81.7	11.0	2.8	75.9	93.5
Age (y)							
18–44	55,507	87.9	77.0	10.3	0.8	67.8	93.4
45–64	31,993	92.4	83.6	7.6	1.6	80.2	93.8
65–74	10,027	96.8	92.0	14.6	5.6	91.0	95.4
75–84	7,171	98.1	93.7	21.3	12.4	92.2	93.6
≥85	2,611	95.9	86.1	24.9	23.6	91.7	83.1
Marital status							
Married	57,068	92.1	83.1	11.3	1.6	76.2	95.1
Divorced/separated	14,743	90.5	83.3	9.7	2.8	78.6	92.8
Widowed	11,986	95.6	89.6	18.3	11.4	90.0	92.2
Never married	23,513	86.0	73.2	7.1	1.3	66.2	90.7
Race/ethnicity							
White/other (non-Hispanic)	83,133	93.3	84.3	10.9	2.9	79.4	94.6
Black (non-Hispanic)	13,025	84.4	73.0	12.9	3.1	66.1	89.4
Hispanic	11,152	81.3	72.0	9.1	2.1	61.2	90.2
Education (y)							
< 12	22,277	88.1	80.1	15.7	6.2	75.0	89.6
12	35,533	89.6	79.7	11.0	2.3	75.2	92.2
> 12	48,802	93.3	84.0	8.8	1.5	77.1	96.5
Census region							
Northeast	20,920	91.2	82.8	10.2	2.8	76.1	93.6
Midwest	24,378	93.8	85.9	12.6	3.3	79.2	94.9
South	38,297	89.6	80.5	11.8	2.7	76.1	92.7
West	23,715	90.0	78.3	8.7	2.5	71.9	93.1
Rural–Urban							
Metro	87,158	91.0	81.3	10.6	2.8	74.9	93.3
Near metro	7,796	91.3	82.8	11.7	2.5	80.0	92.7
Near rural	7,479	93.8	86.3	12.6	2.8	83.4	96.3
Rural	4,876	89.8	79.7	14.7	3.4	76.2	93.8
Health insurance status							
< 65 y							
Any private	68,123	92.1	81.9	7.9	0.6	75.1	96.2
Public only	8,018	93.5	86.0	26.4	5.6	80.0	90.4
Uninsured	11,360	71.2	59.7	5.7	0.9	50.8	80.2
> 65 y							
Medicare only	6,736	96.7	91.1	16.7	9.1	90.0	92.0
Medicare and private	10,579	97.6	93.1	18.7	8.4	93.0	94.7
Medicare and other public	2,396	96.6	90.3	21.8	23.8	91.9	90.0
Income							
Poor or near poor	17,146	87.7	79.0	17.9	5.9	74.1	87.8
Low income	14,505	88.7	81.1	15.3	5.0	74.5	90.0
Middle income	33,980	90.1	80.2	10.2	2.4	75.4	93.2
High income	41,679	93.8	84.2	7.3	1.2	77.5	97.3
Perceived health status							
< 65 y							
Excellent, very good or good	77,609	88.9	77.9	8.0	0.5	70.1	93.9
Fair or poor	9,816	94.6	91.5	19.2	5.6	90.5	91.7
≥ 65							
Excellent very good or good	14,400	96.7	91.3	13.1	6.7	90.3	95.9
Fair or poor	5,177	99.0	95.7	31.6	20.7	96.9	89.7

Note: Restricted to women 18 years and older in the civilian noninstitutionalized population. Percents may not add to one hundred due to rounding. Population estimates by education and health status exclude < 1.2% of cases due to item nonresponse.

Source: Center for Financing Access and Cost Trends, Agency for Healthcare and Quality; Medical Expenditure Panel Survey, 2000.

**Table 2.** Use of Medical Services by Women—Ambulatory Care, Inpatient Hospital Stays and Prescription Drugs, United States, MEPS Data 2000

