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ABSTRACT

This paper notes that, although most private health insurance is obtained through the workplace, important gaps remain in the present system of employment-related coverage. National survey data are presented which revealed that more than 9 million persons with employment experience were uninsured, who, with their uninsured dependents, accounted for three-quarters of all persons who lacked coverage. This report examines the circumstances and characteristics of the employed uninsured, including their opportunity to secure health insurance fringe benefits, their medical care use and expenditures, and the benefits available in private insurance that is not work related. Findings are presented showing that, although workers who are young and poor are the most likely to be uninsured, almost one-half of the employed uninsured are over 30 years old and one-half reside in middle- or high-income households. It is also noted that few of the employed uninsured are offered health insurance at the workplace, and they do not receive higher wages in place of health insurance fringe benefits. Alternative public policy responses to the problem of lack of health insurance coverage are also considered, including: (1) mandated employment-related coverage; (2) mandated state insurance pools; and (3) general tax credits for health insurance. (Author/NB)

NCHSR National Health Care Expenditures Study

The Employed Uninsured and the Role of Public Policy

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The Employed Uninsured and the Role of Public Policy

Although most private health insurance is obtained through the workplace, important gaps remain in the present system of employment-related coverage. National survey data reveal that more than 9 million persons with employment experience are uninsured, who, with their uninsured dependents, account for three-quarters of all persons who lack coverage. This paper examines the circumstances and characteristics of the employed uninsured, including their opportunity to secure health insurance fringe benefits, their medical care use and expenditures, and the benefits available in private insurance that is not work related. Alternative public policy responses to the problem of lack of health insurance coverage are also considered.

Because the workplace is the source of 85% of all private health insurance coverage, it is usually assumed that employed persons are insured through their employers.[1] This assumption has subtly misdirected policy discussions about the uninsured in two ways. First, it has been incorrectly inferred that most unemployed persons have lost health insurance coverage. This contention was not supported by recent research that indicated that most of the unemployed either did not have health insurance to lose in the first place or had the opportunity to retain coverage from a previous job or through the job of a spouse.[2] Second, the presumption that employment leads to health insurance coverage has shifted attention away from the largest component of those without health insurance coverage, the 75% of persons uninsured throughout the year who are workers or their dependents. An appropriate policy response to the general problem of gaps in health insurance coverage must therefore consider the circumstances that cause employed persons to remain uninsured for significant periods of time.

In this paper we seek to redirect the policy debate on the uninsured by examining these circumstances and calling attention to the following points:

- ☐ The employed uninsured and their dependents represent the largest component of those without health insurance coverage.
- ☐ Workers who are young and poor are the most likely to be uninsured, but almost half of the employed uninsured are more than 30 years of age and half reside in middle- or high-income households.
- ☐ Few of the employed uninsured are offered health insurance at the workplace, and they do not receive higher wages in place of health insurance fringe benefits.

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Table 1. Employment status of persons uninsured all year, 1977 and 1980

Uninsured persons	1977		1980	
	n (1,000s)	% of uninsured	*n* (1,000s)	% of uninsured
Total uninsured persons	17,175	100.0	16,942	100.0
Employed all or part of year (16–64 years of age)	9,198	53.6	9,424	55.6
Full-time	6,429	37.4	6,563	38.7
Part-time	2,769	16.1	2,861	16.9
Persons not working (16–64 years of age)	3,162	18.4	2,582	15.2
Persons <16 years of age	4,561	26.6	4,436	26.2
Other uninsured persons[a]	252	1.4	500	3.0

Source: NMCES Health Insurance Employer and Household Surveys (1977); NMCUES Household Survey (1980).
[a] Includes persons 65 years of age or older and persons with unknown employment status.

- Benefits and out-of-pocket premiums comparable to the value of employment-related insurance are not available to the employed uninsured outside the workplace.
- Lack of health insurance has consequences for the health care of the employed uninsured, who use fewer health services than insured workers even after controlling for health status.

These findings are based on analyses of the 1977 National Medical Care Expenditure Survey (NMCES) and the 1980 National Medical Care Utilization and Expenditure Survey (NMCUES).[3] The NMCES serves as the primary analytic data base because it provides information on a person's employment status, insurance status, and use of health services throughout the year, and is the only data set that describes the premiums and benefit provisions of insurance held by respondents. The latter information is contained in the Health Insurance Employer Survey (HIES) component of NMCES, which also describes the availability of coverage at the workplace.[4] The 1980 NMCUES is used to compare and validate NMCES tabulations of the number of employed uninsured persons, their uninsured dependents, and their representation among the uninsured population. Although NMCUES also contains some of the information available from NMCES, the sample is less than half the size of NMCES and does not contain detailed information on the availability and provisions of employment-related coverage.[5]

The employed uninsured have been defined as persons 16–64 years of age who are employed for all or part of the year but are uninsured throughout the year.[6] Because such persons are working, not eligible for Medicare, and chronically uninsured, they represent a key group for public policy consideration.

The Employed Uninsured and the Gap in Health Insurance Coverage

The employed uninsured represent more than half of all persons uninsured throughout the year. Together with their uninsured dependents, they account for more than three-quarters of the uninsured population. These findings are presented in Table 1, which describes the employment status of uninsured persons, and in Table 2, which presents data on the uninsured dependents of the employed uninsured.

As Table 1 indicates, the largest component of the 17.2 million persons without health care coverage throughout 1977 consists of workers 16–64 years of age (53.6%, or 9.2 million individuals). Full-time workers (defined as working 35 hours or more per week) represent a third of all the uninsured and 70% of the employed uninsured, and part-time workers account for 16% of all uninsured persons and 30% of the employed uninsured. More recent data from the 1980 NMCUES reveal a striking stability in the proportion of the uninsured represented by employed workers three years later.

Persons 16–64 years of age who are not employed, in contrast, comprise the smallest proportion of the uninsured population, accounting for 18.4% of the uninsured in 1977 and

Table 2. Uninsured workers and uninsured dependents

Uninsured persons	1977		1980	
	n (1,000s)	% of uninsured	*n* (1,000s)	% of uninsured
1) Total uninsured persons	17,175	100.0	16,942	100.0
2) Uninsured workers having uninsured dependents	2,832	16.5	2,355	13.9
3) Uninsured dependents of uninsured workers	5,504	32.0	5,220	30.8
a) Employed spouses	1,179	6.9	1,154	6.9
b) Employed children 16–18 years of age	392	3.3	299	1.8
c) Spouses not working	748	4.4	643	3.8
d) Children under 19 not working	3,185	18.5	3,124	18.4
4) Uninsured workers, no uninsured dependents	4,794	27.9	5,617	33.2
5) All other uninsured persons	4,045	23.6	3,751	22.1
Totals				
6) All employed uninsured persons (2 + 3a + 3b + 4)	9,198	53.5	9,425	55.6
7) Employed uninsured persons having dependents and their dependents (2 + 3)	8,336	48.5	7,575	44.7
8) All employed uninsured persons and dependents (2 + 3 + 4)	13,130	76.4	13,192	77.9
9) Uninsured dependents per employed uninsured person with dependents (3 ÷ 2)	1.94		2.34	

Source: NMCES Health Insurance Employer and Household Surveys (1977); NMCUES Household Survey (1980).

