Trends in out-of-pocket spending on health care, 1980–92

For the most part, employers, government, and households all shared in the increased burden of rising medical spending; each share grew proportionately between 1980 and 1990, but during 1990–92, government's share increased rapidly, while households' out-of-pocket component dipped

Gregory Acs and John Sabelhaus

Throughout the 1980's, the medical component of the Consumer Price Index rose at twice the rate of inflation. Rising prices have caused some employers to reduce employer-sponsored insurance coverage,[1] and increased the pressure of medicaid and medicare spending on the federal budget. One would also expect that these rising prices would have a large, direct impact on family budgets because families would have to pay more for insurance, prescription drugs, hospital stays, and visits to the doctor out of their own pockets, and thus, have less money to spend on other goods and services.

This article uses aggregate data from the National Income and Product Accounts (National Accounts hereinafter) and family level data from the Consumer Expenditure Surveys to measure the growth in out-of-pocket health care expenditures between 1980 and 1992. We also explore how the composition of family health spending has changed during this period and how this spending varies across different types of families.

The share of personal consumption devoted to medical care, which includes all spending by, or on behalf of households, rose from 11.9 percent to 17.0 percent between 1980 and 1992, according to data from the National Accounts. However, direct out-of-pocket spending accounts for only one-third of all health related spending, and families only absorbed about one-third of the increase in health care costs through direct out-of-pocket spending. Consequently, the observable impact on household budgets was modest. Most of the growth in health care costs was absorbed through higher budgetary outlays by government and increased labor costs for businesses. In effect, the large increase in health care costs during the last decade has been "hidden" in increased taxes, lower wages, and higher prices for other goods.

Data from the Consumer Expenditure Survey show similar patterns of out-of-pocket health spending to those observed in the National Accounts between 1980 and 1992. Focusing on nonelderly households, we find that spending on health care and health insurance grew from an average of 4.2 percent of total household expenditures in 1980 to 5.0 percent in 1992. The data also indicate that increased payments for insurance (both conventional and health maintenance organizations–HMO–arrangements) account for virtually all of the growth in out-of-pocket spending by households.

Consumer expenditure data also allow us to examine the trends in out-of-pocket spending across several groups in the population and to look closely at changes in the way families spend their money on health care. The modest increase in out-of-pocket health spending between 1980 and 1992 is observed for every group we consider: the change in budget shares for out-of-pocket health care ranged from –0.3 percentage points to 2.0 percentage points across income, region, race, family composition, and age groups. Also, the increased share of health budgets de-

Gregory Acs and John Sabelhaus are senior research associates at The Urban Institute, Washington, DC. Opinions of the authors do not necessarily reflect the views of The Urban Institute or its sponsors.

voted to insurance premiums is pervasive across groups, though there are interesting differences in both levels and trends. The increase in spending on traditional health insurance and HMOs was offset by a decline in the share of health budgets paid directly to hospitals and physicians. Consumers reacted to rising health care prices by purchasing "more" insurance, in the sense that the share of health spending attributable to copayments and deductibles for hospitals and physicians actually fell from 30.1 percent to 20.9 percent between 1980 and 1992.

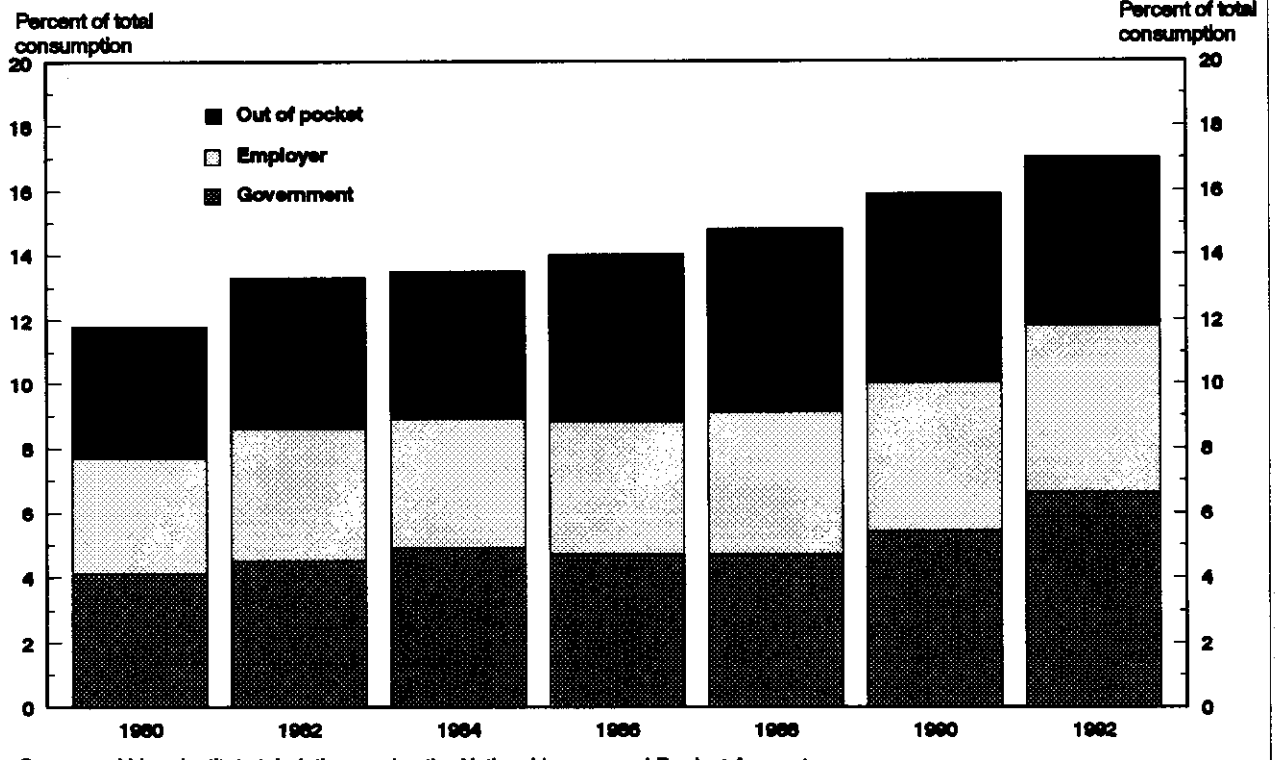
Finally, we combine the basic interview data from the Consumer Expenditure Survey with supplemental files on health insurance (available after 1988) to study how out-of-pocket spending varies by type of insurance coverage. We find that the uninsured spend a much smaller fraction of their total budgets on health care than the privately insured primarily because they spend no money on insurance. Indeed, the fraction of uninsured family budgets going towards supportive care (eye, dental, and medical equipment) is not very different from that of the insured population.