	Total population (in thousands)	Mean number ambulatory care visits	Mean number of inpatient hospital days	Mean number of prescriptions
Total	107,310	8.4	6.3	15.7
Age (y)				
18–44	55,507	6.8	3.8	8.6
45–64	31,993	9.2	6.2	19.1
65–74	10,027	11.9	9.7	24.5
75–84	7,171	11.1	10.2	26.8
≥85	2,611	8.1	11.5	25.5
Marital status				
Married	57,068	8.4	5.0	14.6
Divorced/separated	14,743	8.8	7.3	17.1
Widowed	11,986	11.0	9.6	26.9
Never married	23,513	6.6	6.0	9.9
Race/ethnicity				
White/other (non-Hispanic)	83,133	8.8	6.1	16.2
Black (non-Hispanic)	13,025	7.0	7.3	14.1
Hispanic	11,152	7.1	6.2	12.4
Education (y)				
< 12	22,277	8.6	7.3	19.6
12	35,533	8.3	5.8	16.2
> 12	48,802	8.4	5.9	13.5
Census region				
Northeast	20,920	9.5	7.3	15.1
Midwest	24,378	8.6	6.5	17.2
South	38,297	7.8	6.4	16.3
West	23,715	8.4	4.8	13.5
Rural-urban				
Metro	87,158	8.5	6.5	15.1
Near metro	7,796	9.2	5.8	16.8
Near rural	7,479	7.4	4.9	18.4
Rural	4,876	7.7	—	19.2
Health Insurance status				
< 65 y				
Any private	68,123	7.6	4.0	11.8
Public only	8,018	11.2	5.3	23.3
Uninsured	11,360	5.6	6.8	10.8
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Medicare only	6,736	10.0	11.1	24.1
Medicare and private	10,579	11.6	9.5	24.2
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Income				
Poor or near poor	17,146	9.0	6.9	19.9
Low income	14,505	9.2	6.8	18.7
Middle income	33,980	8.0	6.8	15.2
High income	41,679	8.3	4.7	13.4
Perceived health status				
< 65 y				
Excellent, very good or good	77,609	6.8	3.5	10.3
Fair or poor	9,816	13.8	7.7	28.8
≥ 65				
Excellent, Very Good or Good	14,400	9.8	10.0	21.7
Fair or Poor	5,177	15.0	10.5	35.5

Note: Restricted to women 18 years and older in the civilian noninstitutionalized population. Percents may not add to 100 due to rounding. Population estimates by education and health status exclude < 1.2% of cases due to item nonresponse.

Source: Center for Financing Access and Cost Trends, Agency for Healthcare and Quality; Medical Expenditure Panel Survey, 2000.



to health care setting and overall cost with prescription drug use. Ninety-one percent of women 18 years or older reported the use of any health services during 2000. Eighty-two percent of these women received ambulatory visits. For women reporting these visits, there was an average of 8.4 ambulatory visits during the year. Only about 11% of women reported a hospital stay during 2000 and of those women who had a hospital stay the average length of stay was 6.3 days. Ninety-four percent of women received preventive health care during the year, and over three fourths of women reported filling at least one prescription. Only 3% of women received home health services during the year.

*Sociodemographic characteristics.* As expected, the percent of the population who used any health services increased with age. By age 65 at least 96% of the population reported any use of health services during the year. Women over 65 were more likely to use ambulatory care services than younger women. Women age 65–74 were more likely to have had an inpatient hospital stay than younger women and a higher percentage of women age 75 or older had inpatient hospitalization than women under age 75. The proportion of women reporting inpatient care began to increase significantly after age 65, and the proportion reporting home health care increased significantly after age 75. A higher percentage of women over age 65 reported use of prescription drugs than did women less than 65 years of age.

Health care utilization patterns for never married women differed significantly from those of other women. Compared to other women, never married women were less likely to use any health services. They were also less likely to have had any ambulatory care services or an inpatient hospital stay.

A lower percentage of black and Hispanic women reported use of any health services, ambulatory care, and prescription drugs than did white women. Black women (13%) were more likely to report an inpatient stay than Hispanic women (9%). On average black and Hispanic women reported 7 ambulatory visits during the year compared to an average of 9 visits for white women.

Women with more than 12 years of education had a higher probability of using any medical care (93%) and ambulatory care (84%), but a lower likelihood of an inpatient hospital stay (9%) or home health service use (2%) when compared to women with less than 12 years of education. Women with higher education (97%) were also more likely to report using preventive health services than women with 12 years of education (92%) and those with less than 12 years of education (90%). In addition these women reported fewer average numbers of prescriptions (14) compared to women with high school graduation (16) and women with less

than 12 years of education (20). There were no significant differences in the length of hospital stays by educational status.

Women from the South (90%) and West (90%) were less likely to report use of any health services compared to women in the Midwest (94%). Women in the West (78%) were less likely to have an ambulatory visit than women in the Midwest (86%) or the Northeast (83%). Women who lived in the West (9%) were less likely to report a hospital stay than women in the Midwest (13%) and South (12%). Women who resided in the West (72%) were less likely to buy prescription drugs than women from any other region (76–79%).

For those who did use ambulatory services the mean number of ambulatory visits was less for women in the South (8 visits) than the Northeast (10 visits). Women in the West reported fewer hospital days (5 days) than women from all other regions (6–7 days). Finally, women in the West (14) reported a fewer number of prescriptions purchased compared to women from the South (16) and the Midwest (17).

Women who lived in rural counties were less likely to use any health services, have an ambulatory visit, or obtain prescriptions than women in near rural places. Ninety percent of rural women used any health services compared to 94% of near rural women. In a similar pattern, 80% of rural women and 86% of near rural women had an ambulatory care visit during the year. Finally, 76% of rural women reported obtaining a prescription during the year in comparison to 83% of near rural women. Rural women also obtained more prescriptions, an average of 19 during the year, significantly more than metropolitan women (15 during the year).