15.2% in 1980. This group consists of the dependents of the employed uninsured, other uninsured household members, and uninsured persons residing in their own households. Their relatively small representation among the uninsured suggests that many persons who do not work secure health insurance as dependents of insured workers or through public programs such as Medicaid. Table 1 also reveals that children less than 16 years of age represented more than a quarter of all uninsured persons in both 1977 and 1980.

Although the employed uninsured represent a minority of all employed persons under 65 (8.7% in 1977 and 8.2% in 1980, or just over 9 million persons), their numbers far exceed estimates of the number of unemployed workers who lost health insurance coverage in early 1982 and 1983.[7] Government intervention on behalf of unemployed workers became the subject of an intense public policy debate during this time, with proponents of such intervention arguing that it was unfair to allow unemployed workers to lose coverage because of economic fluctuations largely beyond their control, especially in an uncertain period of financial hardship.

Similar appeals can be made for public policy intervention on behalf of the employed uninsured. Most work for firms that fail to offer health insurance fringe benefits as part of their compensation, which excludes them, like the unemployed, from the benefits afforded most workers. They, too, face higher prices for private health insurance than do workers with employment-related group coverage, since they forgo the tax advantages and economies associated with group coverage. Like unemployed workers without health insurance coverage, they also face difficulties securing health care. The argument for public policy consideration becomes even more compelling when dependents of the employed uninsured are included in measurements of the size of the uninsured population.

Table 2 assesses how the dependents of the employed uninsured contribute to the size of the uninsured population. As the table demonstrates, these secondary effects are not inconsequential. In 1977, there were 2.8 million employed uninsured persons with uninsured dependents; this number declined slightly to 2.4 million in 1980. These workers had more than 5 million uninsured dependents in both years, accounting for more than 30% of all uninsured persons. Together, they and their uninsured dependents comprise almost half of all persons lacking health insurance coverage (48.5% in 1977 and 44.7% in 1980). When all employed uninsured persons (those with and without uninsured dependents) and uninsured dependents are combined, they account for

some 13 million persons, or more than three-quarters of the uninsured population in 1977 and 1980. This total consists of more than 9 million employed persons and about 4 million nonworking dependents each year. If family coverage were available to and taken by such workers, three-quarters of the gap in health insurance coverage could be eliminated. Also, Table 2 suggests that when an employed person with dependents lacks health insurance, at least two other persons are uninsured throughout the year.

What Kinds of Workers Are Most Likely to Lack Health Insurance Coverage?

The workers who are most likely to lack health insurance tend to be young, in relatively poor economic circumstances, and less educated. Workers in industries characterized by seasonal or transitory employment and in occupations requiring less technical skill are also more likely to be uninsured. The employed uninsured, however, are a diverse group consisting of many prime-age workers and workers in favorable economic circumstances.

The figures in Table 3 describe the percentage of employed workers of selected demographic and economic characteristics falling into one of four mutually exclusive insurance classes: private insurance only, all year; private insurance only, part of the year; public insurance, all or part of the year; and uninsured throughout the year. Overall, the 9.2 million employed uninsured in 1977 represented 8.7% of all persons with employment experience that year.

Young workers 19 to 24 years of age are the most likely to be uninsured, and the proportion of workers without insurance declines as age increases.[8] Young workers tend to be in relatively good health, expect to incur low medical care expenditures, and are less likely to have dependents who require medical care. Many no longer qualify as dependents under the health insurance of their parents and may have to pay for their own insurance out of relatively low earnings. They also may not be offered employment-related coverage because of their limited work experience or transitory employment status.

The employed uninsured population also includes a significant proportion of older prime-age workers whose lack of coverage is likely to affect the insurance status of their dependents. For example, almost half (47%) of the employed uninsured are workers over 30 years of age, half are married, and 60% are full-time wage earners.[9] The limited employment experience and employment opportunities that may explain why young workers are uninsured cannot explain why many older workers are uninsured for significant periods of time.

Female workers are no more likely to be uninsured than males. However, nonwhite workers are more likely to lack health insurance than are whites (12.9% compared with 8.1%). Health insurance is also associated with educational attainment, with 12.6% of workers having less than 12 years of schooling uninsured compared with only 3.1% of workers with 16 or more years. Unmarried workers are about twice as likely to lack health insurance as are married workers, reflecting the fact that married workers can obtain insurance as the dependent of a working spouse. Table 3 also reveals that workers in poor health are less likely to obtain health insurance. Of workers reporting poor health, 17% are uninsured compared with only 7.0% of workers reporting excellent health and 9.3% in good health. Finally, workers in the South and West are twice as likely to lack health insurance as are workers in the Northeast or North Central states (11.7% and 12.6% of the former compared with 5.5% and 5.4% of the latter). These differences may reflect the greater degree of industrialization and unionization in the latter regions.

With regard to employment characteristics, Table 3 discloses that self-employed persons are far more likely to lack coverage than are wage earners (15% compared with 8%). There are also disparities in health insurance coverage by industry and occupation. Workers in industries characterized by seasonal employment, self-employment, or a less technically skilled work force, such as agriculture, construction, sales, repair and personal services, and entertainment and recreation, are twice as likely to be uninsured as are workers in such sectors as manufacturing, transportation, communications, and utilities, which offer year-round employment to a specialized and more unionized labor force. Similarly, where the technical and educational requirements of an

Table 3. Employment and health insurance coverage: Percentage of employed persons by health insurance status according to selected characteristics

