Job-Based Health Insurance, 1977–1998: The Accidental System Under Scrutiny

The employment-based health insurance picture for Americans without college degrees is grim, based on trends over the past twenty years.

by Jon R. Gabel

PROLOGUE: In *Don Quixote,* Miguel de Cervantes wrote that "[t]here are only two families in the world: the Haves and the Have-Nots." Nearly four hundred years have passed since Cervantes coined this popular phrase, yet it is a remarkably accurate depiction of the world's population on the eve of the twenty-first century. In the United States the disparity between those who have access to the economic pie and those who do not is partially obscured by our large, working middle class. But in recent years the gap in incomes between the high end and the low end of the earnings scale has increased, and as this paper by Jon Gabel shows, so has the gap in health benefits. A two-tier system of access to job-based insurance has developed, one in which low-skill workers, often those without a college education, are not able to afford their employer's coverage. These health care "have-nots" face bleak prospects as the world's information-based economy expands, while the health care "haves" are becoming an elite segment of the U.S. workforce.

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ABSTRACT: This paper highlights changes in employer-based health insurance from 1977 to 1998, based on national household surveys conducted by the Agency for Health Care Policy and Research (AHCPR) in 1977, 1987, and 1996; and surveys of employers by the AHCPR in 1977, by the Health Insurance Association of America in 1988, and by KPMG Peat Marwick/Kaiser Family Foundation in 1998. During the study years, in 1998 dollars, the cost of job-based insurance increased 2.6-fold, and employees' contributions for coverage increased 3.5-fold. The percentage of nonelderly Americans covered by job-based insurance plummeted from 71 percent to 64 percent. This decline occurred exclusively among non-college-educated Americans. An information-based global economy is likely to produce not only greater future wealth but also greater inequalities in income and health benefits.

Months after the surprise Japanese attack on Pearl Harbor, with a wartime economy experiencing serious labor shortages, federal officials ruled that increased health benefits were not subject to the limits of federal wage controls. In a special 1943 ruling the Internal Revenue Service (IRS) concurred with that decision.[1] These judgments rendered employers' contributions for health insurance tax-exempt for workers and tax-deductible for employers. As a result, employer-sponsored health benefits grew tremendously. Enrollment in Blue Cross/Blue Shield plans grew from 1.4 million persons before the war to sixty million in 1951.[2] Today more than 152 million persons receive their health insurance through their employer—93 percent of all privately insured Americans.[3]

The health care systems of advanced Western nations, such as Canada, Germany, or the United Kingdom, can trace their origins to a specific legislative act. The U.S. employer-based system cannot trace its heritage to any legislation. Instead, our "accidental system" grew out of actions by the executive and judicial branches to address labor shortages during World War II.

This paper reviews changes in this accidental system for the years 1977 to 1998. Both Presidents Jimmy Carter and Bill Clinton, whose administrations mark the beginning and end of the study period, attempted to dramatically reorganize the financing and delivery of health care through federal legislation, and both received humbling defeats. Spurred by employers' refusal to tolerate persistent double-digit increases in the cost of health insurance, the nation has greatly reorganized the financing and delivery of care over the twenty years. However, more Americans—particularly workers without high school diplomas—were without health coverage at the end of the period than at the beginning.

The objective of this paper is to examine fundamental changes in employer-based health coverage. Specifically, I address the follow-

ing research issues: (1) What were the trends in the percentage of Americans under age sixty-five covered by job-based health benefits, by region, income, education, race, and other demographic measures? (2) What were the trends in the percentage of employees offered health benefits and the percentage of the workforce eligible for and covered by their firm's health plan? (3) What have been the trends in the number of health plans offered by employers and the types of health plans offered? (4) What have been the trends in plan enrollment, plan cost, employee contributions for monthly premiums, patient cost sharing, covered benefits, and utilization review?

