Out-of-Pocket Expenditures by Consumer Units with Private Health Insurance

ERIC J. KEIL

Although managed-care health plans have been around for quite some time, rising medical costs in the 1970s, along with changes in Federal law, set the stage for increased interest in such plans. As a result, health maintenance organizations (HMOs) have grown steadily in popularity since the 1970s, while the popularity of more traditional fee-for-service health plans has declined.[1] Increases in health care costs continue to stir national debate and have prompted much criticism of current methods of dealing with high-cost health care. Although many solutions to the problem have been proposed, no significant changes have occurred.

In this article, data from the 1999 and 2000 Consumer Expenditure (CE) Interview surveys are used to show that there are differences in certain out-of-pocket medical expenditures between consumer units insured through HMOs and those insured through fee-for-service plans. Demographic characteristics of consumer units are examined as well, to aid in our understanding of spending patterns with regard to health insurance.

[1] Consumer expenditure data show increasing expenditure levels and percentages reporting for HMO insurance. (In 1984, average annual expenditures were at $15 with 3 percent reporting; by 1993, they stood at $110 with 10 percent reporting; and in 2000, expenditures reached $254 with more than 20 percent reporting.) The data also show decreasing expenditure levels and percentages reporting for fee-for-service insurance: in 1997, expenditures were $100 with 8 percent reporting; by 2000, they reached $77 with 5 percent reporting. Due to changes made to the Interview survey in 1996, it is not practical to show fee-for-service expenditure levels or percentage reporting prior to 1977.

Eric J. Keil is an economist in the Branch of Information and Analysis, Division of Consumer Expenditure Surveys, Bureau of Labor Statistics.

Study methodology

The sample for this study was restricted to those consumer units who completed all four quarterly interviews. All interviews must have occurred between January 1999 and December 2000. In addition, these consumer units must have had private health insurance for at least one quarter during the period in which they were interviewed. Because the CE Interview survey does not match medical expenditures with the health plans responsible for covering them, the sample was further restricted either to those consumer units who had one private health plan or to those whose multiple plans were all of one type, either HMO or fee for service. This strategy allowed consumer units to be grouped into two separate categories: Those with HMO coverage or those with fee-for-service coverage. In either case, it was possible for a consumer unit to have a member who was also covered by Medicare or Medicaid.

Health care expenditures from the CE Interview survey are out-of-pocket expenditures. They consist of expenditures paid for medical services, prod-

ucts, and supplies that are net of any payments or reimbursements from health insurance plans, government programs, or any other third-party payers.[2]

Definitions

Two definitions are essential to an understanding of the material presented in this article:

Health maintenance organization. There are two basic types of HMOs. The first is the group or staff type, in which the participant goes to a central facility (a group health center) to receive care. The second type is the independent practice association (IPA), in which providers work from their individual offices and are referred to as primary care physicians. Expenses in this type of plan are usually covered in full, or there is a modest copayment at the time of the visit.

Fee-for-service plan. Commercial health insurance plans encompass both traditional fee-for-service plans and preferred provider organizations. In these plans, a fee is charged for each medical service rendered or for all medical equipment purchased. In traditional fee-for-service plans, participants receive medical care from the providers they choose. The plan reimburses either the provider or the individual for some or all of the cost of care received. Participants in a preferred provider organization are given a list of doctors from which they may choose. If they choose to go to one of the doctors on the list, the amount of expenses covered is higher than if they had gone to a doctor who is not on the list.

The impact of health insurance on medical expenditures

As with most products and services, health care expenditures are affected by interactions between prices and quantities demanded. One major difference is that health insurance acts as a third-party payer for health-related products and services. This aspect can alter expenditure levels both directly and indirectly. In brief, the presence of health insurance can affect medical expenditures in the following ways:

1. Differences in payment and benefit structures between the two types of health plans can lead to direct differences in the out-of-pocket component of health care spending. In other words, given consumer units with identical medical consumption, those with HMO insurance may pay less for each medical bill in comparison with those with fee-for-service insurance. This difference effectively lowers the out-of-pocket price of heath care to HMO members, which, in turn, tends to lower expenditure levels for health-care-related items or services.

2. The aforementioned differences in payment and benefit structures can lead indirectly to different spending patterns between participants in the two types of health insurance plans. A consumer unit who expects to have high medical bills might decide to select insurance that will cover more of the costs. In addition, lower out-of-pocket costs may have an effect on the quantity of medical items and services demanded. Because HMO insurance plans cover a larger proportion of the bill, one might expect higher usage by those consumer units with that type of insurance. The different spending patterns translate into a higher quantity demanded by consumer units in HMO plans, which, in turn, tends to raise expenditure levels, all else held constant.