Characteristics	Total employed (1,000s)	% of employed persons			
		Private insurance all year	Private insurance part of year	Public insurance all or part of year	Uninsured all year
Employed all or part of year[a]	106,184	83.7	3.3	4.3	8.7
Age (years)					
16–18	8,395	81.0	1.9	8.1	9.0
19–24	19,534	74.4	6.9	5.7	13.0
25–30	17,711	82.0	4.4	5.2	8.5
31–40	22,018	85.5	2.6	4.3	7.6
41–54	25,176	89.0	1.6	2.3	7.1
55–64	13,350	88.8	1.9	2.4	7.0
Sex					
Male	57,922	84.3	3.2	3.0	9.4
Female	48,262	83.0	3.4	5.8	7.7
Color					
White	93,813	85.2	3.3	3.3	8.1
Nonwhite	12,371	72.4	3.1	11.6	12.9
Education (years)					
<12	29,830	75.9	3.3	8.2	12.6
12	38,160	86.4	3.3	2.8	7.4
13–15	16,110	86.3	3.5	2.2	8.0
16+	15,112	92.6	3.2	1.1	3.1
Marital status					
Never married	25,964	77.3	4.7	6.0	12.0
Married	66,348	88.6	2.6	2.2	6.5
Widowed	23,211	79.7	4.0	4.0	12.3
Separated	2,774	64.2	4.7	17.1	14.1
Divorced	5,782	69.1	4.8	12.1	14.0
Perceived health status					
Excellent	50,787	86.6	3.6	2.8	7.0
Good	41,723	83.2	2.8	4.7	9.3
Fair	9,491	77.3	3.9	8.3	10.5
Poor	1,637	66.1	1.8	14.7	17.4
Region					
Northeast	21,985	89.8	1.5	3.4	5.5
North Central	31,666	87.2	3.6	3.9	5.4
South	32,808	80.5	3.5	4.3	11.7
West	19,724	76.9	4.6	5.9	12.6
Employment status					
Wage earner	91,319	84.3	3.4	4.3	8.0
Full-time	72,125	85.9	3.6	3.5	7.0
Part-time	19,194	78.1	2.8	7.3	11.8
Self-employed	7,570	80.5	2.4	2.0	15.0
Full-time	5,827	81.3	2.4	1.4	15.0
Part-time	1,743	77.3	2.4	5.0	15.4
Farm worker/unknown	2,103	80.1	2.3	3.1	14.4
Industry					
Agriculture, forestry, fishing	2,662	71.2	3.6	3.5	21.7
Construction	4,980	72.7	4.2	4.9	18.2
Manufacturing	16,100	88.6	3.0	3.7	4.8
Transportation, communication, utilities	6,166	92.4	1.9	1.3	4.4
Sales	18,898	80.7	3.4	5.1	10.8
Finance and insurance	5,185	87.8	3.9	3.3	5.0
Repair services	4,922	78.7	3.8	4.3	13.2
Personal services	3,262	67.8	4.2	12.0	16.0
Entertainment and recreation	1,374	71.2	5.1	5.6	18.1

Table 3. Continued

Characteristics	Total employed (1,000s)	% of employed persons: Private insurance all year	Private insurance part of year	Public insurance all or part of year	Uninsured all year
Professional services	12,338	87.6	3.0	3.2	6.3
Public administration	2,628	87.7	1.5	1.1	9.7
Occupation					
Professional and technical	15,673	91.0	2.7	1.8	4.6
Managerial and administrative	8,031	89.9	4.6	1.0	4.5
Sales	6,176	86.4	3.7	2.2	7.7
Clerical	14,869	88.1	2.6	3.5	5.8
Craftsmen and foremen	10,366	83.9	3.3	3.3	9.5
Operatives	10,842	84.2	4.0	5.8	6.1
Transportation operatives	3,816	84.0	2.1	3.0	10.9
Service workers	15,859	74.7	4.0	8.8	12.5
Laborers (nonfarm)	4,812	73.1	3.4	5.6	17.9
Farmers (owners, managers)	1,379	85.2	1.5	1.2	12.1
Farm laborers and foremen	958	69.4	2.7	7.1	20.8
Family income					
Poor/near poor	9,244	50.8	4.4	21.6	23.3
Low income	12,317	67.8	6.0	8.7	17.5
Middle income	41,282	85.8	3.8	2.4	8.0
High income	43,400	93.3	1.9	1.1	3.7
Hourly wage rate					
≤$2.50	10,816	67.9	3.7	11.0	17.4
$2.51–$5.00	42,890	79.3	4.0	5.2	11.4
$5.01–$7.50	19,346	91.8	2.9	1.1	4.2
$7.51–$10.00	9,058	93.8	1.4	1.7	3.1
$10.01+	5,640	92.6	2.2	1.9	3.3
Income/earnings		Mean value[b]			
Household income (all sources)		$23,994 ($376)	$18,271 ($1,267)	$11,398 ($844)	$14,883 ($753)
Hourly wage rate		$5.56 (7¢)	$4.40 (15¢)	$3.63 (20¢)	$3.87 (15¢)
Marginal tax rate of tax filing unit (includes federal, state, and Social Security taxes)		29.8% (.24%)	25.6% (.74%)	13.0% (.69%)	20.6% (.63%)

Source: NMCES Health Insurance Employer and Household Surveys (1977).
[a] Includes all other ethnic/racial groups not shown separately, persons with unknown education, marital status, health status, hours of work, earnings, wages, and industry or occupation.
[b] Standard errors are in parentheses.

occupation are less or its seasonal or transitory nature is greater, the likelihood that a worker will lack coverage is greater. Thus, professional, technical, and managerial workers are less likely to lack insurance, whereas service workers, laborers, craftsmen, and agricultural employees are among those most likely to be uninsured.

Table 3 also reveals that low income and wages are associated with lack of coverage. Almost a quarter of workers residing in poor or near-poor households and 17.5% in low-income households are uninsured all year, compared with only 8% of workers in middle-income households and 3.7% in high-income families. Of workers who received hourly wages of $2.50 or less in 1977, 17% were uninsured, as were 11% who earned between $2.50 and $5.00. Less than 5% of workers who earned more than $5.00 per hour were uninsured. On average, uninsured workers had household incomes of $14,883, nearly 40% below those of workers who were privately insured all year, and hourly wages of $3.87, 30% below those of insured workers.

The government implicitly subsidizes the health insurance benefits of most workers through the tax system. If the employed uninsured were to receive health insurance through the workplace, they would benefit less

Table 4. Availability of health insurance at the workplace according to health insurance status

Health insurance status	Number (1,000s)	Availability of health insurance (%)			
			Employer with plan		
		Employer not offering plan	Employee ineligible	Eligible and not taken	Eligible and taken
Total employed all or part of year	106,184	27.1	5.9	3.9	63.1
Private insurance all year	88,926	22.5	3.7	2.8	71.0
Private insurance part of year	3,515	18.4	5.0	3.9	72.8
Public insurance all or part of year	4,545	44.0	16.4	11.7	27.9
Uninsured all year	9,198	66.9	22.0	11.1	0.0

Source: NMCES Health Insurance Employer and Household Surveys (1977).

from this policy than the average worker because of their lower wages. The tax advantages associated with employment-related insurance arise because employer contributions to health insurance fringe benefits are not treated as taxable income. Because workers who receive such benefits have higher incomes and face higher marginal tax rates than uninsured workers, they receive a greater tax break than uninsured workers would receive from the same employment benefit. The average tax reduction for workers with private insurance all year was about 30¢ for every dollar of health insurance fringe benefits, whereas the employed uninsured would have received a reduction of about 20¢ had they been covered (Table 3, last line). Consequently, low-income workers both lack the resources to purchase insurance and face weaker tax incentives to obtain it through the workplace.