*Insurance and income characteristics.* Women's health insurance status was associated with differences in utilization of medical care. Women under age 65 who were uninsured all year were significantly less likely to use any health services (71%) compared to women with either public (94%) or private (92%) coverage. Similarly, uninsured women were less likely to use ambulatory care services (60%) than their publicly (86%) or privately (82%) insured counterparts. This same pattern was observed in the use of prescription drugs and preventive health services. Uninsured women under 65 were no less likely than women with private insurance to report inpatient hospital and home health services. Women under age 65 with public insurance were more likely to use inpatient hospital care and home health services than women who were uninsured or those who had private health insurance. Over one quarter of women with public insurance only throughout the year had an inpatient hospital stay (26 percent), compared to 8% of those with private insurance and 6% of uninsured women.

Women with Medicare and other public insurance

were significantly more likely (24%) to use home health services than those with Medicare only (9%) or Medicare and private insurance (8%). There were generally no other significant differences in the likelihood of reporting health services use for women over age 65 years by insurance status.

Poor and near poor women were less likely to have reported use of any health care services (88%) or ambulatory care (79%) than women in the highest income category (94%, 84%). However, poor and near poor women were similar to low- and middle-income women in their likelihood of reporting any health service use or ambulatory care. Women in the lowest income category were also less likely to have used preventive health services (88%) when compared to middle- (93%) or high-income (97%) women. Poor/near poor (18%) and low-income (15%) women were more likely to have reported a hospital stay than middle- (10%) or high- (7%) income women. Middle-income women were more likely to have had a hospital stay than high-income women. High-income women also reported shorter lengths of stay (5 days) compared to all other women (~7 days). A larger proportion of poor/near poor (6%) and low-income (5%) women reported having used home health services than middle- (2%) and high-income (1%) women.

*Health status.* Not surprisingly, women in poor health, regardless of age, were more likely to have used all health services except preventive care than did women whose health was good, very good, or excellent.

#### *Annual Expenses for Personal Health Expenditures*

**Table 3** describes annual expenses for personal health expenditures. In most cases, mean expenditures for personal health expenses reflect the differences seen in the previous section on utilization of health services.

*Sociodemographic characteristics.* Total annual expenditures per person on average were lower for those under age 65 than for those 65 years and older, ranging from \$2118 for women age 18–44 years of age to \$6893 for women 85 years and older. Inpatient hospitalization accounted for the largest fraction of expenditures by type of service for women age 75 years and older (46%). Ambulatory care made up the largest proportion of expenditures for women younger than age 65 (37–39%). Prescription drugs made up a larger fraction of total expenses for women age 45–64 and 65–74 than for those aged 18–44 and those aged 85 and older.

Age differences also emerged by marital status. Widows had higher mean expenses (\$5683) than other women, and never married women had the lowest average expenditures (\$2023).

Mean total expenses were higher for whites (\$3333) than either blacks (\$3060) or Hispanics (\$2434) and mean expenses were higher for blacks than for Hispanics. Expenditures for inpatient hospital services accounted for 46% of expenditures for black women, which was significantly higher than the 32% reported by white women. Thus, the proportion of total expenditures for black women in other categories such as prescription drugs and ambulatory care was notably lower than for white women. There were no significant differences in the proportion of expenditures devoted to any one category of expenditures between white women and Hispanic women.

Women with more than 12 years of education had significantly lower average annual medical expenses (\$2892) than did women who had less than 12 years of education (\$3928). For women with lower education, inpatient care represented a higher fraction of expenses and ambulatory physician care represented a lower fraction of expenses than for women with 12 or more years of education.

There were no significant differences in mean expenditures per person by region. The only significant differences that emerged in the examination of women from different regions were that women in the Northeast spent a higher fraction (21%) of their expenses for prescription drugs than women in the West (16%); and ambulatory physician services accounted for a larger fraction of expenses for women in the West (36%) than for women in the South (30%).

#### *Insurance and income characteristics*

*Under 65 years.* Mean expenses were significantly higher for women who had public insurance throughout the year (\$4675) than those who were uninsured (\$1512). Not surprisingly, women with private insurance (\$2460) also had higher average expenses than women who were uninsured for the entire year.

Inpatient hospital services made up the largest fraction of expenses (39%) for women with public insurance only, whereas ambulatory physician services accounted for the largest proportion of expenses for women with private insurance (41%). Ten percent of total expenditures reported by women with public insurance were for home health services, which was significantly greater than for women with private insurance.