3. Administrative differences affect the selection of a health plan. A consumer unit who anticipates using medical services with greater frequency might seek an insurance plan with a low administrative burden or one that allows more flexibility in choosing providers. These considerations may tend to counteract each other. A common assumption is that HMOs tend to require less paperwork, whereas fee-for-service health plans offer greater flexibility in choosing physicians or other health care services. The overall effect on expenditures is difficult to determine.

Health care expenditures by type of insurance

The CE Survey collects comprehensive spending data for medical goods and services as well as detailed information regarding insurance coverage, including the type of health plan and the out-of-pocket costs for premiums. The Survey classifies these expenditures into 17 categories. (See table 1.) Summing up the medical expenditure components reveals that total out-of-pocket medical spending was significantly higher, on average, for those who had fee-for-service insurance, than for those who had HMO coverage ($2,315 per year, as opposed to $1,789). Of the 17 categories, 6 were found to be significantly different between the two groups of consumer units.

Differences were noted for health care insurance, physicians' services, laboratory tests and x rays, hospital services other than room, prescription drugs and medicine, and dental care. In each case, expenditures were greater for consumer units in fee-for-service health plans.[3] Table 1 shows that the largest difference in annual out-of-pocket spending, in absolute terms, was for health care insurance ($159):[4] consumer units with fee-for-service insurance paid $1,029 per year, on aver-

[2] Cash reimbursements paid directly to the consumer unit are reported only infrequently in the CE Survey.

[3] The following medical expenditure items were found not to be statistically different between the two types of health plans: Purchase of eyeglasses and accessories, including insurance; purchase of medical or surgical equipment for general use; purchase of supportive or convalescent medical equipment; hearing aids; eye exams, treatment, or surgery; services by other medical professionals; hospital room and meals; care in a convalescent or nursing home; other medical care services; rental of medical or surgical equipment for general use; and rental of supportive or convalescent equipment.

[4] Health insurance expenditures include those captured by payroll deductions.

age, while those with HMO insurance paid $870. Other significant differences in spending included physicians' services ($210 for fee-for-service plans, $129 for HMOs), laboratory tests and x rays ($38, compared with $15), hospital services other than room ($68 and $37), prescriptions drugs and medicines ($329 and $236), and dental services ($311, as opposed to $265).

A similar analysis shows that consumer units with fee-for-service insurance had a higher percentage reporting for several medical expenditure categories. In this article, percent reporting is defined as the percentage of consumer units having at least one, but possibly more, expenditures during the year they were interviewed. Table 2 shows that there were significant differences in percent reporting for laboratory tests and x rays (23 percent for fee-for-service plans, 13 percent for HMOs), hospital services other than room (16 percent and 13 percent), prescription drugs and medicines (80 percent and 75 percent), dental care (51 percent, compared with 48 percent), purchases of medical or surgical equipment (4 percent, as opposed to 2 percent), and eye exams, treatment, or surgery (32 percent and 28 percent).

Although the percentage reporting for all medical expenditures was higher for the fee-for-service group, the number of reported expenditures per medical expenditure item was generally higher for the HMO group. Significant differences in reported expenditure were noted for physicians' services (13,113 for HMO plans, 11,176 for fee-for-service arrangements),[5] prescription drugs (26,871, compared with 24,088), dental care (6,449 and 5,748), and eyeglasses and accessories (2,445 and 1,909). The number of reported expenditures was higher for the fee-for-service group only for lab tests and x rays (1,451, as against 940).[6]

[5] All figures in parentheses in this paragraph are in millions.

Demographic differences between the two insured groups

A demographic analysis shows that the two groups of insured were similar with respect to age, income, family size, and the number of children living in the consumer unit. There was no statistically significant difference between incomes ($43,226 for those in HMO plans, $43,728 for fee-for-service participants), but there were slight differences with respect to age, family size, and number of children. Although there was a statistical difference in age, it was small, with an average age of 50 for the fee-for-service group and 48 for the HMO group. Similarly, consumer units with fee-for-service plans, on average, were composed of 2.6 persons, of which 0.80 were children; consumer units with HMO insurance comprised 2.7 persons, of which 0.91 were children. The demographic differences between these two groups may not be large enough to be considered a contributing factor in expenditure differences.