Although poor and near-poor workers are most likely to be uninsured, it is important to note that the employed uninsured population includes some workers in relatively favorable economic circumstances. For example, more than half of all employed uninsured persons are in middle- and high-income households (twice the poverty level or above) and about 14% have earnings in excess of $10,000 (in 1977 dollars). Consequently, a policy directed at the employed insured that failed to recognize differences in economic circumstances might subsidize workers capable of financing their own health care coverage.

Uninsured Workers and the Availability of Health Insurance at the Workplace

An important prerequisite for assessing the fairness of the current system of employment-related coverage is to determine whether insured and uninsured workers have the same opportunity to purchase comparable health insurance at the workplace. If employment-related insurance is available but uninsured workers decline to purchase it, the argument for public policy intervention may be less compelling. The NMCES data in Table 4, which examines the relationship between insurance status and the availability of employment-related coverage, clearly demonstrate that this rarely happens. The NMCES data, of course, cannot disclose whether the employed uninsured could have obtained coverage through an alternative choice of employment or under what conditions.

The most striking finding in Table 4 is the contrast in the availability of employment-related health insurance to insured and uninsured workers.[10] Of workers with private insurance, more than 70% obtained coverage at their workplace, whereas only a fifth were not offered insurance by their employers.[11] However, the overwhelming majority of uninsured workers—some 89%—were unable to obtain insurance through their employers. Two-thirds of uninsured workers were employed at firms that did not offer coverage and 22% were ineligible for the health insurance fringe benefits that were offered. Only 11% of uninsured workers declined to select health insurance benefits made available by their employers. Note that 60% of workers covered by public insurance for all or part of 1977 did not have employment-related coverage as an alternative; of these, 44% were employees with public insurance who were working for firms with no insurance plan and 16% were ineligible for any coverage offered. Only 12% of workers with public insurance failed to elect employment-related coverage that was available, suggesting

that public insurance was a relatively small factor in decisions to forgo private coverage.

To determine what types of workers or firms are systematically associated with the lack of health insurance benefits, we used two logit equations to examine the likelihood, first, that a worker is employed by a firm that offers health insurance and, second, that a worker will be eligible for such benefits.[12] Our empirical results (available on request) indicate that low-wage workers, those employed in small firms (fewer than 50 employees) or who are self-employed, or those who work part-time or in industries characterized by seasonal or transitory employment (such as agriculture, construction, sales, personal services, and entertainment and recreation) are less likely to work for firms that provide health insurance benefits. These results are consistent with findings presented elsewhere.[13] Workers with less labor market experience, who receive low hourly wages, are employed part-time, and are employed in agricultural and construction sectors are less likely to be eligible for their firm's health insurance benefits. These findings suggest that employers are less willing or able to incur the costs of extending such benefits to marginal workers with limited bargaining power (given the ready availability of substitute labor) and with a relatively high rate of turnover.

Do Wage Increases Compensate Workers Not Offered Employment-Related Coverage?

Another issue related to the availability of health insurance fringe benefits at the workplace is whether workers who fail to receive such benefits are compensated by higher wages instead. This possibility is suggested by the theory of competitive labor markets. In such markets employees receive the full monetary value of their productivity and employers are indifferent between providing the same total compensation in wages alone or through a combination of wages and fringe benefits. Workers can then substitute wages for fringe benefits by selecting employers who offer the compensation package they prefer. Among workers with the same productivity in the same labor market, those preferring wages to fringe benefits will receive higher money wages to equalize the value of the compensation package that combines wages and fringe benefits. The available empirical research on this issue provides mixed empirical support for this theory.[14] Furthermore, even if the theory is correct, similar workers need not receive compensating wage differentials to make up for differences in fringe benefits if they are in different markets and face a different demand for their services.

Because the argument for policy intervention may be less compelling if workers not offered insurance are compensated by higher wages, we empirically examined the relationship between hourly wages and the availability of employment-related coverage, holding productivity constant. We used a reduced-form regression equation with the natural logarithm of hourly wages as the dependent variable.[15] The explanatory variables included factors reflecting productivity differences among workers (education, labor market experience) sex and color (to reflect disparities related to possible labor market discrimination), census division and urban/rural locale (to reflect labor market and cost-of-living differences), and industrial sector (to capture variation in unionization, seasonality of employment, and productivity related to differences in capital stock). We included a dichotomous variable to indicate that an employee was not offered insurance (individuals offered insurance were the reference group). A positive relationship between this variable and hourly wages would support the equalizing-wage-differences hypothesis (i.e., workers not offered health insurance, with productivity and other differences held constant, receive higher wages instead). We restricted the sample to full-time workers and estimated separate equations by occupation.

The regression results (available on request) uniformly failed to support the hypothesis that workers excluded from health insurance benefits receive compensating wage increases. With the exception of professional and technical workers, workers not offered insurance have lower wages than workers receiving such benefits. Although professional and technical workers not offered insurance receive higher wages, this relationship is small and not statistically significant. Instead of supporting the

Table 5. Premiums and benefits of privately insured workers by type of insurance

	Employment-related insurance	Not employment-related insurance
No. of insured workers (1,000s)	83,390	8,990
Premiums[a]		
Mean dollars	$409	$247
% paid by employer	73.3	—
% paid by employee	23.8	96.4
% paid by other	2.9	3.6
	% with benefit	
Type of coverage		
Any HMO	4.5	1.9
Basic only	9.1	51.7
Major medical only	15.2	13.0
Basic and major medical	70.6	29.8
Other/unknown	0.5	3.6
Breadth of coverage		
Dental care	27.9	1.5
Vision care	8.7	2.7
Outpatient prescriptions	87.8	36.0
Physician office visits	88.5	43.5
Routine physical exam	6.1	3.0
Outpatient psychiatric care	77.4	24.5
Hospital room and board		
No deductible, semiprivate[b]	72.2	34.9
Deductible, semiprivate	5.7	5.9
Less than semiprivate	21.0	55.2
No coverage	1.1	4.0
Major medical out-of-pocket limit[c]		
$750 or less	33.7	11.4
$751 or more	20.2	10.7
Unlimited	33.7	20.8
No major medical	12.5	57.1

Source: NMCES Health Insurance Employer and Household Surveys (1977).
[a] Premium per insured family member.
[b] Full semiprivate or daily benefit of $90 or more.
[c] Refers to the limit applicable to most services under a policy.

equalizing-wage-differences hypothesis, the findings suggest that workers who receive health insurance benefits may be getting a total compensation package that is superior to that of workers not offered such fringe benefits.

Is Private Health Insurance Comparable to Employment-Related Coverage Available Outside the Workplace?