*Over 65 years.* For women in this age group, those with Medicare and other public insurance had considerably higher expenses on average (\$7822) than women who had Medicare alone (\$5143) or Medicare and private insurance (\$5773). For women with Medicare and other public insurance the percent of expenses accounted for by ambulatory physician services (20%) was lower than for those who had Medicare and private insurance (29%). The percent of

**Table 3.** Expenses for Personal Health Services: Mean Annual Expense and Distribution by Type of Service, Women; US, MEPS Data 2000

Population characteristics	Percent with expense	Mean expense per person with expense (\$)	Type of service (% distribution of expense)				
			Inpatient hospital services	Ambulatory physician contacts	Rx	Home health	Other medical equipment and services
Total	90.5	3,219	33.9	33.5	19.1	4.2	9.4
Age (y)							
18–44	87.2	2,118	32.8	38.7	14.5	2.5	11.6
45–64	92.1	3,332	25.6	36.5	24.1	2.2	11.6
65–74	96.7	5,226	37.7	33.0	20.7	2.6	6.1
75–84	98.0	6,250	45.7	22.5	18.5	8.3	5.1
≥ 85	95.9	6,893	46.1	15.4	14.6	20.0	3.9
Marital status							
Married	91.8	3,129	33.7	36.3	18.2	1.3	10.5
Divorced/separated	90.2	3,258	29.1	34.9	21.9	3.1	10.3
Widowed	95.2	5,683	39.8	24.6	20.1	10.1	5.4
Never married	85.1	2,023	29.9	35.1	17.9	6.7	10.4
Race/ethnicity							
White/other (non-Hispanic)	92.9	3,333	32.0	34.5	19.7	3.8	10.1
Black (non-Hispanic)	83.7	3,060	45.8	26.5	15.1	7.3	5.4
Hispanic	80.4	2,434	37.7	32.5	18.3	3.9	7.6
Education (y)							
< 12	87.5	3,928	41.7	28.4	19.3	5.2	5.4
12	89.2	3,141	33.1	33.5	20.7	4.0	8.7
≥ 12 y	92.8	2,892	29.8	36.9	18.2	2.6	12.6
Census region							
Northeast	90.9	3,232	29.4	34.6	20.7	4.1	11.2
Midwest	93.6	3,516	34.7	34.8	19.2	2.3	9.0
South	89.0	3,119	38.1	30.2	19.7	3.6	8.4
West	89.3	3,049	30.1	36.3	16.3	7.6	9.7
Rural-urban							
Metro	90.2	3,152	33.8	33.7	18.8	3.7	10.1
Near metro	90.8	3,594	34.1	37.4	18.3	2.6	7.7
Near rural	93.7	3,537	33.6	27.4	21.4	12.2	5.5
Rural	89.5	3,317	35.4	33.6	21.7	1.9	7.3
Health insurance status							
< 65 y							
Any private	91.9	2,460	27.2	40.7	18.2	0.5	13.4
Public only	93.0	4,675	38.5	25.1	22.6	10.0	3.8
Uninsured	68.6	1,512	28.5	34.5	22.0	3.3	11.7
≥ 65 y							
Medicare only	96.5	5,143	43.6	24.5	20.1	6.2	5.6
Medicare and private	97.6	5,773	41.9	29.1	18.4	4.4	6.3
Medicare and other public	96.5	7,822	38.2	20.4	19.1	20.3	2.0
Income							
Poor or near poor	86.8	3,923	44.1	24.0	20.6	6.6	4.7
Low income	87.9	4,052	38.6	28.0	17.3	11.0	5.1
Middle income	89.7	3,079	33.9	36.1	19.3	2.0	8.9
High income	93.5	2,787	26.0	39.1	19.0	1.5	14.4
Perceived health status							
< 65 y							
Excellent, very good or good	88.3	2,088	26.7	40.1	17.9	0.9	14.4
Fair or poor	94.3	6,138	34.8	31.8	22.6	6.1	4.7
≥ 65 y							
Excellent, very good or good	96.6	4,350	34.3	30.1	21.4	6.8	7.3
Fair or poor	99.0	9,625	49.4	22.3	16.5	8.7	3.2

Note: Restricted to women 18 years and older in the civilian noninstitutionalized population. Percents may not add to 100 due to rounding. Population estimates by education and health status exclude < 1.2% of cases due to item nonresponse.

Source: Center for Financing Access and Cost Trends, Agency for Healthcare and Quality; Medical Expenditure Panel Survey, 2000.



expenses going to home health services was significantly higher for those on Medicare and other public insurance (20%) than women with Medicare (6%) or Medicare and private insurance (4%).

Average expenses for women with lower family incomes (poor, near poor, or low income) were higher than expenses for women with middle and high incomes. Expenditures for women in middle- and high-income categories were not significantly different from one another. Women with lower incomes had a higher proportion of their expenses devoted to inpatient and home health expenses and a lower percent dedicated to ambulatory physician care than women with higher income status. There were no differences in the percent spent on prescription drugs across income categories.