Looking at distributions of insured consumer units by age of the reference person, one can see that there were more units with HMO insurance in the group aged 25 to 54, but more consumer units in fee-for-service plans in the upper age categories. [7] (See chart 1.) The distributions of insured consumer units with respect to their size do not show much difference (chart 2), but the distributions with respect to numbers of children in the unit indicate that there were more fee-for-service consumer units with no children than HMO units with no children. (See chart 3.)

In sum, out-of-pocket expenditures and spending patterns vary between fee-for-service and HMO health plans. Significant expenditure differences exist for health care insurance, physicians' services, lab tests and x rays, hospital services other than room, prescription drugs, and dental care. In each case, consumer units with HMO insurance had lower out-of-pocket expenditures for these items. They also had a lower percentage reporting for many of the items, but a higher number of actual reported expenditures within item categories. The higher frequencies for reported expenditures may be a result of perceived lower costs. Consumers who have HMO insurance generally incur lower out-of-pocket medical costs despite a higher number of reported expenditures. Their lower medical expenditures may be more the result of differences in plan benefits. The demographic makeup of the two groups of insured is similar with respect to income, age, family size, and the number of children in the consumer unit. Although some of the differences found are statistically significant, they are nonetheless small. ■

[6] Care must be taken in evaluating percentages of consumer units reporting a medical expenditure, as well as the total volume of expenditures, because medical goods and services that are completely paid for by a third party are not recorded in the CE Interview survey.

[7] Consumer units whose reference person is eligible for Medicare also can have members who are insured through a fee-for-service or HMO plan.

Chart 1. **Percentages of consumer units participating in health maintenance organizations (HMO) and fee-for-service (FFS) health care plans, by age of reference person, Consumer Expenditure Survey, 1999-2000**

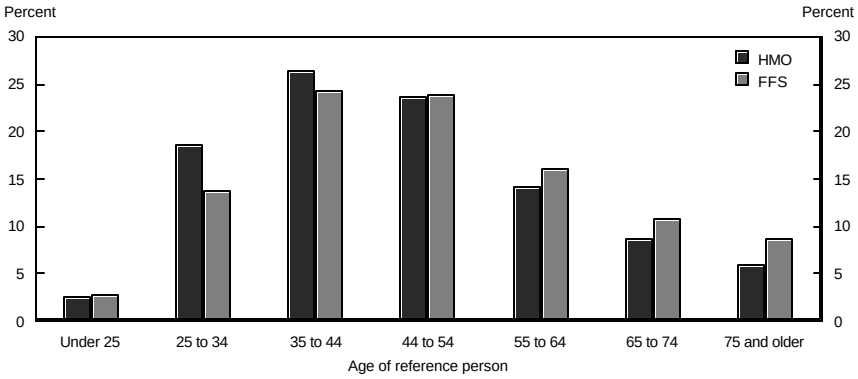

Chart 2. **Percentages of consumer units participating in health maintenance organizations (HMO) and fee-for-service (FFS) health care plans, by number of persons in the consumer unit, Consumer Expenditure Survey, 1999-2000**

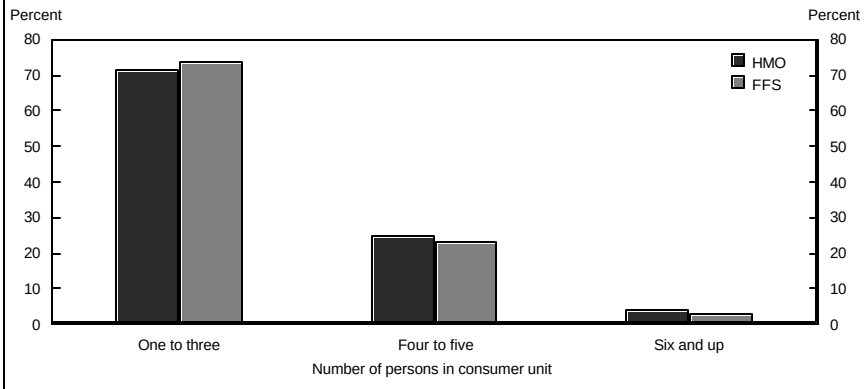

Chart 3. **Percentages of consumer units participating in health maintenance organizations (HMO) and fee-for-service (FFS) health care plans, by number of children in the consumer unit, Consumer Expenditure Survey, 1999-2000**