Spending trends

We examine trends in aggregate spending using data from the National Accounts and the Consumer Expenditure Survey because they provide fairly consistent information throughout the 1980's and early 1990's.[2] These data show that spending on health care is consuming an increasingly larger share of total spending in the United States, confirmed by the fact that growth in the medical sector has outpaced all of the aggregate income or output measures in the National Accounts. We assess the impact of rising health care costs by measuring the change in medical spending as a share of personal consumption because this ratio clearly shows how health spending offsets other types of expenditures. In the National Accounts data, the share of consumption devoted to health care rose from 11.9 percent in 1980 to 17.0 percent in 1992.

We divide health care spending into three components: Federal Government spending (largely medicaid and medicare), business spending on employer-provided insurance, and direct spending by individuals and families (out-of-pocket spending, which we define to include insurance premiums paid by households). For the most part, employers, government, and households all shared in the increased burden of rising medical spending. This diffusion across the three principal payers softens the direct impact on each group. Thus, the direct effect on family budgets appears to be modest. Chart 1 shows that government-provided health care rose from 4.1 percent of consumption in 1980 to 6.6 percent by 1992.[3] Em-

Chart 1. **Medical spending as a share of total consumption by compnent of medical spending, 1980–92**



SOURCE: Urban Institute tabulations, using the National Income and Product Accounts.

ployer-provided health care rose from 3.6 percent of consumption in 1980 to 5.2 percent in 1992. The residual out-of-pocket health care paid for out of household budgets rose from 4.1 percent of consumption in 1980 to 5.2 percent by 1992. Each of the three components grew proportionately between 1980 and 1990, but between 1990 and 1992, government's share increased rapidly while the out-of-pocket component dipped. This coincides with expansions in the medicaid program.[4]

The household-level consumer expenditure data also allow us to further divide government and out-of-pocket shares into spending by, and for the elderly and nonelderly populations.[5] As table 1 shows, government spending on the elderly as a percentage of all health spending grew from 17.2 percent to 18.7 percent between 1980 and 1992, while spending on the nonelderly grew from 17.8 percent to 20.2 percent. In principle, government spending on the nonelderly should represent a larger share of total health spending during economic downturns, because more people receive public assistance at those times. Between 1990 and 1992, when the economy experienced the 1990–91 recession, medicaid coverage expanded. As a result, the out-of-pocket share of total spending fell slightly between 1990 and 1992.

We use the Consumer Expenditure Survey to examine trends in out-of-pocket spending among nonelderly households, because most of them have private insurance, while elderly households generally receive insurance through medicare coverage. Chart 2 shows that the overall growth in the share of family budgets going to health expenditures is almost identical to the growth indicated from National Accounts data (the out-of pocket component in chart 1), rising from 4.2 percent to 5.0 percent between 1980 and 1992, though there is some divergence in the patterns of growth over the 12-year period.[6] Virtually all of the growth in household budgets allocated to health care has been in the form of insurance payments, which we define to include both traditional commercial health insurance and fees for HMOs.

Together, data from the National Accounts and Consumer Expenditure Survey provide unique insights into health care spending trends between 1980 and 1992. For example, by comparing the noninsurance component of out-of-pocket spending from consumer expenditures in chart 2 with the sum of all nonelderly health care spending from the National Accounts in table 1, we can derive the fraction of health care payments made directly to service providers and for medicine and medical equipment, by nonelderly households.[7]

Notably, the fraction of costs paid at point of service fell from 28.7 percent in 1980 to 21.1 percent by 1992. About half of the decrease is attributable to increased medical outlays by employers and government, while the other half is attributable to the shift within out-of-pocket health budgets away from direct payments and towards insurance. The data suggest that households facing higher costs at the point of service eventually purchased more insurance to offset these higher point-of-service fees.

Table 1. Aggregate medical spending by source of funding for elderly and nonelderly groups, selected years

[In percent]

Characteristic	1980	1985	1990	1992
All sources	100.0	100.0	100.0	100.0
Employers	30.1	29.4	29.1	30.3
Government	35.0	33.8	33.9	39.0
Elderly	17.2	19.2	18.0	18.7
Nonelderly	17.8	14.6	15.8	20.2
Out of pocket	34.9	36.8	37.1	30.8
Elderly	11.0	11.3	12.0	10.6
Nonelderly	23.9	25.5	25.1	20.2

SOURCE: The authors' tabulations, using the National Income and Product Accounts. The allocation of out-of-pocket expenditures between elderly and nonelderly is based on Consumer Expenditure Surveys.