Workers who are not offered employment-related coverage may, as an alternative, purchase other private health insurance for themselves and their dependents directly from an insurance company. Such plans, however, are imperfect substitutes for those available at the workplace because they do not offer the administrative economies of group insurance and typically offer far less generous benefits. In fact, benefits comparable to those found in employment-related coverage are rare, as shown in Table 5, which describes the differences in premiums and benefits.

Premiums for employment-related insurance were, on average, $409 per year per insured family member in 1977, compared with $247 for coverage that was not employment related. This difference reflects the broader coverage obtained through the workplace. Despite higher total premiums, workers with employment-related coverage pay less than a quarter of total premium costs, or some $97 out of pocket, with their employers paying almost three-quarters. In contrast, workers who obtain health insurance outside the firm pay almost two and one-half times as much out of pocket, or some $238. Employees covered by employment-related plans also receive the implicit tax subsidy on premiums paid by employers, equal to $96 per insured family member. The inability of workers to obtain similar coverage through the workplace means that they forgo a tax subsidy of some $77 per insured family member.[16] As noted earlier, this figure is lower because of the lower incomes and tax rates of workers not offered an employer plan.

The most pronounced difference in benefits between employment-related and other private coverage is the extent of supplementary major medical coverage. About 71% of workers with employment-related insurance have both basic and major medical coverage, compared with only 30% of workers without employment-related plans. The majority of the latter (52%) have only basic benefits. More than half of all workers with employment-related coverage have limits on their out-of-pocket expenditures under a major medical plan. These expenditures are limited for only 22% of workers with major medical coverage obtained through private insurance. The lack of major medical coverage also means less coverage for services typically insured in major medical plans. For example, employment-related plans

are far more likely to insure physician office visits and outpatient psychiatric care. Employment-related insurance also covers routine exams and dental care more frequently, and hospital benefits are far more generous than those available in private plans. More than 70% of workers covered by employment-related plans face no deductible for hospital care and are fully covered for a semiprivate room or have daily benefits of $90 or more. In contrast, only 35% of workers with other private coverage have such benefits. Half of such workers are covered for less than the semiprivate room rate.

In sum, the fact that most uninsured workers are not offered health insurance through the workplace means that they are at a disadvantage in the purchase of private health insurance. Private health insurance plans that are not work related typically provide more restrictive benefits at significantly higher out-of-pocket costs. Employment-related plans offer the economies of group purchase, rating of premiums on a group rather than an individual basis, and tax subsidies that effectively lower the price of insurance.

Do the Employed Uninsured Use Fewer Health Services?

The data in Table 6 demonstrate the repercussions on workers who lack health insurance. As a group they use fewer health services than insured workers. Almost 77% of the insured reported at least one physician visit during the year compared with 62% of the uninsured.[17] Among those with physician visits, the insured averaged about five visits compared with about four visits for the uninsured. There were also large differences between insured and uninsured workers in the use of hospital services and the use of prescription drugs. Of the insured, 61% used prescription drugs compared with 49% of the uninsured. More than 11% of the insured were hospitalized as opposed to less than 5% of the uninsured.

There are also large differences between insured and uninsured workers with similar health status. The differences are large among those workers experiencing poor health. Of those with fair or poor perceived health status, the insured have about two more physician visits per year than the uninsured, compared with a difference of only .7 visits between the insured and uninsured who consider themselves in good health. The same pattern emerges when disability days are used to control for health status. Similar utilization patterns are also found for prescription drugs. Among workers in fair or poor health, only 65% of the employed uninsured used prescription drugs compared with 81% of the insured. Insured workers in fair or poor health who used prescription drugs also had a higher mean number of prescriptions. Insured workers in good or excellent health were also more likely to use prescription drugs than were uninsured workers of the same perceived health status.

Perhaps the most striking findings are those pertaining to hospitalization. Hospitalization is generally considered less discretionary than other health services, so we did not expect lack of insurance to have the same effect on hospital use as for other care. Nonetheless, employed uninsured individuals are only half as likely as insured workers to be hospitalized, a pattern that holds when either perceived health status or disability days are used to control for health status. The differences are most pronounced among those in poor or fair health, with only 6.7% of the uninsured hospitalized during the survey year compared with 20.4% of the insured, a threefold difference.

Given these differences, the insured have substantially higher medical expenses overall ($510) than do the uninsured ($367). Yet the uninsured pay about $40 more out of pocket than the insured. This varies according to health status, with no difference in out-of-pocket expenditures between the insured and uninsured with less than eight bed days but a very large difference for eight or more days of hospitalization. The sick uninsured paid $638 out of pocket in 1977, whereas those with insurance paid only $376.

These data strongly suggest that the employed uninsured use fewer health services than insured workers even when they encounter serious health problems. Such utilization data cannot be used to determine whether the higher levels of use among insured workers are more appropriate, but disparities of this magnitude seem to warrant concern if equitable access to health care is an important social goal.[18]

Table 6. Use and expenditures for health services by employed persons according to insurance and health status

Health insurance and health status	*n* (1,000s)	% with physician visit	Mean no. of visits for those with at least one	% with prescription drugs	Mean no. of prescriptions for those with at least one	% hospitalized	Mean expenditures for those with services ($)	Out-of-pocket expenditures for those with services ($)
Employed uninsured	9,198	62.0	4.1	48.9	5.3	4.7	367.16	216.71
Employed insured[a]	88,926	76.9	5.0	61.3	6.2	11.2	509.88	179.54
Perceived health status[b]								
Fair or poor (total)	9,698	84.8	7.5	79.0	11.4	18.6	908.77	264.33
Employed uninsured	1,282	69.5	5.7	64.9	7.7	6.7	610.74	372.88
Employed insured	8,417	87.2	7.7	81.1	11.8	20.4	924.89	257.59
Good or excellent (total)	86,139	74.5	4.6	57.9	5.3	9.7	454.39	168.87
Employed uninsured	7,436	60.6	3.9	45.5	4.9	4.3	319.24	195.43
Employed insured	78,703	75.9	4.7	59.1	5.3	10.2	458.90	170.49
Disability days								
≥8 days (total)	11,900	96.2	8.9	88.4	9.4	32.0	1,899.22	381.37
Employed uninsured	1,031	88.5	7.1	77.8	9.8	28.0	1,357.27	638.25
Employed insured	10,869	96.9	9.1	89.4	9.3	52.2	1,932.35	375.62
<8 days (total)	86,186	72.7	4.2	56.2	5.4	5.2	281.25	145.59
Employed uninsured	8,152	58.6	3.5	45.2	4.3	1.8	203.62	147.49
Employed insured	78,034	74.1	4.3	57.3	5.5	5.5	286.81	147.96

Source: NMCES Health Insurance Employer and Household Surveys (1977).
[a] Privately insured all year.
[b] Totals may not sum because of missing values.