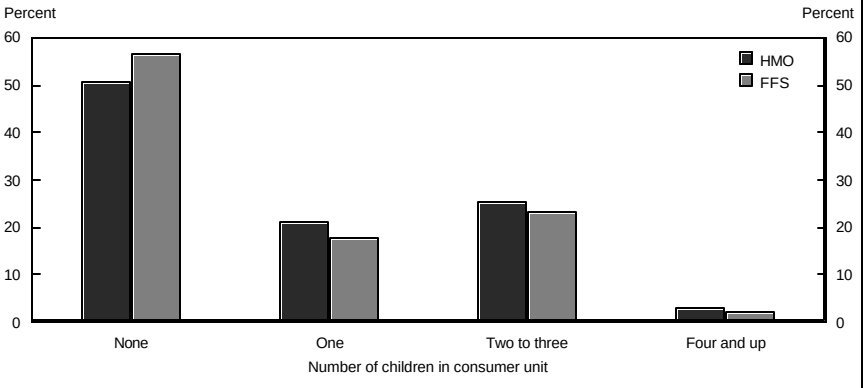

Table 1. Average annual health care expenditures by type of insurance, Consumer Expenditure Interview Survey, 1999–2000

Medical expenditure item	Fee-for-service insurance	Health maintenance organization	Difference in means
Total medical expenditures	$2,314.71	$1,789.24	[1] $525.47
Health insurance	1,028.67	870.45	[1] 158.22
Physicians' services	210.14	128.65	[1] 81.49
Lab tests and x rays	37.88	14.63	[1] 23.25
Hospital services other than room	67.64	37.34	[1] 30.30
Prescription drugs and medicine	329.02	236.47	[1] 92.55
Dental care	310.96	265.42	[1] 45.55
Eyeglasses and accessories, vision insurance	73.09	77.72	– 4.63
Purchase of medical or surgical equipment for general use	2.93	2.16	0.77
Purchase of supportive or convalescent medical equipment	3.52	6.21	– 2.69
Hearing aid	21.77	13.68	8.09
Eye examinations, treatment, or surgery	42.75	44.94	– 2.19
Services by other medical professionals	58.49	38.91	19.58
Hospital room and meals	56.42	31.24	25.18
Care in a convalescent or nursing home	58.70	9.05	49.66
Other medical care services	11.56	11.28	.28
Rental of medical or surgical equipment for general use	.50	.62	– .11
Rental of supportive or convalescent equipment	.69	.51	.18

[1] Significantly different at the 95-percent confidence level.

Table 2. Percentage reporting medical expenditures, Consumer Expenditure Interview Survey, 1999–2000

Medical expenditure item	Percent reporting fee-for-service plan	Percent reporting health maintenance organization	Difference in percent reporting
Health insurance	73	72	1
Physicians' services	70	67	3
Lab tests and x rays	23	13	[1] 10
Hospital services other than room	16	13	[1] 3
Prescription drugs and medicine	80	75	[1] 5
Dental care	51	48	[1] 3
Eyeglasses and accessories, vision insurance	34	35	– 1
Purchase of medical or surgical equipment for general use	4	2	[1] 2
Purchase of supportive or convalescent medical equipment	4	3	1
Hearing aid	3	3	0
Eye examinations, treatment, or surgery	32	28	[1] 4
Services by other medical professionals	16	15	1
Hospital room and meals	9	8	1
Care in a convalescent or nursing home	1	1	0
Other medical care services	6	4	2
Rental of medical or surgical equipment for general use	1	1	0
Rental of supportive or convalescent equipment	1	1	0

[1] Significantly different at the 95-percent confidence level.

Table 3. Frequencies of health care expenditures, Consumer Expenditure Interview Survey, 1999–2000

Medical expenditure item	Frequency of reporting, fee-for-service plans (in milions)	Frequency of reporting, health maintenance organizations (in millions)	Difference in frequency of reporting
Health insurance	34,612	41,852	[1] – 7,240
Physicians' services	5,748	13,113	[1] – 1,937
Lab tests and x rays	1,451	940	[1] 511
Hospital services other than room	1,124	1,062	62
Prescription drugs and medicine	24,088	26,871	[1] – 2,783
Dental care	5,748	6,449	[1] – 701
Eyeglasses and accessories, vision insurance	1,909	2,445	[1] – 536
Purchase of medical or surgical equipment for general use	225	186	39
Purchase of supportive or convalescent medical equipment	195	234	– 39
Hearing aid	212	216	–4
Eye examinations, treatment, or surgery	1,771	1,924	– 153
Services by other medical professionals	1,836	1,857	– 21
Hospital room and meals	544	628	– 84
Care in a convalescent or nursing home	127	81	46
Other medical care services	344	345	–1
Rental of medical or surgical equipment for general use	76	90	– 14
Rental of supportive or convalescent equipment	80	97	– 17

[1] Significantly different at the 95-percent level.