In sum, the aggregate National Accounts data indicate that spending on health care in the United States grew dramatically between 1980 and 1992. The impact of this rapid growth, however, was spread fairly evenly across the three principle payers: individuals, employers, and the Federal Government. In recent years, the government's share of total spending has grown faster than the other components, further mitigating the immediate pressure on family budgets. But behind the small average growth, we might expect to find significantly increased burdens for particularly vulnerable groups in the population, particularly those unable to obtain health insurance. The Consumer Expenditure Survey allows us to investigate these distributional issues by analyzing health care spending across various groups within the population.

Spending across demographic groups

Aggregate data show that escalating health care costs only had a modest impact on household budgets—government and business bore the lion's share of the increase, and individual households shifted their spending away from direct fee for service purchases to insurance. In this section, we investigate the extent to which these aggregate trends persist across demographic groups, by income, region, race, family composition, and age.

Table 2 presents trends in overall out-of-pocket spending for different segments of the population. First, consider health care's share of spending out of total expenditures for low, medium, and high spending households.[8] Not surprisingly, poorer households devote a larger share of their budgets to

health care than other households. Between 1980 and 1992, out-of-pocket health spending as a proportion of all spending rose from 5.7 percent to 6.4 percent for poorer households, from 5.0 percent to 6.1 percent for households spending between $15,000 and $30,000 a year, and from 3.3 percent to 4.0 percent for households spending more than $30,000 annually.

Trends in health care spending as a share of total household expenditures also varies across different parts of the United States. The share of household budgets devoted to health insurance and health care increased from 5.1 percent to 7.1 percent for families living in rural areas, while the share increased slightly throughout the urban areas. By 1992, families in the urban West devoted the smallest share of their expenditures to health care (4.2 percent) while families in the urban South devoted the highest proportion (5.4 percent).

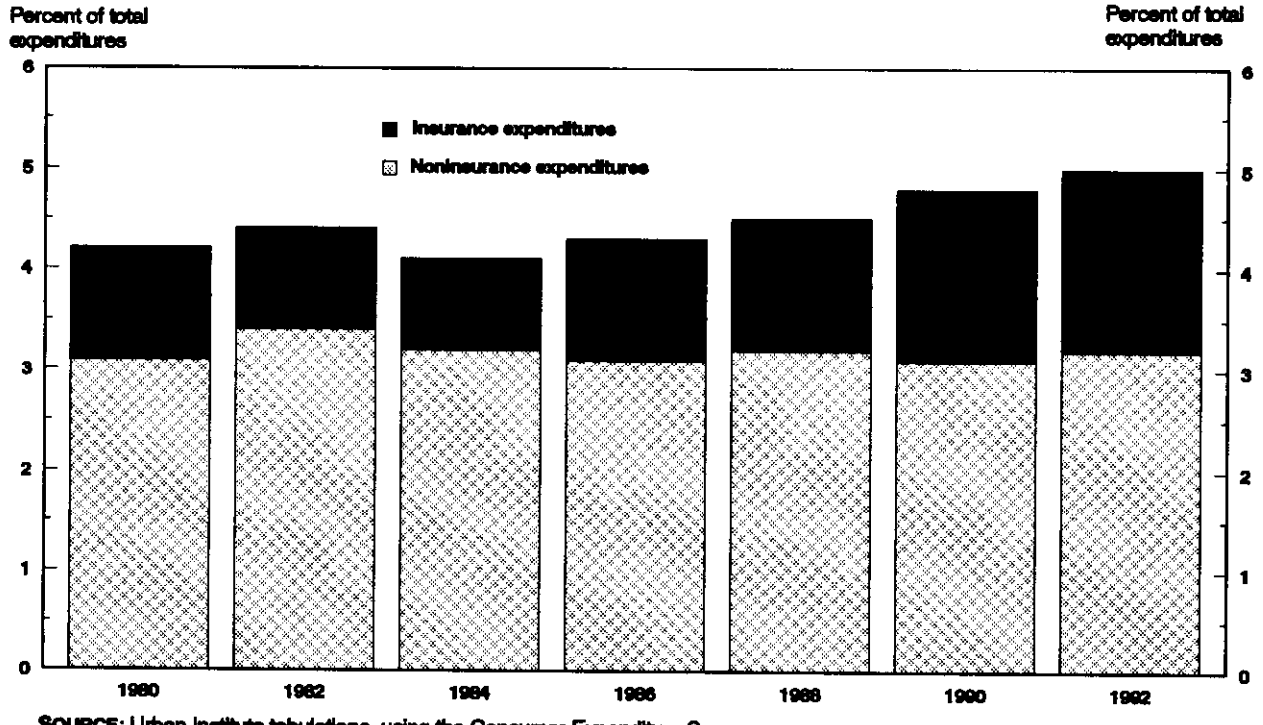
Black families consistently spent a lower share of their budgets on health care than nonblack families. The ratio of health care spending to all expenditures for nonblack families rose from 4.3 percent to 5.2 percent between 1980 and 1992. Among black families, the ratio remained at 3.5 percent.

The trends in out-of-pocket spending on health are similar across family types. Single-parent families consistently devoted a smaller proportion of their budgets to health care than other families, with the proportion rising from 3.1 to 4.2 percent between 1980 and 1992. This may reflect the relatively high medicaid enrollment for this population. Households without children spent relatively more on health care than those with children and their out-of-pocket spending on health care as a proportion of all expenditures grew from 4.4 percent to 5.3 percent.