Data And Methods

This paper provides a snapshot of population-based coverage for job-based health insurance for three years: 1977, 1987, and 1996. I have selected these three study years because of the availability of coverage information from three highly similar and comprehensive national household surveys conducted by the Agency for Health Care Policy and Research (AHCPR).[4]

Data from surveys of employer-based health plans conducted in 1977, 1988, and 1998 constitute the second major source of information. In 1977 the AHCPR conducted a survey of health insurers and employers, selecting its sample of employers by linking the 14,000 household-survey respondents with their employers and insurers. The source of information on job-based insurance in 1988 is the Health Insurance Association of America (HIAA). I use 1988 rather than 1987 data from the HIAA survey because the quality and sample size for the 1988 data are much better. Data for 1998 are from the KPMG Peat Marwick/Kaiser Family Foundation (KFF) survey of employer-based plans. I use data from the 1998 rather than the 1996 KPMG survey to illustrate changes over a ten-year period and to provide the reader with the most current information about the provisions of job-based health coverage. The 1988 HIAA and 1998 KPMG/KFF surveys include many similar questions and use a similar sample design.[5]

In the analysis I show trends by comparing household-survey data from 1977 with household-based data from 1987 and 1996. Similarly, 1977 data from the AHCPR surveys of employers are compared with other data from HIAA (1988) and KPMG/KFF (1998) surveys of employers. In some cases, data from 1977 are not available to make the appropriate comparisons.[6] All prices are expressed in inflation-adjusted dollars.[7]

When analyzing data from the household surveys conducted by the AHCPR, I use statistical tests based on the agency's published standard errors. The fundamental test is to determine if differences

between 1977 and 1987, and 1987 and 1996 are greater than what we could attribute to the random variation in numbers. Similarly, when using data from the surveys of employers, we test to see if differences between 1977 and 1988 and between 1988 and 1998 are greater than the normal variation in numbers.

The Status Of Job-Based Coverage

■ **Coverage.** The percentage of the civilian population under age sixty-five with employer-based health coverage declined more than six percentage points from 1977 to 1996 (Exhibit 1). Overall, 19.2 percent of the population under age sixty-five was uninsured in 1996, compared with 13.8 percent in 1977 and 17.2 percent in 1987.[8] In general, the erosion in coverage was more pronounced among disadvantaged segments of the population. The percentage of white Americans with employer-based coverage fell from 77 percent to 71 percent. In contrast, the percentage of African Americans with such coverage declined from 59 percent to 48 percent, and coverage among Hispanics fell from 58 percent to 42 percent.

EXHIBIT 1
Persons Under Age Sixty-Five With Employer-Based Health Insurance, By Employment Status And Various Demographic Characteristics, 1977, 1987, And 1996

Characteristic	1977	1987	1996
Employment status			
Employed	78.2%	78.8%	73.6%[a]
Not employed	36.5	41.7	44.2
Total	70.5	70.9	64.1[a]
Race/ethnicity			
White	77.4	75.6	71.4[a]
African American	58.6	53.0	47.9
Hispanic	58.4	50.0	42.1[a]
Region			
Northeast	75.8	75.3	68.4[a]
North Central	80.5	73.8[a]	70.3
South	67.5	65.1	61.2
West	66.8	68.8	58.7[a]
Education level (of head of household)			
College graduate	79.0	81.0	80.0
High school graduate	68.0	67.0	63.0[a]
High school dropout	52.0	40.0[a]	34.0[a]

SOURCES: P. Farley, *Private Health Insurance in the United States,* Data Preview 23, DHHS Pub. no. 86-3406 (Rockville, Md.: National Center for Health Services Research, September 1986); A. Monheit and J. Vistnes, *Health Insurance Status of Workers and Their Families: 1996,* Medical Expenditure Panel Survey (MEPS) Research Findings 2, AHCPR Pub. no. 97-0065 (Rockville, Md.: Agency for Health Care Policy and Research, 1997); unpublished data from the 1987 National Medical Expenditure Survey (NMES) and 1996 MEPS; unpublished data from the Current Population Survey, 1988 and 1996; and D. Shactman and S. Altman, "A Study of the Decline in Employment Based Health Insurance" (Prepared for the Council on the Economic Impact of Health Care Reform, Washington, D.C., May 1995).
[a] Significant difference with preceding column at the .05 level.