Policy Implications

Our empirical analyses demonstrate that the employed uninsured and their dependents constitute some three-quarters of the 17 million persons uninsured throughout either 1977 or 1980. Analyses of NMCES data also reveal that workers most likely to lack coverage earn low wages, are less educated, and have household incomes significantly below those of insured workers. Workers in industries and occupations characterized by seasonal employment and less technical or administrative skill are also more likely to be uninsured, as are young workers, part-time employees, and the self-employed. Nevertheless, the employed uninsured also include many typical mainstream workers with dependents. Almost half are between 30 and 64 years of age, half are married, 60% are full-time wage earners, and more than half reside in middle- or high-income households.

Lack of insurance for employed persons does not simply reflect decisions made by young workers who are relatively healthy and without insurable dependents to forgo purchasing insurance. It probably reflects a number of other influences as well, including poor economic circumstances, relatively weak bargaining power (little or no union representation, readily available labor substitutes for low-skill workers), and an unwillingness of employers to insure seasonal or marginal workers. In contrast to insured workers, the majority of uninsured workers do not have the opportunity to purchase employment-related coverage. Instead, their only choice is generally to pay higher out-of-pocket premiums for less generous benefits than are commonly available through health insurance obtained in the workplace. Many uninsured workers can ill afford such coverage.

These observations have important implications for a public policy that seeks to expand health insurance coverage in order to improve access to health care and implement a more coherent system for financing the uncompensated care of those presently uninsured. Because the employed uninsured and their dependents represent the largest component of the gap in health insurance coverage, policy initiatives on their behalf could significantly reduce the size of the uninsured population. Any such policy intervention, however, must recognize the diversity of the employed uninsured. At the same time, it must not impose costs on employers that would jeopardize the employment of many marginal workers. It should also not penalize part-time or seasonal workers.

Public policy initiatives must also confront a political environment characterized by fiscal austerity and a keen interest in constraining outlays for health care. Concern over the federal budget deficit, the desire to shift more responsibility and discretion for health care financing to state governments, and the need to guarantee the solvency of the Medicare Trust Fund are among the factors likely to preclude proposals for a new federal entitlement program for health insurance coverage.[19] Substantial changes in the eligibility standards of existing public health insurance programs are also unlikely. As interest in tax reform and tax simplification mounts and as attempts are made to expand the federal revenue base by reducing tax expenditures on health insurance, tax incentives to promote the purchase of private health insurance become less realistic.

Nevertheless, although the focus of health care policy since the 1960s and 1970s has shifted from one of broad concern over access to care to interest in cost containment and procompetitive reform of the health care sector, a number of issues still demand that attention be paid to the uninsured.[20] These issues, where the public has clearly expressed its concern, include uncompensated hospital care, transfers of uninsured patients from private to public hospitals, and the loss of health insurance associated with unemployment. Moreover, even as the Medicaid program has been cut back, the poverty rate remains at a high level (14.4% in 1984, the third highest level since 1966) and certain sectors of the U.S. economy continue to experience depressed levels of income and employment.

The spectrum of available policy options ranges from nonintervention to broad-based national health insurance initiatives that would include all uninsured persons. The latter approach, prohibitively costly to implement, has long been debated, with no sign of consensus. Some intermediate approaches, such as ex-

panding Medicaid eligibility to all uninsured poor or providing federal grants to state or local governments to insure their indigent populations, target the poor and the unemployed.[21] However, they ignore low-income persons above the poverty line and the rest of the employed uninsured, who, along with their dependents, account for a large part of the uninsured population.

Policy options that are particularly relevant to the working population, and that need not add to the federal budget, have already been proposed. Three of them, along with the possibility of maintaining the status quo, are considered below. They are:

- ☐ requiring employers to make insurance available to all workers;
- ☐ encouraging the formation of state insurance pools to make coverage available to uninsured workers; and
- ☐ severing the tie between employment and health insurance benefits while using income tax incentives to promote health insurance purchases.

These strategies rely, respectively, on the fact that the employed uninsured do have employers to offer them coverage, they represent a population healthy enough to be insurable and have some income to pay at least part of the premium, and they earn income and file tax returns, making use of an altered tax system a feasible alternative.

Nonintervention by Policy Makers

One option is to retain the present system of employment-related coverage. In a competitive labor market with a wide choice between wages and fringe benefits for a given occupation, it can be asserted that some workers lack health insurance by preference. Our empirical evidence fails to support this assertion. Almost 90% of uninsured workers are not offered health insurance, and only about 1% of all workers who are offered insurance choose to be uninsured. Thus, it is difficult to infer that most workers are exercising their preferences. Moreover, there is no indication that uninsured workers receive higher wages in place of health insurance benefits. The low educational and wage levels of most uninsured workers suggest that they face limited labor market alternatives and have little bargaining power to negotiate compensation arrangements. Nonintervention, however, is likely to remain the short-run policy as concern grows over the federal budget deficit and health care cost containment.

Mandated Employment-Related Coverage

Mandated health insurance benefits have frequently been discussed in the context of national health insurance proposals. As defined by Mitchell and Phelps, such an approach would "require by law that all employers make available health insurance policies of specified benefits and characteristics to cover all employees and their dependents."[22] The mandated approach would legislate the elimination of existing gaps in employment-related coverage and would meet equity concerns by imposing minimum benefits.

Because a legislative mandate would impose additional labor costs on firms, however, it may be an ill-suited means of extending coverage to uninsured workers, especially for small employers, who are less likely than large employers to offer coverage. Phelps has suggested that the large fixed costs of acquiring and managing a health insurance plan make it too expensive to insure only a few employees.[23] Phelps also speculates that small firms experience higher labor turnover, resulting in additional administrative costs for enrollment. Because small firms are more likely to employ uninsured workers, they would disproportionately bear the costs of mandated coverage. If these and other firms that do not offer health insurance are marginally profitable, the added costs of mandated coverage could pose a threat to their long-run survival.

For firms to survive in a competitive environment, the cost of mandated coverage requires a compensating decline in wages to keep total labor costs equivalent to worker productivity. Because these wage adjustments would not be instantaneous, workers employed by firms that previously did not offer coverage might suffer some short-run unemployment. Even in the long run, wages cannot adjust downward for workers at or near the minimum wage. Thus, because the employed uninsured are concentrated among low-wage earners, mandated coverage might lead to a permanent

decline in employment for a significant portion of this group.[24] That is, a mandated approach could perversely affect the very group it intends to assist.