Households headed by individuals under age 25 actually spent less on health care as a percentage of all their expenditures in 1992 than in 1980. Health care spending fell from 2.8 percent to 2.5 percent of all spending for this group. Health care expenditures as a share of all spending increased for other families that had higher spending proportions and older heads of households. Between 1980 and 1992, families headed by individuals ages 55–64 increased the share of their budgets devoted to health care from 5.7 percent to 7.4 percent. Part of the rise for this age group may be attributable to the increasing incidence of early retirement during the 1980's.[9]

Chart 3 shows how the composition of out-of-pocket health care spending changed between 1980 and 1992. We divide spending into four categories: (1) commercial insurance plus payments to HMOs; (2) point-of-service payments to doctors and hospitals; (3) prescription drugs; and (4) supplemental care payments to dentists, opticians, and so forth. While the budget shares for prescription drugs and supplemental care remained fairly stable over the 12-year interval, the share of

Chart 2. Nonelderly out-of-pocket health care spending as a share of total expenditures, 1980–92



SOURCE: Urban Institute tabulations, using the Consumer Expenditure Survey.

Table 2. Household expenditures on health care expenditures as a percentage of total household expenditures, by household characteristics, 1980 and 1992

[In percent]

Characteristic	1980	1992	Change
All consumer units	4.2	5.0	0.8
Annual household expenditure levels			
Less than $15,000	5.7	6.4	.7
$15,000 to $30,000	5.0	6.1	1.1
Greater than $30,000	3.3	4.0	.7
Region			
Rural	5.1	7.1	2.0
Urban Northeast	3.9	4.7	.8
Urban Midwest	3.8	4.6	.8
Urban South	4.7	5.4	.7
Urban West	3.7	4.2	.5
Race			
Black	3.5	3.5	0
Nonblack	4.3	5.2	.9
Family type			
No children	4.4	5.3	.9
Single parent	3.1	4.2	1.1
Two parent	4.3	5.0	.7
Age of head of household			
Younger than 25	2.8	2.5	-0.3
25-34	3.5	4.1	.6
35-44	4.1	4.9	.8
45-54	4.6	5.3	.7
55-64	5.7	7.4	1.7

NOTE: Households with heads ages 65 and older are excluded.
SOURCE: Authors' tabulations.

Table 3. Household expenditures on health insurance as a percentage of total household expenditures on health care by household characteristics, 1980 and 1990

[In percent]

Characteristic	1980	1992	Change
All consumer units	25.7	36.4	10.7
Annual household expenditure levels			
Less than $15,000	31.7	36.1	4.4
$15,000 to $30,000	26.8	39.4	12.6
Greater than $30,000	21.9	33.8	11.9
Region			
Rural	28.7	40.1	11.4
Urban Northeast	22.9	35.1	12.2
Urban Midwest	27.5	35.5	8.0
Urban South	26.8	37.2	10.4
Urban West	21.6	34.3	12.7
Race			
Black	32.3	46.1	13.8
Nonblack	25.2	35.8	10.6
Family type			
No children	26.9	34.7	7.8
Single parent	26.0	34.9	8.9
Two parent	24.6	38.8	14.2
Age of household head			
Younger than 25	27.0	32.3	5.3
25-34	27.9	40.1	12.2
35-44	22.8	36.3	13.5
45-54	25.6	35.1	9.5
55-64	26.4	35.5	9.1

NOTE: Households with heads ages 65 and older are excluded.
SOURCE: Authors' tabulations.

household health-care dollars going toward point- of-service expenses fell by 9.2 percentage points. Over the same period, spending on insurance increased by 10.7 percentage points.

There are two competing explanations for this rise in insurance spending: households are either paying more for the same insurance coverage or they are purchasing more insurance to cover point-of-service expenses. If the former were true, however, we would expect a uniform decline in all noninsurance spending categories rather than a decline concentrated in one category. Furthermore, within the category of insurance spending, we see a large increase in spending on HMOs.[10] By enrolling in HMOs, households are, in effect, prepaying copayments and deductibles for physicians' services. Thus, it appears that over the 1980's and early 1990's, households purchased more insurance coverage to protect against higher point-of-service medical expenses.

Next, we examine how spending on each of the four components of health care vary across groups within the population. First, consider spending on insurance as presented in table 3. The share of health budgets going to insurance for households with annual total spending less than $15,000 rose by 4.4 percentage points, and shares for the middle-spending households increased by 12.6 percentage points, while high-spending households, rose by 11.9 percentage points. In all regions of the United States, insurance occupied a greater share of family budgets in 1980 than in 1992, accounting for more than a third of health budgets by 1992. In general, the share of health budgets devoted to insurance rose by more than 10 percentage points across race, family type, and all age groups except those families headed by individuals under age 25.

Table 4 shows how point-of-service payments to physicians and hospitals differed across groups within the population. While point-of-service payments' share of total health care spending declined slightly for wealthier households, it dropped considerably for middle and low spending households. In fact, in 1980, households with expenditures in excess of $30,000 per year spent a smaller portion of their health dollars on point-of-service payments than other expenditure groups, but by 1992, they became the highest spending group.

Point-of-service spending as a share of health care spending dropped considerably more in rural areas and in the urban

West than it did in other areas. And while the point-of-service share of health spending by blacks and nonblacks was roughly equal in 1980, it dropped more for blacks than nonblacks. Families without children spent a higher percentage of their health care dollars on point-of service-expenses than families with children, but the share declined over the 12-year period. Families with younger heads of households tend to spend a greater proportion of their health care dollars on point-of-service care than families with older heads; however, point of service spending's share fell among all age groups.

Spending on prescription drugs as a proportion of total health care spending remained remarkably stable between 1980 and 1992,[11] however, there are some interesting differences in the spending patterns across different demographic groups. As table 5 shows, families spending less than $15,000 a year devoted 11.5 percent of their health care dollars to prescription drugs in 1980; by 1992, they were spending 14.6 percent on medication. In contrast, among "well-to-do" families, only 10 percent of their health care expenditures went to pay for prescription drugs in 1980, and the share dropped to 9.2 percent by 1992.