Americans without high school diplomas and high school graduates with no college degree saw much of the decline in coverage.[9] The percentage of college graduates with job-based coverage remained statistically unchanged at roughly 80 percent. In contrast, coverage for high school graduates declined from 68 percent to 63 percent, and coverage among high school dropouts fell dramatically from 52 percent to 34 percent.

■ **Decomposing declining coverage.** The percentage of workers covered by health insurance from their employer fell from 67 percent in 1977 to 60 percent in 1996 (Exhibit 2).[10] From 1987 to 1996 a declining "take-up rate" more than offset a slight increase in the percentage of workers eligible for coverage from their employer.[11] Take-up rates declined over this period as a result of substantial increases in inflation-adjusted monthly contributions by employees, while real wage rates remained stagnant. I return to this point later.

■ **Choice of health plans.** American workers' ability to choose among alternative health plans (as opposed to choosing among care providers) has expanded since 1977 (Exhibit 3). In 1977 only 18 percent of workers had a choice of more than one plan. By 1988 that figure had increased to 60 percent, and by 1998, to 66 percent.[12] In 1977, indemnity plans dominated job-based health insurance. Only 11 percent of workers had the choice of a health maintenance organization (HMO) plan. The terms *preferred provider organization* (PPO) and *point-of-service* (POS) had not yet become part of the health care vocabulary. Therefore, it made little sense for employers to offer a choice of health plans in 1977, since it would have led to little more than adverse selection among competing indemnity plans.

The percentage of workers who can choose an indemnity plan has fallen dramatically over the past ten years—from 90 percent to 33 percent. American workers today have almost an equal chance of choosing a PPO, an HMO, and a POS plan—ranging from 49 percent

EXHIBIT 2
Workers Eligible For Health Coverage From Their Employer, Percentage Taking Up Coverage, And Coverage Rate, 1977, 1987, And 1996

	1977	1987	1996
Percent of employees eligible for coverage from their employer	82.7%	72.4%[a]	75.4%[a]
Percent of eligibles taking up coverage	80.6	88.3[a]	80.1[a]
Percent of workers with coverage from their employer	66.7	63.9	60.4[a]

SOURCE: A. Taylor and W. Lawson, *Employer and Employee Expenditures for Private Insurance,* Data Preview 7, DHHS Pub. no. 81-3297 (Washington: U.S. Department of Health and Human Services, 1981); P. Farley, *Private Health Insurance in the United States,* Data Preview 23, DHHS Pub. no. 86-3406 (Rockville, Md.: National Center for Health Services Research, September 1986); and P.F. Cooper and B.S. Schone, "More Offers, Fewer Takers for Employment-Based Health Insurance: 1987 and 1996," *Health Affairs* (November/December 1997): 142–149.
[a] Significant difference with preceding column at the .05 level.

EXHIBIT 3
Employees' Choice Of Their Health Plan, By Number And Type Of Plans, 1977, 1988, And 1998