The mandating of employer-related coverage by states is currently precluded by the federal Employment Retirement Income and Security Act (ERISA) of 1974, which limits state regulation of employee benefits such as health insurance. To date only Hawaii, which obtained an exemption from ERISA in 1981, requires employers to provide health insurance of minimum standards to full-time employees in 1974 legislation. Minnesota, in 1976 legislation, required employers offering coverage to provide minimum benefits or lose state income tax deductions for health insurance premiums. The Minnesota law, however, was preempted by ERISA in a 1980 court decision.[25]

Mandated State Insurance Pools

States have the option of creating risk pools to make coverage available to the uninsured.[26] Because many of the uninsured are workers who lack insurance not because they are poor medical risks but mostly because group insurance is unavailable to them and other private insurance may be unaffordable, a state pool that can attract a large proportion of the employed uninsured could offer reasonable coverage at a reasonable price. A precedent for this kind of activity has been established in six states (Connecticut, Minnesota, Wisconsin, Indiana, North Dakota, and Florida) that make insurance available to high medical risks who are otherwise uninsurable. Connecticut's legislation also extends the risk pool to all state residents except those eligible for Medicare. In general, the states that sponsor such plans require all insurers doing business in the state to cooperatively offer coverage specified by the state and to share in any underwriting losses.

The attractiveness and feasibility of such a risk pool would depend on its ability to attract sufficient numbers of the employed uninsured with coverage that is less expensive or more comprehensive than existing alternatives, and to avoid or minimize underwriting losses. To date, most pools face difficulties in both areas, since all but Connecticut's are limited to high risks.[27] Connecticut's broad-based pool, consisting of the Health Reinsurance Association, comprising all private commercial carriers, and the Residual Pool organized by Blue Cross and Blue Shield of Connecticut, attracted only 8.4% of the state's uninsured population in 1981. The Health Reinsurance Association attracted high risks and operated at a loss, as the commercial insurers enrolled the more favorable risks in their own plans, and the Residual Pool appeared to enroll persons who sought individual policies but missed the annual Blue Cross and Blue Shield Plan open enrollment period. Connecticut's small enrollment consists largely of young people in transition and others seeking insurance protection between jobs. Its limited success may be the result of premiums that are too high for many of the uninsured (between 125% and 150% of the average group rate for individuals with similar characteristics).

Experience thus suggests that the affordability of state-sponsored insurance depends most importantly on the size of the pool and on attracting good risks so that experience-rated premiums can be created that are more attractive than those currently available from private insurers. A successful state pool must also balance considerations of premium costs and affordability with comprehensiveness of coverage. To keep premiums low may require high deductibles and coinsurance provisions, which may be necessary to encourage enrollment, especially by good risks. To keep premiums low in relation to benefits may require limited subsidies, which could be worthwhile if large numbers of the uninsured obtained coverage at mostly their own expense. In the final analysis, the formation of state pools might best be facilitated by extending the favorable tax treatment of employer-sponsored plans to those enrolled in other types of plans (including the state's), as discussed next.

General Tax Credits for Health Insurance: The Enthoven Approach

Enthoven suggests replacing the present exclusion of employer-paid premiums from each worker's taxable income with a refundable tax credit available to anyone who buys insurance.[28] The tax credit would be 40% of combined individual or employer payments up to a limit of $150 per month for family coverage

and $60 per month for individual coverage (in 1983 dollars). The tax credit would limit the tax reduction and thereby reduce incentives to purchase very comprehensive health insurance benefits that contribute to rising health care costs. The tax credit would also offer the same tax break to individuals in different tax brackets. In contrast, the current tax break is restricted to employer-paid premiums, is open-ended, and is proportional to the individual's marginal tax rate. Enthoven argues that his approach would encourage even low risks to purchase private insurance, lessening problems of adverse selection outside employer groups. The cost to the federal budget would be reduced by making employer premium contributions subject to income and payroll taxation.

The flexibility and broad base of the tax credit approach is appealing. Workers who are not offered employment-related coverage would face the same tax incentives as others who are offered coverage. Household members could pool their earnings to obtain more benefits. Furthermore, additional labor costs would not be imposed on firms that failed to offer health insurance fringe benefits (as in a mandated strategy). By cutting the tie to employer-paid benefits, a general tax credit would provide similar incentives for individuals in different circumstances—the self-employed, full-time and part-time workers, the unemployed—to secure coverage.

As Enthoven observes, the tax credit approach is not perfect. Persons unable to secure group coverage and those considered high risks (i.e., the elderly, those with preexisting medical conditions, and those in risky occupations) would still face higher premiums. The credit could be adjusted to reflect these differences, however, and insurance companies could be compensated for the added risks of covering such persons. The tax credit approach could also be integrated with state risk pooling efforts for the uninsured. It is also consistent with cost containment policies directed at the overly generous benefits of some workers while it provides a way to make health insurance affordable to others.

In sum, a mechanism to enable uninsured workers to secure health insurance would substantially reduce the number of persons chronically without coverage. Such a policy initiative is likely to require an innovative approach that departs significantly from the current system of employment-related coverage as a source of insurance. Given current concerns over uncompensated care, transfers of patients from private to public hospitals because of lack of insurance, and the loss of health insurance associated with unemployment, there is growing interest in the problems of equitable access to health care and affordable health insurance. Serious public policy efforts to address these problems will be incomplete unless they consider the circumstances of the employed uninsured.

Notes

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1 P. J. Farley and G. R. Wilensky, "Options, Incentives and Employment-Related Health Insurance," *Advances in Health Economics and Health Services Research* 4 (1983): 57–82.

2 A. C. Monheit, M. M. Hagan, M. L. Berk, and G. R. Wilensky, "Health Insurance for the Unemployed: Is Federal Legislation Needed?" *Health Affairs* 3 (Spring 1984): 101–111.

3 The 1977 National Medical Care Expenditure Survey (NMCES) was cosponsored by the National Center for Health Services Research and the National Center for Health Statistics. The 1980 National Medical Care Utilization and Expenditure Survey (NMCUES) was cosponsored by the National Center for Health Statistics and the Health Care Financing Administration. A description of each data base is available on request.

4 For a description of HIES, see S. B. Cohen and P. J. Farley, *Estimation and Sampling Procedures in the NMCES Insurance Surveys, Instruments and Procedures 3* (Rockville, MD: Department of Health and Human Services, National Center for Health Services Research, May 1984).