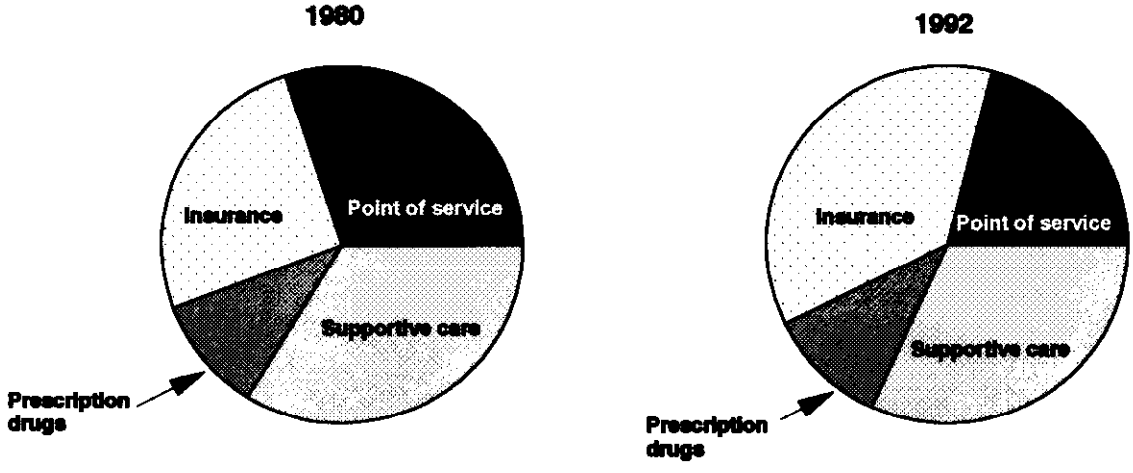
Families living in rural areas and families living in the urban West devote very different shares of their budgets to prescription drugs. In 1992, families in rural areas devoted 15.1 percent of their health care dollars to medication, while the share paid by families in the urban West was 8.3 percent.

There are, however, few differences by race. The share of health spending devoted to medication fell slightly for blacks, reaching 11.0 percent in 1992. Spending by nonblacks climbed slightly, reaching 10.8 percent in 1992. Smaller families, specifically, those with no children paid 13.4 percent of their health care dollars to cover the cost of drugs in 1992, compared with 8.1 percent of the health care budget for larger families consisting of two-parent families. This represents a small rise for families without children and a small decline for two-parent families.

Households headed by older individuals spent substantially more on prescription drugs than younger households. Indeed, families with heads of households under age 45 spent less than 10 percent of their health care dollars on medication, while families with heads between the ages of 45 and 54 spent 12.7 percent. Families headed by individuals ages 55 to 64 devoted 14.2 percent of their health budgets to prescription drugs.

Together, health insurance, point-of-service payments for physicians and hospitals, and prescription drugs account for about 70 percent of out-of-pocket medical expenditures. The balance is for dental, eye, and other supportive care. The share of out-of-pocket spending devoted to supportive care declined slightly between 1980 and 1992. As table 6 illustrates,

Chart 3. Composition of out-of-pocket health care spending, 1980 and 1992



SOURCE: Urban Institute tabulations, using the Consumer Expenditure Survey.

Table 4. Household expenditures on hospitals and physicians as a percentage of total household expenditures on health care by household characteristics, 1980 and 1990

[In percent]

Characteristic	1980	1992	Change
All consumer units	30.1	20.9	-9.2
Annual household expenditure levels			
Less than $15,000	30.2	19.7	-10.5
$15,000 to $30,000	31.3	19.7	-11.6
Greater than $30,000	27.4	22.6	-4.8
Region			
Rural	30.2	16.4	-13.8
Urban Northeast	27.7	22.7	-5.0
Urban Midwest	26.5	21.5	-5.0
Urban South	31.2	23.4	-7.8
Urban West	31.6	19.4	-12.2
Race			
Black	31.1	15.3	-15.8
Nonblack	29.3	21.3	-8.0
Family type			
No children	27.3	19.8	-7.5
Single parent	32.2	22.3	-9.9
Two parent	31.1	21.9	-9.2
Age of household head			
Younger than 25	36.6	28.7	-7.9
25-34	34.0	26.0	-8.0
35-44	29.6	20.0	-9.6
45-54	28.3	18.4	-9.9
55-64	24.9	19.4	-15.5

NOTE: Households with heads ages 65 and older are excluded.
SOURCE: Authors' tabulations.

Table 5. Household expenditures on prescription drugs as a percentage of total household expenditures on health care, by household characteristics

[In percent]

Characteristic	1980	1992	Change
All consumer units	10.4	10.8	4.0
Annual household expenditure levels			
Less than $15,000	11.5	14.6	3.1
$15,000 to $30,000	10.2	10.9	.7
Greater than $30,000	10.0	9.2	-.8
Region			
Rural	11.8	15.1	3.3
Urban Northeast	9.8	9.2	-0.6
Urban Midwest	10.4	10.9	0.5
Urban South	11.0	11.0	0
Urban West	8.3	8.3	0
Race			
Black	11.3	11.0	-0.3
Nonblack	10.3	10.8	0.5
Family type			
No children	11.1	13.4	2.1
Single parent	9.2	10.3	1.1
Two parent	9.9	8.1	1.8
Age of household head			
Younger than 25	8.7	9.5	.8
25-34	8.2	7.7	-.5
35-44	8.6	9.0	.4
45-54	11.2	12.7	1.5
55-64	13.6	14.2	.6

NOTE: Households with heads ages 65 and older are excluded.
SOURCE: Authors' tabulations.

wealthier households devoted a larger share of their health care dollars to supportive care than other households. While the share devoted to supportive care declined for high and middle spending households, households with expenditures below $15,000 per year actually spent a higher proportion of their health care dollars on supportive care in 1992 than in 1980. Of the total out-of-pocket health care spending, the share of supportive care declined across all regions. While blacks spent a lower proportion of their health budgets on supportive care than nonblacks in both years, the gap narrowed over time. The share of health spending devoted to supportive care was relatively stable across family types. Finally, the youngest heads of households devoted a larger share of their health care dollars to supportive care in 1992 than in 1980, while the oldest households devoted slightly less.