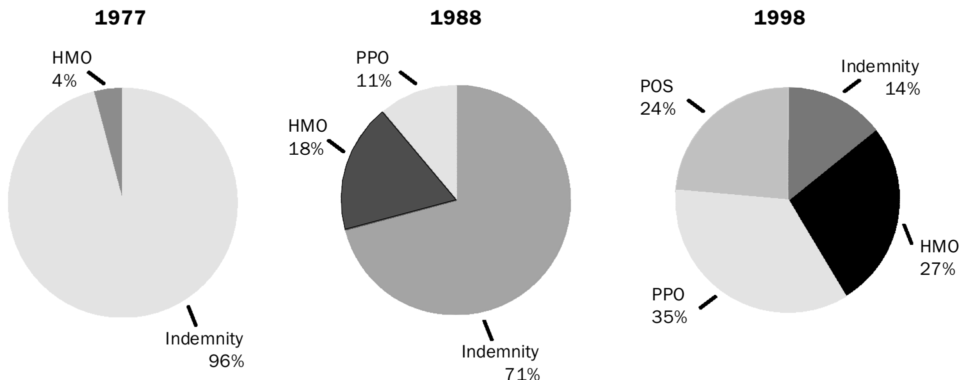
	1977	1988	1998
Offered one plan	82%	40%	34%[a]
Offered two plans	18	15[a]	15
Offered three or more plans	–[b]	45	51[a]
Percent able to choose an indemnity plan	–[b]	90	32.5[a]
Percent able to choose a PPO plan	0	19[a]	57.5[a]
Percent able to choose an HMO plan	11	40[a]	54[a]
Percent able to choose a POS plan	0	0	49[a]

SOURCES: Derived from P. Farley and G. Wilensky, "Options, Incentives, and Employment Related Health Insurance Coverage," in *Advances in Health Economics and Health Services Research,* ed. R. Scheffler (Greenwich, Conn.: JAI Press, 1984); unpublished data, 1988 Health Insurance Association of America (HIAA) Health Benefits Survey; and unpublished data, KPMG Peat Marwick/Kaiser Family Foundation Health Benefits Survey.
NOTES: Results are for employees who were offered health coverage by their employer. PPO is preferred provider organization. HMO is health maintenance organization. POS is point-of-service.
[a] Significant difference with preceding column at the .05 level.
[b] Not available.

for POS plans to 58 percent for PPO plans.

■ **Plan enrollment.** Reflecting the changed menu of choices, enrollment in managed care plans (defined as either HMO, PPO, or POS plans) increased from 4 percent in 1977, to 29 percent in 1988, to 86 percent in 1998 (Exhibit 4). In 1998 indemnity plans constituted less than 20 percent of enrollment in each of the four regions of the country. The fastest-growing plan today is the POS plan, whose enrollment has grown from 14 percent in 1996 to 24 percent in 1998.[13] In 1998 PPO plans passed HMO plans as the plan type with the

EXHIBIT 4
Enrollment In Job-Based Health Plans, By Type Of Plan, 1977, 1988, And 1998



SOURCES: G. Wilensky, P. Farley, and A. Taylor, "Variation in Health Insurance Coverage: Benefits versus Premiums," *Milbank Quarterly 62, no. 1 (1984): 57; 1988 Health Insurance Association of America Health Benefits Survey; and* 1998 KPMG Peat Marwick/Kaiser Family Foundation Health Benefits Survey.
NOTES: HMO is health maintenance organization. PPO is preferred provider organization. POS is point-of-service.

largest market share.

Various plan elements. *Plan costs.* In 1998 dollars the total average monthly cost (employer plus employee contribution) of covering an employee increased from $132 in 1977, to $224 in 1988, to $341 in 1998 (Exhibit 5). Thus, the average annual rate of increase in premiums per worker, above the economywide rate of inflation, was 4.9 percent from 1977 to 1988, and 4.2 percent from 1988 to 1998.[14] The ten-year intervals obscure the cyclical nature of premium increases and the unprecedented five-year slowdown in health care inflation in recent years. From 1994 to 1998 real premium increases averaged 0.2 percent, whereas from 1988 through 1993 they averaged 8.8 percent.[15]

Employee contributions for premiums and cost sharing. Employees assumed a greater share of the cost of monthly premiums in the 1990s: 27 percent on average in 1998, compared with 20 percent in 1977 and 1988. In 1998 dollars, employees paid 3.5 times as much for their health insurance in 1998 as in 1977. The average monthly employee

EXHIBIT 5
Plan Cost, Employee Contributions, Patient Cost Sharing, And Covered Benefits, In 1998 Dollars, 1977, 1988, And 1998