*Health status.* For all ages, women in fair or poor health reported significantly higher average expenses than those in excellent, very good, or good health.

For women over 65 years of age in fair or poor health the highest proportion of health expenditures were for inpatient hospital care (49%); this fraction was a significantly higher proportion than for women in the same age group whose health was good, very good, or excellent (34%). Women of all ages who reported their health as good, very good, or excellent spent a higher fraction of their health care dollars on ambulatory health care than did women in fair or poor health. Women 65 years or older in fair or poor health spent a significantly smaller proportion of their health care dollars on prescription drugs (17%) than did older women in good, very good, or excellent health (21%).

Younger women in fair or poor health spent a significantly higher proportion for prescription drugs (23%) when compared to younger women in good to excellent health (18%).

### Distribution of Health Expenditures by Source of Payment

In previous tables, use of services and annual expenditures for these services by sociodemographic characteristics were examined. Table 4 shows the distribution of total health expenditures by sources of payment for women in different segments of the population. Third-party payers accounted for almost 80% of mean health expenses; nearly 22% was paid out of pocket.

*Sociodemographic characteristics.* Private insurance was the source of payment (52–56%) for the largest proportion of expenses for women under 65 years of age. Similarly for women 65 years and older, Medicare paid the largest proportion (51–60%) of average ex-

penditures. For women aged 45–64 almost one quarter of medical expenses were paid out of pocket, a significantly higher proportion than for women 18–44 years. Medicaid paid a higher percent of expenses for women 18–44 years old (14%) than for older women (5–9%).

The effect of age can again be seen in marital status. Widows have a smaller percent paid by private insurance (14%) and a larger percent paid by Medicare (49%) compared to women from other marital categories. Never married (22%) and divorced or separated women (16%) had a higher proportion of health care expenditures paid by Medicaid than married women (5%). Married women had a higher percent (50%) of their health care expenses paid by private insurance than other women (14–41%).

White women paid a larger proportion of mean medical expenses out of pocket (23%) than black (15%) or Hispanic (18%) women; Medicaid was the source of payment for a larger percentage of expenses for black (19%) and Hispanic (20%) women. Moreover, white women reported a significantly higher proportion of their health care expenses met by private insurance than black women.

In comparison to women with higher education, women with less education had a significantly higher proportion of their health expenditures paid by Medicare or Medicaid.

Women from the Midwest reported a higher proportion of their health care expenses paid by private insurance (44%) than women from the Northeast or the South (36%).

### Insurance and income characteristics

*Under 65.* There were significant differences in the proportion of expenses paid out of pocket by insurance status. On average the highest percent paid out of pocket was paid by uninsured women, who paid 51% of their expenses out of pocket, in comparison to 11% paid by women with public insurance only and 23% paid by women with any private insurance.

*65 years and older.* A significantly lower fraction of expenses was paid out of pocket on average by women with Medicare and other public sources (11%) than by those with Medicare plus private insurance (20%) or Medicare only (25%).

Women in the highest income category paid a higher proportion of their expenditures out of pocket (26%) than women with lower incomes (18–20%). There was a significant and steady increase in the percent of health care expenditures paid by private insurance as income increased. Poor, near poor, and low-income women have a higher percent of health care expenditures paid by Medicaid and Medicare than did women who had middle or high income.