Effects of insurance coverage

Differences in health insurance coverage, also affect the level and composition of out-of-pocket health expenditures. Prior to 1988, however, the Consumer Expenditure Survey provided very limited information on insurance status. In this section, we use supplemental data from the survey, available after 1988 to look at how the levels and composition of health spending vary with coverage status.[12]

The following tabulation shows, the distribution of consumer units by insurance coverage status for 1988 and 1992. Consistent with other studies[13], we observe a decline in employer-provided insurance coverage from 66.8 percent to 63.8 percent of families over the 5-year period.[14] This decline is offset by an increase in the share of the population with publicly-provided insurance (medicaid and medicare) from 6.9 percent to 9.5 percent. The fraction of consumer units lacking insurance was stable at 16.5 percent:[15]

Insurance status	*1988*	*1992*
All consumer units	100.0	100.0
Private coverage	76.6	74.0
Employer-provided	66.8	63.8
Other private	9.8	10.2
Public coverage	6.9	9.5
No coverage	16.5	16.5

As the next tabulation shows, families who buy their own private insurance spent a greater share of their budgets on health care than families with employer-sponsored insurance or public coverage—6.9 percent in 1988, rising to 7.6 percent by 1992:

Insurance status	*Share of budget for health care* 1988	1992
All consumer units	4.3	5.0
Private coverage	4.8	5.5
Employer-provided	4.5	5.2
Other private	6.9	7.6
Public coverage	3.4	2.0
No coverage	2.4	2.6

Families with employer-sponsored insurance, in turn, spent a greater share of their family budgets on health care than families with public coverage in both years. Of course, publicly covered households spent a lower share of their budgets on health care because they did not buy insurance or make any contributions to employer plans. Further, many supportive services, such as eye care, are covered by medicaid, but are not included in most private sector insurance plans.

Table 6. Household expenditures on supportive care as a percentage of total household expenditures on health care by household characteristics, 1980 and 1992

[In percent]

Characteristic	1980	1992	Change
Consumer units	33.8	31.9	-1.9
Annual household expenditure levels			
Less than $15,000	26.6	29.6	3.0
$15,000 to $30,000	31.7	30.0	-1.7
Greater than $30,000	40.7	34.4	-6.3
Region			
Rural	29.3	28.4	-.9
Urban Northeast	39.6	33.0	-6.6
Urban Midwest	35.6	32.1	-3.5
Urban South	31.0	28.4	-2.6
Urban West	38.5	38.0	-.5
Race			
Black	25.3	27.6	2.3
Nonblack	35.2	32.1	-3.1
Family type			
No children	34.7	32.1	-2.6
Single parent	32.6	32.5	-.1
Two parent	34.4	31.2	-3.2
Age of household head			
Younger than 25	27.7	29.5	1.8
25-34	29.9	26.2	-3.7
35-44	39.0	34.7	-4.3
45-54	34.9	33.8	-1.1
55-64	35.1	30.9	-4.2

NOTE: Households with heads ages 65 and older are excluded.
SOURCE: Authors' tabulations.

Table 7. Insurance coverage status by total household expenditures, 1992

Health insurance status	Total household expenditures— Less than $15,000	$15,000 to $30,000	More than $30,000
All consumer units	100.0	100.0	100.0
Private coverage	52.4	81.4	91.1
Employer-provided	41.0	72.0	81.8
Other private	11.4	9.4	9.3
Public coverage	19.9	4.9	2.5
No coverage	27.7	13.7	6.4

NOTE: Households with heads ages 65 and older are excluded.
SOURCE: Authors' tabulations.

The uninsured devoted a significantly lower portion of their total budgets to health care, compared with individuals who have private sector coverage. That the uninsured spend less than those with private coverage can be interpreted in two ways: those without insurance may be healthier, and hence, choose to forego medicine or use less medical care; or they may be more willing to rely on uncompensated care in the event of an emergency.[16]

Differences in the amount of money spent on health care, by insurance-coverage status are also interesting. It may be the case that the uninsured obtain the same level of basic medical care, but pay for services typically covered by insurance at the point-of-service, rather than through third-parties. However, this is not the case. As the following tabulation shows, the sum of insurance payments and point-of-service payments for physicians and hospitals is much lower for the uninsured than for the insured. In 1992, those with private coverage devoted 3.3 percent of their total budgets to insurance and point-of service-expenses while the uninsured devoted only 1.1 percent of their total expenditures to these items.

Coverage status	*Insurance, hospitals, and physicians as a share of total expenditures* 1988	1992
All consumer units	2.5	2.9
Private coverage	2.8	3.3
Employer-provided	2.6	3.1
Other private	4.6	5.0
Public coverage	1.9	1.0
No coverage	1.1	1.1

The following tabulation shows that uninsured families spent almost as much on supplemental items (such as eye care, dental services, and medical equipment) as they did on point-of-service expenses:

Coverage status	Insurance, hospitals, and physicians as a share of total expenditures 1988	1992
Private coverage	1.5	1.6
Employer-provided	1.4	1.6
Other private	1.6	1.8
Public coverage	.8	.5
No coverage	.9	1.1
All consumer units	1.4	1.5

Nevertheless, families with private sector coverage devote a larger portion of their total expenditures to supplemental care than the uninsured (1.6 percent, versus 1.1 percent in 1992). Public coverage is more generous than private plans, therefore, it is not surprising that individuals with public coverage spent only 0.5 percent of their total budgets on supplemental care.