	1977	1988	1998
Average monthly premium cost per worker	$132	$224[a]	$341[a]
Monthly cost			
Single coverage	–[b]	127	175[a]
Family coverage	–[b]	290	461[a]
Monthly employee contribution			
Single coverage	–[b]	10%	19%[a]
Family coverage	–[b]	26	32[a]
Percent contributed by employee	19.6%	19.6	26.8[a]
Dollar amount contributed by employee (1998 dollars)	$26	$44	$91[a]
Average deductible			
Out of plan	$259[c]	$216[a]	$325[a]
In plan	–[b]	$ 73	$ 87
Percent of employees covered for			
Prescription drugs	87.3%	93.0%[a]	97.0%[a]
Outpatient mental health	75.4	95.0[a]	96.0
Routine physicals	6.3	40.6[a]	84.0[a]

SOURCES: G. Wilensky, P. Farley, and A. Taylor, "Variations in Health Insurance Coverage: Benefits vs. Premiums," *Milbank Quarterly* 62, no. 1 (1984): 60–62; P. Farley, *Private Health Insurance in the United States,* Data Preview 23, DHHS Pub. no. 86-3406 (Rockville, Md.: National Center for Health Services Research, September 1986); A. Taylor and W. Lawson, *Employer and Employee Expenditures for Private Insurance,* Data Preview 7, DHHS Pub. no. 81-3297 (Rockville, Md.: NCHSR, 1981); unpublished data from the Health Insurance Association of America (HIAA), 1988; and unpublished data from the 1998 KPMG Peat Marwick/Kaiser Family Foundation Health Benefits Survey.
[a] Significant difference with preceding column at the .05 level.
[b] Not available.
[c] Based on median deductible of $100 for major medical coverage, then adjusted for inflation and 4 percent of covered lives having health maintenance organization (HMO) coverage.

contribution was $26 in 1977, compared with $44 in 1988 and $91 in 1998. In contrast, real weekly wages of privately employed nonsupervisory workers were 11 percent lower in 1988 than in 1977 and remained 11 percent lower in 1998.[16]

Earlier we noted that the increase in the number of uninsured workers from 1987 to 1996 was attributable not to a declining number of workers who were offered health coverage, but rather to a declining number of workers who chose to take up their employer's coverage offer. In the face of decreasing real wages and threefold real increases in monthly contributions, the declining take-up rate is economically rational.

Employee cost sharing, as measured by deductibles, did not rise as dramatically as employee contributions for premiums did. Two countervailing forces were at work. First, employers resisted paying the full expense for the rising cost of health care and chose to pass on these costs disproportionately to workers. This was the rationale for employees' bearing a greater share of the monthly cost of health insurance premiums. The countervailing force was the shift from indemnity insurance to managed care. Managed care's traditional philosophy has been to stress preventive benefits and to remove financial barriers to care, such as high deductibles. HMOs commonly require no deductibles for office visits or hospital care. On the other hand, HMOs use a series of nonprice rationing techniques to control costs and inappropriate use of health services.

Deductibles for use of out-of-network providers fell from an average of $259 in 1977 to $216 in 1988 and rose to $325 in 1998, in 1998 dollars (Exhibit 5). (Deductibles for indemnity plans are regarded as out-of-network deductibles.) In the 1990s, in PPO and POS plans, there was a pronounced movement to increase the cost to employees when using nonnetwork providers. Because there were no PPO or POS plans in 1977, there are no available data on deductibles for using network providers. Deductibles for using network providers increased from $73 in 1988 to $87 in 1998.[17]

Changes in covered benefits. To demonstrate changes in covered benefits, I have selected three benefits that were not a standard part of insurance in 1977: prescription drug coverage, outpatient mental health care visits, and adult physicals (Exhibit 5). All three benefits were covered more extensively in 1998 than in 1977. The growth in covered benefits is a natural outgrowth of the transition from indemnity to managed care coverage. To only display the percentage of plans covering these three areas, however, would be misleading. The philosophy of managed care is not only to remove financial barriers to care but also to control the inappropriate use of services through utilization review and other nonprice rationing techniques. Man-