**Table 4.** Mean Expenditures and Sources of Payment for Health Services, Women: US, MEPS Data 2000

	Percent with expense	Mean expense per person with expenses	Source of payment (% distribution)					
			Out of pocket	Private health insurance	Medicare	Medicaid	Other public*	Other†
Total	90.5	\$3,219	21.5	39.4	22.8	9.5	2.6	4.3
Age (y)								
18–44	87.2	2,118	19.8	55.7	1.5	13.9	3.4	5.7
45–64	92.1	3,332	24.9	51.9	7.1	9.0	2.6	4.6
65–74	96.7	5,226	20.8	18.8	50.7	4.6	1.4	3.7
75–84	98.0	6,250	19.4	9.4	60.2	6.6	2.6	1.8
≥85	95.9	6,893	20.7	7.8	60.3	7.9	1.5	2.0
Marital status								
Married	91.8	3,129	21.5	50.3	17.4	4.5	2.0	4.2
Divorced/separated	90.2	3,258	22.2	34.6	18.6	15.7	2.8	6.1
Widowed	95.2	5,683	20.7	14.1	49.4	10.2	3.2	2.4
Never married	85.1	2,023	22.3	40.5	6.1	21.8	3.9	5.5
Race/ethnicity								
White/other (non-Hispanic)	92.9	3,333	22.8	40.7	23.0	7.4	2.1	4.1
Black (non-Hispanic)	83.7	3,060	14.5	32.6	22.3	18.5	6.7	5.4
Hispanic	80.4	2,434	18.1	34.3	20.1	20.4	2.9	4.2
Education (y)								
< 12	87.5	3,928	17.3	20.5	35.3	18.4	2.9	5.7
12	89.2	3,141	21.6	39.8	23.2	9.5	1.9	4.0
≥ 12	92.8	2,892	24.4	51.2	14.8	3.5	2.4	3.7
Census region								
Northeast	90.9	3,232	22.1	35.6	26.2	11.5	1.3	3.4
Midwest	93.6	3,516	20.8	43.5	20.1	7.5	3.0	5.1
South	89.0	3,119	23.2	36.3	24.5	7.8	3.8	4.5
West	89.3	3,049	19.3	42.8	20.0	12.8	1.4	3.8
Rural-urban								
Metro	90.2	3,152	21.8	39.1	23.1	9.0	2.8	4.3
Near metro	90.8	3,594	21.1	42.9	22.3	7.9	1.7	4.1
Near rural	93.7	3,537	19.1	41.2	19.1	16.1	0.5	4.2
Rural	89.5	3,317	22.9	35.1	23.6	9.4	4.6	4.4
Health insurance status								
< 65								
Any private	91.9	2,460	22.6	70.1	1.2	1.3	1.9	2.9
Public only	93.0	4,675	11.2	0.0	19.1	60.5	1.7	7.5
Uninsured	68.6	1,512	50.8	0.0	0.0	0.0	21.5	27.7
≥ 65								
Medicare only	96.5	5,143	25.3	0.0	66.7	0.0	2.9	5.1
Medicare & private	97.6	5,773	20.2	25.1	52.6	0.9	0.4	0.8
Medicare and other public	96.5	7,822	11.4	0.0	49.5	33.6	1.2	4.4
Income								
Poor or near poor	86.8	3,923	17.5	14.2	29.9	28.3	4.3	5.8
Low income	87.9	4,052	18.7	23.4	35.2	17.5	1.8	3.4
Middle income	89.7	3,079	20.3	46.9	20.4	3.5	4.1	4.9
High income	93.5	2,787	26.1	53.9	15.0	0.8	0.8	3.3
Perceived health status								
< 65 y								
Excellent, very good, or good	88.3	2,088	24.3	60.3	1.0	7.8	1.7	5.0
Fair or poor	94.3	6,138	17.5	38.1	12.6	20.3	6.0	5.6
≥ 65 y								
Excellent, very good, or good	96.6	4,350	24.2	14.6	52.0	5.2	1.3	2.7
Fair or poor	99.0	9,625	16.0	11.4	61.5	7.0	1.3	2.7

Note: Restricted to women 18 years and older in the civilian noninstitutionalized population. Percents may not add to 100 due to rounding. Population estimates by education and health status exclude < 1.2% of cases due to item nonresponse.

Source: Center for Financing Access and Cost Trends, Agency for Healthcare and Quality; Medical Expenditure Panel Survey, 2000.

\*For source of payment, other public includes Department of Veterans Affairs (except TRICARE); other federal sources (Indian Health Service, military treatment facilities, and other care provided by the federal government); various state and local sources (community and neighborhood clinics, state and local health departments, and state programs other than Medicaid); and other public (Medicaid payments reported for persons who were not enrolled in the Medicaid program at any time during the year).

†For source of payment, other includes payments from worker's compensation; other unclassified sources (automobile, homeowner's, or liability insurance, and other miscellaneous or unknown sources); and other private insurance (any types of private insurance payments reported for people without private health insurance coverage during the years as defined in MEPS).

### Health status

*Under 65.* Women under age 65 who were in good to excellent health paid a higher proportion of their health care expenses out of pocket (24%) than women who were in fair or poor health (18%). Nonelderly women in fair or poor health had a higher proportion of their health care paid by Medicaid (20%) or Medicare (13%); women who were in good, very good, or excellent health had a higher proportion paid by private insurance (60%).

*65 years and older.* Like younger women, women 65 years and older in good to excellent health paid a much higher proportion of their health expenses out of pocket (24%) than women in fair to poor health (16%). Women in this age group in fair or poor health had a higher percentage of their health care expenses met by Medicare (62%) than healthier women (52%).

### Out-of-Pocket Expenses for Personal Health Services

**Table 5** shows out-of-pocket expenses for personal health services for women in 2000 as a percent of family income. The burden imposed by out-of-pocket expenses is best illustrated by the percentage spent relative to family income. In 2000, about 12% of women had no out-of-pocket health expenditures. Of those women who did have expenses, approximately 70% spent less than 3% of family income on health care. On the other hand, approximately 6% had out-of-pocket expenses in excess of 10% of their family income.