Some of the differences in health expenditure patterns across insurance-coverage groups reflect differences in family budgets. In table 7, we show the distribution of families across three total-expenditure groups by insurance-coverage status in 1992. About half the families with total expenditures below the $15,000 per year mark have either public or no insurance. That fraction falls to less than 10 percent for families with total expenditures above $30,000 per year. The fraction of each income group obtaining their own private insurance is about 10 percent.

Finally, the differences in out-of-pocket spending by insurance coverage status are not simply a function of family resources. Within any given insurance-coverage group, budget shares for out-of-pocket health care spending decline smoothly as total expenditures rise. But after controlling for overall expenditures, budget shares for out-of-pocket health care can vary significantly across insurance-coverage groups. (See table 8.) Overall, families with private coverage devoted more than twice as much of their total budgets to health care as the uninsured across all three expenditure groups. This ratio varies from 3.0 for the lowest expenditure group to 2.1 for the highest.

Table 8. Out-of-pocket spending for health care as a share of total household expenditures, 1992

Health insurance status	Total household expenditures— Less than $15,000	$15,000 to $30,000	More than $30,000
All consumer units	6.4	6.1	4.0
Private coverage	8.8	6.8	4.2
Employer-provided	7.9	6.5	4.1
Other private	12.1	9.2	5.2
Public coverage	2.8	1.4	1.3
No coverage	3.0	2.7	2.0

NOTE: Households with heads ages 65 and older are excluded.
SOURCE: Authors' tabulations.

WHILE HEALTH CARE SPENDING has taken up an increasing share of the family budgets of nonelderly households, our analysis suggests that the increase, from 4.2 to 5.0 percent between 1980 and 1992, is rather modest. The significant growth in medical spending was in large part paid for by employers and government, and consumers may not be associating the falling wages and rising taxes needed to cover those outlays with rising health care prices. In addition, the increased out-of-pocket spending that families experienced directly was in the form of higher insurance premiums, rather than increased point-of-service outlays.

Because the direct impact of increases in health care spending may not be evident to consumers, our findings on out-of-pocket health care spending across groups within the population are an incomplete description of the distributional effect of rising health care costs. Thus, we need to assess the impact of rising health care costs on wages and taxes across the population to complete the distributional analysis. However, similarities in health-care budget composition across groups in the population suggest that the impact was fairly uniform, in the sense that no obvious crowding of other expenditures seems evident. □

Footnotes

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[1] Colin Winterbottom, "Trends in Health Insurance Coverage: 1988-1991," Discussion paper (Washington, The Urban Institute, 1993); and Katherine R. Levit, Gary L. Olin, and Suzanne W. Letsch, "American's Health Insurance Coverage, 1980–91," *Health Care Financing Review*, vol. 14, no. 1, 1992.

[2] The National Medical Expenditure Surveys also provide detailed data on health spending, however, the most recent data currently available reflect spending from 1987. In addition, this survey is not taken annually; no data were collected between 1977 and 1987. A discussion of the merits and limitations of the National Income and Products Accounts, Consumer Expenditure Survey, and the data appear in the appendix.

[3] The values in chart 1 reflect only the budgetary outlays for medical care provided by the Federal Government. Tax-subsidies for employer-provided health insurance are not counted as part of government costs.

[4] Winterbottom, "Trends in Health Insurance."

[5] We classify nonelderly households as those headed by someone less than 65 years old. The share of government medical spending going to the elderly in table 1 is computed, using National Income and Product Accounts data on medicare spending — spending on medicaid for the elderly and spending on medical care for retired military personnel are not included in the table, because they cannot be discerned in the National Accounts.

[6] From the Consumer Expenditure Survey, the out-of-pocket health care budget share including elderly households rises from 5.3 percent in 1980 to 6.5 percent in 1992. It is important to note that the denominator used in chart 1 — total consumption — differs from the denominator in chart 2, which is total expenditures. The differences are attributable to National Accounts imputations for the household sector which cannot be reproduced using survey data. See the appendix for details.

[7] The budget shares in table 1 use consumption across all age groups as the denominator. We convert these to nonelderly budget shares by dividing through by the share of expenditures (from the Consumer Expenditure Survey) accounted for by nonelderly households, which was 86.5 percent in 1980, and 84.1 percent in 1992.

[8] We use family expenditures rather than family income to distinguish between richer and poorer households because the subset of families (from the Consumer Expenditure Survey) with "complete" income measures is not representative of the whole population. Census does not impute missing income items on the Consumer Expenditure Survey, as it does with the Current Population Survey (CPS) and other income-oriented surveys.

[9] The reason that early retirement and higher health costs are related is that employers are more likely to provide insurance for current workers than for nonelderly (early) retirees. So, it is likely a retired person has to pay for their own insurance, and therefore bear higher costs.

[10] Thomas Burke and Rita Jain document the growth of health maintenance organizations between 1979 and 1989 using data from the Bureau of Labor Statistics annual survey of employer benefits. See Thomas Burke, and Rita Jain, "Trends in employer-provided health care benefits," *Monthly Labor Review*, February, 1991, pp. 24–30.

[11] Out-of-pocket spending on prescription drugs remained stable, despite the fact that the price of prescription drugs rose faster than the overall rate of medical inflation during the 1980's). One explanation for this apparent paradox involves the use of bulk rate, mail order prescription drug services and insurance plans which encourage individuals to purchase generic equivalents to brand name drugs. Cathy Baker and Natalie Kramer note that the number of subscribers covered by plans with such incentives increased from 3 percent in 1985 to 14 percent in 1989. Thus, consumers are not paying for higher drug costs directly from their pockets, but indirectly through product substitution and less convenient access to medication. See Cathy Baker and Natalie Kramer, "Employer-sponsored prescription drug benefits, *Monthly Labor Review*, February 1991, pp. 31–35.