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aged care also pursues a strategy of prudent purchasing, which means selective contracting with providers and consequently the exclusion of providers and some medical products. Thus, in 1998, 34 percent of employees were enrolled in a plan that required mandatory generic drug substitution. With regard to mental health care services, 65 percent of employees belonged to a health plan that limited the number of allowable office visits for such services.[18]

Utilization management. Perhaps no change in health care delivery has been more controversial than the evolution of prospective utilization management. Physicians view techniques such as preadmission hospital review and primary care gatekeepers as serious intrusions into their clinical autonomy and a costly administrative burden. Such techniques were so rare in 1977 that few references to them exist in the literature. By 1988 nearly 70 percent of workers with job-based health coverage were enrolled in a plan with preadmission review, and about one-fifth were in a plan with a primary care gatekeeper.[19] By 1998 prospective utilization review techniques were so widespread that the major national surveys ceased to ask about their presence. Based on POS and HMO enrollment, I estimate that about half of employees with job-based coverage today are enrolled in a plan with a primary care gatekeeper.

Self-insurance. The passage of the Employee Retirement Income Security Act (ERISA) in 1974 brought about an unintended major change to the "accidental system." ERISA's primary objective was to protect workers' pension plans from fraud and mismanagement and to expand the benefits of pensions to more members of the workforce.[20] One clause of ERISA exempted "welfare plans" from state insurance regulation. The courts have interpreted this clause as excluding self-insured employer health plans from premium taxes, solvency and consumer protections, mandated benefits, and other aspects of state regulation.

The effect of ERISA over the past twenty years has been profound. Estimates from the Health Care Financing Administration (HCFA) in 1977 placed about 7 percent of workers in a self-insured plan.[21] By 1988 that figure had increased to 50 percent, and by 1998 to 51 percent. Within each type of plan (that is, indemnity, HMO) the percentage of employees covered by a self-insured plan has risen since 1988. However, a greater share of employees are now enrolled in HMO and POS plans, and these plans are far less likely to self-

insure. Since the passage of the Health Insurance Portability and Accountability Act (HIPAA) in 1996, the percentage of workers in self-insured plans has declined. One explanation for this decline is that the act imposed regulatory requirements on self-insured plans, such as limits on the uses of preexisting condition clauses, and this has offset some prior advantages of self-insuring.

The Future Of Job-Based Health Coverage

The pervasive change in job-based health coverage over the past twenty-one years has been the transition from an indemnity-based to a managed care–dominated system. The catalyst for this transformation was employers' resistance to double-digit increases in the cost of coverage. Many key changes identified here were a logical outcome of the evolution from an indemnity to a managed care system.

American workers may regard many changes favorably. Today benefits are richer, employees have greater choice of alternative plans, and workers face lower deductibles if they choose to use network providers. Employees might assess other changes less favorably. The cost of coverage in inflation-adjusted dollars is 2.6 times as great today as in 1977, and employee contributions for coverage are 3.5 times as great. Deductibles are higher when using nonnetwork providers, and there is less freedom to choose providers. About half of workers do not have the protection of state regulation of health insurance because their employer plan is self-insured.

The decline in the percentage of Americans with job-based coverage over the study period and the commensurate rise in the number of uninsured persons—from 13.8 percent in 1977 to 19.2 percent of the nonelderly population in 1996—should place health care on center stage in the forthcoming presidential election. The decline in coverage occurred overwhelmingly among those segments of American society least able to compete in an information-based economy. Thus, college graduates experienced no loss in job-based coverage over the study period; high school dropouts' coverage rates fell eighteen percentage points, to 34 percent.

Many factors have contributed to the decline in coverage. The three main underlying reasons are (1) the decline in real wages among low-skill workers, (2) a 2.6-fold real increase in the cost of health insurance, and (3) a 3.5-fold increase in workers' contributions for their coverage. These factors are interrelated. Rising health insurance costs and declining real wages for low-skill workers lead to rising monthly worker contributions for health insurance.