The distribution of out-of-pocket medical expenses as a fraction of income by sociodemographic characteristics is shown in **Table 5**. By age, the highest out of pocket expenses as a percent of family income were incurred by women age 75 or over; almost one quarter in this group (21–23%) spent 10% or more of their income on health care in 2000. In the general population only 6% on average had out-of-pocket expenses at this level. Poor, near poor, and low-income women, widows, women who lived in rural areas, those in fair or poor health, and those women with less than a high school education were also more likely to have spent 10% or more of their incomes out of pocket for health care. In contrast married women, those who lived in metropolitan statistical areas, women who were in excellent or good health, and those with more than 12 years of education were less likely to have had relatively high levels of spending as a percent of family income. Another important sociodemographic difference may be found in a comparison among white, black, and Hispanic women. Proportionately fewer

Hispanic women than white women spent 10% or more of family income out of pocket for medical care.

Variation in out-of-pocket expenses for health care as a percent of family income was also related to insurance status. Among women under age 65, the uninsured, and those with public insurance only were more likely than the privately insured to have high levels of out-of-pocket expenses relative to income. A different distribution of out-of-pocket spending in relation to income was observed for women age 65 and older in 2000. Those with Medicare only and Medicare plus other public coverage were more likely to have had relatively high levels of out-of-pocket expenses relative to income than those with Medicare plus private insurance.

### Discussion

Analysis and interpretation of health care use and expenditure data are complex because of the many factors influencing both. Health care utilization and expenditures can be affected by barriers to care, the health care needs of each patient, and patients' preferences. Income levels cannot be used to explain all the disparities in health care for women, and insurance coverage plays a key role in the decision to use medical care. Women with private insurance and those with Medicaid and/or Medicare are more likely to use health services than uninsured women. Lack of health insurance can be a serious problem in accessing medical care, particularly for minorities, such as Hispanic and black women, who are more likely to be economically disadvantaged and less likely to have employer-based health insurance than white women (Almeida et al., 2001; Altman & Taylor, 2001; Berk and Schur, 1998; Kaiser Foundation, 2001; Reisenger, 1996; Salganicoff and Wyn, 1999). One immediate consequence of lack of insurance coverage is that uninsured women are less likely to use preventive health services than women who are either privately or publicly insured.

We found that nearly 30% of older women in fair or poor health spent 10% or more of their income on medical care in 2000. High out-of-pocket health care expenses for those on Medicare can represent a hardship for women seeking needed medical care services (Seldon & Banthin, 2003). As the US population ages, increases in the prevalence of chronic conditions and associated disabilities are expected. Consequently, older women's health care expenditures will also become increasingly relevant to policy makers concerned with Medicare spending.

This paper continues the process of exploring differences in women's use and expenditures for a wide range of health services. Our findings need to be considered with several limitations in mind. In this

**Table 5.** Out-of-Pocket Expenses for Personal Health Services as a Percent of Family Income, Women; US, MEPS Data 2000