5 Although economic conditions and insurance coverage change over time, recent survey data yield estimates of the proportion of the population uninsured and the use of health services by the insured and uninsured that are similar to those of NMCES. However, they lack the same breadth of information available in

NMCES. Although the Current Population Survey (CPS) questions respondents about insurance status in the prior year, respondents appear to describe their status at the time they are interviewed. Estimates using the March 1980 CPS to gauge the number and proportion of the population uninsured resemble point estimates obtained in NMCES (28.6 million persons uninsured or 14.4% of the population using the CPS, compared with 26.2 million or 13.8% at the first NMCES interview). See K. Swartz, "How Different Are Four Surveys' Estimates of the Number of Americans Without Health Insurance?" unpublished manuscript (Washington, DC: Urban Institute, December 1984). Published data for the fourth quarter of 1983 from the Survey of Income and Program Participation (SIPP) indicate that an average of 15.2% of the population is uninsured during each month, compared with 11%–12% uninsured for a somewhat longer time period (roughly a quarter) in NMCES. See U.S. Bureau of the Census, *Current Population Reports, P-70-83-4, Economic Characteristics of Households in the United States: Fourth Quarter 1983* (Washington, DC: Government Printing Office, 1985), p. 5. Neither CPS nor SIPP contains any data on the use of health services. The 1982 National Access Survey, a survey of 3,014 adults between May 10 and September 27, 1982, sponsored by the Robert Wood Johnson Foundation, reports 8.7% of the population uninsured, the same as the all-year NMCES estimate. Utilization data are also similar, with 32.9% of the uninsured in the access survey having no physician visits and those with visits averaging 4.4 visits, compared with 38.0% and 4.1 visits for the NMCES employed uninsured. See "Update Report on Access to Health Care for the American People," Special Report 1 (Princeton, NJ: Robert Wood Johnson Foundation, 1983); and L. Aday, G. Fleming, and R. Andersen, *Access to Medical Care in the U.S.: Who Has It, Who Doesn't?* (Chicago: Pluribus Press, 1984).

6 The experience of persons uninsured for part of the year is more difficult to characterize, since the duration of lapses in coverage cannot be precisely measured in either NMCES or NMCUES. Such lapses may also be of a transitory nature, reflecting changes in employment and personal circumstances that, once resolved, lead to a continuation of coverage at a subsequent point during the year.

7 The number of unemployed persons losing health insurance coverage was estimated by Monheit et al. (note 2) to be 1.4 million in March 1982. The Congressional Budget Office (CBO) provided a more pessimistic estimate of 5 million persons in February 1983. CBO also estimated that these unemployed workers had an additional 5 million uninsured dependents. See U.S. Congressional Budget Office, "Health Insurance for the Unemployed: A Comparison of CBO Estimates with NCHSR Estimates" (staff memorandum, March 1984).

8 Unless otherwise indicated, differences discussed are significant at the .05 level for a two-tailed test.

9 Young adults age 19 to 24 remain the largest proportion of the employed uninsured (28%). The composition of the employed uninsured for any subgroup in Table 3 is derived as follows: Multiply the total employed in the subgroup cell by the percentage uninsured in that cell, sum to obtain the total employed uninsured, and divide the number of employed uninsured in each cell by the total.

10 Self-employed workers who were uninsured were classified as not offering insurance to themselves.

11 Insured workers not offered coverage by their own employers obtained insurance either as dependents of a working spouse or by purchasing private insurance that was not work related.

12 Explanatory variables in the firm equation included employee sex and color, full-time or part-time status, the hourly wage rate, whether the worker was a wage earner or self-employed, firm size, census division, and industry with manufacturing as the reference group. Variables in the eligibility equation included an estimate of the worker's overall labor market experience (age less years of education less six), the hourly wage rate, color and sex, and whether the worker was employed full- or part-time. Establishment size, location, and industrial sector were also included with manufacturing as the reference group.

13 S. Malhotra, K. M. McCaffree, J. M. Wills, and J. Baker, *Determinants of the Decisions by Establishments to Offer a Group Health Plan* (report to the Labor Management Services Administration and the Assistant Secretary for Policy Evaluation and Research, U.S. Department of Labor, June 1980); W. S. Mellow, "Determinants of Health Insurance and Pension Coverage," *Monthly Labor Review* 105 (May 1982): 30–32.

14 S. A. Woodbury, "Substitution Between Wage and Nonwage Benefits," *American Economic Review* 73 (March 1983): 166–182; A. Leibowitz, "Fringe Benefits in Employee Compensation," in *The Measurement of Labor Cost*, ed. J. E. Triplett (Chicago: University of Chicago Press for the National Bureau of Economic Research, 1983), pp. 371–389; R. S. Smith and R. G. Ehrenberg, "Estimating Wage-Fringe Trade-Offs: Some Data Problems," in *The Measurement of Labor Cost*, pp. 347–367.

15 The specification conforms to an earnings function suggested by human capital theory. See J. Mincer, *Schooling, Experience and Earnings* (New York: National Bureau of Economic Research, 1974).

16 This figure is computed by applying the marginal tax rates of workers without employment-related coverage to the average premium paid by employers for insured workers (total premium times percentage paid by employer).

17 Differences reported in the text are significant at the .05 level for a two-tailed test.

18 See, e.g., President's Commission for the Study of Ethical Problems in Medicine and Biomedical Research, *Securing Access to Health Care*, vol. 1 (Washington, DC: Government Printing Office, March 1983).

19 For discussions of the changing federal role in health care policy, see J. Feder, J. Holahan, R. Bovbjerg, and J. Hadley, "Health," in *The Reagan Experiment*, ed. J. Palmer and I. Sawhill (Washington, DC: Urban Institute Press, 1982), pp. 271–305; and L. Ethridge, "Reagan, Congress, and Health Spending," *Health Affairs* 2 (Spring 1983): 14–24.

20 See G. R. Wilensky, "Solving Uncompensated Hospital Care: Targeting the Indigent and the Uninsured," *Health Affairs* 3 (Winter 1984): 50–62; S. Mulstein, "The Uninsured and the Financing of Uncompensated Care: Scope, Costs, and Policy Options," *Inquiry* 21 (Fall 1984): 214–229; and R. J. Blendon, D. E. Altman, and S. M. Kilstein, "Health Insurance for the Unemployed and Uninsured," *National Journal*, May 28, 1983, pp. 1146–1149.

21 See Wilensky (note 20).

22 B. M. Mitchell and C. E. Phelps, "National Health Insurance: Some Costs and Effects of Mandated Employee Coverage," *Journal of Political Economy* 84 (June 1976): 554.
23 C. E. Phelps, "National Health Insurance by Regulation: Mandated Employee Benefits," *National Health Insurance: What Now, What Later, What Never?* ed. M. V. Pauly (Washington, DC: American Enterprise Institute, 1980), pp. 52–73.
24 Ibid.; W. K. Viscusi, "Comment on Phelps," in *National Health Insurance* (note 23), pp. 80–82.
25 See J. Needleman, M. Anderson, and R. Jaffe, *State Options for Addressing Catastrophic Health Expenses*, vol. 2 (Washington, DC: Lewin & Associates for the National Center for Health Services Research, April 1983), chap. 5.
26 This discussion draws on ibid., chap. 4, and on Wilensky (note 20) and Mulstein (note 20).
27 See Needleman et al. (note 25), chap. 4.
28 A. Enthoven, "A New Proposal to Reform the Tax Treatment of Health Insurance," *Health Affairs* 3 (Spring 1984): 21–39.