[12] The supplemental files available after 1988 are from the EXPN tapes, which record the inventory of health insurance policies a consumer unit has while in the survey, whether a premium payment is made or not. Prior to 1988, all we can observe is spending on health insurance itself, which is an imperfect indicator of coverage.

The text tabulations in this section are the authors' tabulations, using the Consumer Expenditure Survey.

[13] Winterbottom, "Trends in Health Insurance." 1993; and Levit, Olin, and Letsch, "American's Health Insurance Coverage," 1992.

[14] If any member of a consumer unit has employer-sponsored health insurance, we consider the family to have employer-sponsored coverage even if other members are uninsured or have public coverage.

[15] This does not mean that the number of people lacking insurance was constant, though individual-level analysis over this period shows only modest changes. See, for example, Winterbottom, "Trends in Health Insurance," 1993; and Levit, Olin, and Letsch, "American's Health Insurance, 1992.

[16] Research on actual usage of medical care by the uninsured shows interesting patterns. For example, the uninsured score lower on self-reported health questions that are known to be good predictors of future health status and medical needs, according to 1987 data from the National Medical Expenditure Survey, See Peter Franks, Carolyn M. Clancy, Marthe R. Gold, and Paul A. Nutting, "Health Insurance and Subjective Health Status: Data from the 1987 National Medical Expenditure Survey," *American Journal of Public Health*, vol. 83, no. 9, 1993.

Using the Rand Health Insurance Experiment data set, Susan M. Marquis and Ellen R. Harrison confirm the lower self-reported health scores for the uninsured, but go on to show that the uninsured use less medical services even after being provided with access. See Susan M. Marquis, and Ellen R. Harrison, "Health Status and Health Care Use of Uninsured Workers," *Health Benefits and the Workforce* (U.S. Department of Labor, Pension and Welfare Benefits Administration, 1992).

APPENDIX: Estimating household-level expenditures on health care

The most comprehensive data set for studying out-of-pocket health care spending is the National Medical Expenditure Survey (National Survey, for short). Unfortunately, this survey is conducted only every 10 years, and the latest one is for 1987. To develop our household-level spending estimates, we use data from the ongoing Consumer Expenditure Survey. In 1987, the average out-of-pocket health expenditure per household reported in the Consumer Expenditure Survey was slightly lower than the average reported in the National Survey.[1] Amy Taylor and Jessica Banthin examine changes in spending between 1977 and 1987 using the 1977 and 1987 National Survey. For the Consumer Expenditure Survey, approximately 5,000 households are interviewed each quarter and asked to recall their spending over a 3-month period. The survey bases spending analysis on the "consumer unit" instead of the more commonly referenced "household," as in the Current Population Survey or decennial census. The difference is minor — a household can have more than one consumer unit if the individuals do not pool resources in any significant way. In this article, we refer to consumer units as "households" for ease of exposition.

Each household can participate in the survey for up to four interviews, and, in general, about 75 percent complete all four quarters. We do not exploit the longitudinal aspect of the survey because excluding households that do not complete the interviews introduces significant attrition bias.

Our total expenditure measure differs slightly from the published Consumer Expenditure measure because we exclude contributions to pensions plans (which we classify as savings) and Social Security (which we classify as taxes) There are also important differences between our (and any survey-based) measure of expenditures and the National Income and Product Accounts concept of "consumption" referenced in the article. National Accounts consumption includes many imputed categories that cannot be measured in surveys, such as the rental value of owned housing and the value of bank services obtained when consumers forego interest earnings to get free checking. And while categories such as employer- and government-provided medical care can, in principle, be measured in the survey, they are not. Our measure of expenditure can be thought of as a "cash-basis" consumption value, which is not an optimal indicator of economic well-being, but the best measure available at the household level. Barry Bosworth, Gary Burtless, and John Sabelhaus provide a detailed appendix which shows how the "cash-basis" expenditure measure corresponds with National Accounts-based consumption. They also show that these measures tracked closely over time.

Our out-of-pocket measure includes spending on insurance as well as direct payments for medical services. The out-of-pocket medical expenditures in the survey are collected in two pieces. Households are asked to inventory their health insurance policies at the first interview, then record payments made on the policies in all subsequent quarters. In the second interview, they are also asked about payments for medical care made out-of-pocket, and any reimbursements received from insurance companies for payments made in the past. The reimbursements are collected by service category, and negative values are recorded in the data set. This procedure causes problems with estimates, because the timing of expenditures and reimbursements across interviews is not perfect. We address this by bottom-coding the level of expenditure for any category at zero, which raises aggregate health spending by a few percentage points each year.

Footnotes to the appendix

[1] Daniel Walden, Richard Miller, and Steven Cohen, "Comparison of Out-of-Pocket Expenditure Estimates from the 1987 National Medical Expenditure Survey and the Consumer Expenditure Survey." Paper presented (San Diego, CA , Allied Social Science Association annual meeting, 1993).

[2] Amy Taylor and Jessica Banthin, "Changes in Out-of-Pocket Expenditures for Personal Health Services: 1977 and 1987." AHCPR Pub. No. 94–0065 National Medical Expenditure Survey Research Findings 21 (Rockville, MD, Agency for Health Care Policy and Research, Public Health Service).

[3] Barry Bosworth, Gary Burtless, and John Sabelhaus, "The Decline in Saving: Some Microeconomic Evidence," Brookings Papers on Economic Activity, January 1991.

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