	Total population (in thousands)	Annual out-of-pocket expenses as a percent of family income (% distribution)							
		No Income	No expense	0.01–0.99	1.00–1.99	2.00–2.99	3.00–4.99	5.00–9.99	≥ 10.00
Total	107,310	0.8	12.2	49.4	13.1	6.6	5.9	6.0	6.0
Age (y)									
18–44	55,507	0.7	16.6	58.5	11.1	4.5	3.9	2.6	2.2
45–64	31,993	1.2	9.5	48.9	14.9	8.2	6.1	6.0	5.2
65–74	10,027	0.4	4.6	29.3	17.0	10.6	10.2	13.5	14.4
75–84	7,171	1.2	4.2	18.0	14.9	10.5	12.9	17.8	20.5
≥ 85	2,611	0.6	4.8	24.8	12.8	7.2	11.4	15.2	23.4
Marital status									
Married	57,068	0.5	10.3	57.4	13.1	6.2	5.2	4.5	2.9
Divorced/separated	14,743	1.2	12.5	41.8	14.9	7.3	6.5	7.3	8.6
Widowed	11,986	1.4	5.6	21.3	14.4	9.5	12.7	13.4	21.4
Never married	23,513	1.2	19.9	49.0	11.3	5.9	3.9	4.9	3.8
Race/ethnicity									
White/other (non-Hispanic)	83,133	0.6	9.1	50.1	13.8	7.1	6.5	6.5	6.3
Black (non-Hispanic)	13,025	1.9	21.7	47.3	10.4	5.7	4.0	3.8	5.3
Hispanic	11,152	1.5	24.4	46.4	11.2	4.0	4.2	4.2	4.2
Education (y)									
< 12	22,277	1.6	16.7	36.9	11.6	7.7	7.7	7.8	10.0
12	35,533	0.9	13.7	47.4	12.8	6.1	5.8	6.7	6.5
≥ 12	48,802	0.4	9.1	29.8	10.1	6.5	5.2	4.5	3.6
Census region									
Northeast	20,920	0.9	12.2	49.9	12.0	6.5	6.0	6.5	6.1
Midwest	24,378	0.8	9.5	50.3	14.6	6.3	6.3	6.0	6.2
South	38,297	0.7	12.7	46.0	13.6	7.5	6.2	6.7	6.7
West	23,715	1.1	14.4	53.4	11.7	5.8	5.0	4.2	4.5
Rural-urban									
Metro	87,158	0.9	12.7	50.2	13.2	6.4	5.8	5.5	5.5
Near metro	7,796	0.6	11.6	44.2	13.8	8.2	7.3	7.6	6.8
Near rural	7,479	0.7	8.0	48.1	12.6	9.1	6.0	8.3	7.2
Rural	4,876	1.0	12.1	45.8	10.7	5.3	5.7	7.7	11.8
Health insurance status									
< 65 y									
Any private	68,123	0.2	10.0	61.6	13.0	5.8	4.4	3.1	1.8
Public only	8,018	3.9	21.5	33.8	9.7	6.1	6.9	7.8	10.3
Uninsured	11,360	2.6	32.6	30.1	11.3	5.8	4.8	5.3	7.6
≥ 65 y									
Medicare only	6,736	0.6	4.2	24.5	12.7	10.8	11.4	14.1	21.7
Medicare and private	10,579	0.6	3.7	24.7	18.4	10.4	11.5	17.0	13.7
Medicare and other public	2,396	1.4	7.9	25.2	13.1	6.5	9.0	11.5	25.5
Income									
Poor or near poor	17,146	5.2	19.3	21.0	10.2	6.2	7.4	10.3	20.4
Low income	14,505	0.0	15.1	32.0	12.0	9.1	8.9	10.6	12.3
Middle income	33,980	0.0	12.2	48.4	15.8	7.8	6.7	6.6	2.5
High income	41,679	0.0	8.4	67.9	12.5	5.0	3.6	2.0	.07
Perceived health status									
< 65 y									
Excellent, very good, or good	77,609	0.7	14.7	57.9	12.4	5.4	4.0	2.9	2.0
Fair or poor	9,816	2.3	8.0	32.3	12.9	9.8	9.9	11.3	13.6
≥ 65									
Excellent, very good, or good	14,400	0.7	5.1	27.0	16.7	9.9	11.5	15.3	14.0
Fair or poor	5,177	0.6	1.6	17.8	13.7	10.4	11.0	15.7	29.2

Note: Restricted to women 18 years and older in the civilian noninstitutionalized population. Percents may not add to 100 due to rounding. Population estimates by education and health status exclude < 1.2% of cases due to item nonresponse.

Source: Center for Financing Access and Cost Trends, Agency for Healthcare and Quality; Medical Expenditure Panel Survey, 2000.



exploratory analysis we do not adjust or control for multiple characteristics of women. Future studies of specific subpopulations will take this into account and include multivariate analyses. And, although MEPS is a nationally representative dataset that provides extensive data on the use of health care services, how much is paid for the services, and who pays for them, the sample size is not large enough to produce estimates by state or for diseases with a low level of prevalence. In addition, some variables used in other studies of women's use of medical care are unavailable in MEPS, such as the distance individuals travel to obtain health care or measures of specific behavioral and sociocultural orientations toward accessing health care.

Like previous studies, our findings show that disparities are evident across several areas including health status, health care coverage, access to preventive care, and out-of-pocket expenditures. As such, these results confirm a pattern that has been persistent over time. White women remain more likely than black or Hispanic women to have an ambulatory care visit, buy prescription drugs, and use preventive health care services. In addition, white and Hispanic women pay a higher proportion of medical care expenses out of pocket than do black women. Disparities in health care utilization have been described in numerous reports (Trevino & Moss 1994; US Department of Health and Human Services, 1985; IOM, 1993, 2002) and more recently in the national reports (*National Healthcare Disparities Report* and *National Healthcare Quality Report*; AHRQ, 2003a, 2003b, 2004a, 2004b). In particular, the 2003 *National Healthcare Disparities Report* reported different patterns of health care utilization according to race, ethnicity and socioeconomic status. Racial and ethnic differences were also observed throughout all income groups in the 2004 report (AHRQ, 2004a).

National initiatives to eliminate disparities are ongoing (*Closing the Health Care Gap Act of 2004*). Preventable disparities in access to and receipt of quality care are unacceptable. To improve the quality of health care for all women, it is important for policymakers to understand the factors that influence their utilization and expenditures for medical care. Data collection, analysis, and reporting by race, ethnicity, and primary language across federally supported health programs are essential to help identify, understand the causes of, monitor, and eventually eliminate disparities (*Closing the Health Care Gap Act of 2004*).

## Note

Tables showing standard errors are available from the corresponding author.

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