Richard Kronick and Todd Gilmer recently attributed the decline in coverage among workers from 1979 to 1995 "almost entirely [to]

the fact that per capita health care spending increased much more rapidly than income."[22] The aforementioned loss of coverage among non-college-educated Americans, while college graduates suffered no loss, points to declining real wages among non-college-educated workers as a major factor. The divergent trends in wages among persons with and without a college degree are striking, and income is a powerful determinant of coverage. Since 1973 real wages for persons who have not graduated from high school have declined 18 percent, while college graduates have enjoyed a 17 percent increase in hourly wages.[23] Even during the robust expansion of the 1990s, which brought many low-skill, marginal workers into the labor force, median family income for high school dropouts has declined 4 percent, while family income for college graduates has increased 3 percent.[24] A worker taking home $1,200 a month is unlikely to pay $250 per month for health coverage. A small firm with fewer than 10 percent of its workers making less than $20,000 per year is twice as likely to offer health coverage as is a firm in which 30 percent or more of its workers make less than $20,000 per year.[25]

Others have estimated that about 20 percent of the decline in coverage was the shift of employment from high-wage industries that offer coverage to low-wage industries that are less likely to do so.[26] From 1977 to 1998 the percentage of workers employed in manufacturing fell from 24 percent to 15 percent, while employment in the personal-services sector rose from 19 percent to 29 percent.

What does all of this suggest for the future of job-based health coverage, should current trends continue and should Congress not enact any significant national legislation? The twin economic forces of globalization and the information revolution will exacerbate disparities in health coverage and income among skilled and unskilled Americans. The U.S. Department of Labor projects that virtually all employment growth between 1996 and 2006 will be in the service sector.[27] This suggests long-run deterioration in job-based coverage.

What will health coverage look like for employees? Employers with high percentages of college graduates, such as those in the high-tech industry, may shield an increasing share of workers' income through enhanced health benefits. Employers with many nongraduates may do the reverse. With prescription drug costs increasing by 16 percent per year in employer-based plans, and new technologies constituting a major source of increased health care expenses, more nonprice rationing, not less, is likely for the future.[28]

Employers are unlikely to ever return to indemnity insurance. PPO coverage represents the new indemnity coverage. As insurers and managed care organizations attempt to restore profitability, premium increases during the next few years will reach the highest

levels since 1993. Increases of 5–6 percent may temper the recent movement from lower-price HMOs to POS plans, particularly among employers whose workforce is largely composed of persons lacking a college degree. On the other hand, to attract healthy young workers, employers will offer more preventive benefits.

These predictions suggest that the "accidental system," born out of World War II labor shortages, is likely to serve a smaller share of the workforce. A global economy in the information age will produce not only greater wealth but also greater inequalities in income, and greater inequalities in health benefits. To ignore this state of affairs constitutes malign neglect.

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NOTES

1. *Fundamentals of Employee Benefit Programs*, 5th ed. (Washington: Employee Benefit Research Institute, 1997), 5–9.
2. S. Law, *Blue Cross: What Went Wrong?* (New Haven, Conn.: Yale University Press, 1974), 11–13.
3. The denominator for this figure is "major medical" insurance. Medicare supplemental, hospital indemnity, and dread-disease policies are not included.
4. In 1977 the Agency for Health Care Policy and Research (AHCPR) was known as the National Center for Health Services Research (NCHSR). The 1977 survey was the National Medical Care Expenditure Survey (NMCES); the 1987 survey was the National Medical Expenditure Survey (NMES); and the 1996 survey was the Medical Expenditure Panel Survey (MEPS).
5. Because I was the project director for both the HIAA and KPMG/KFF surveys, the two survey questionnaires and sample designs are highly similar.
6. For 1977 NMCES methods, see S. Cohen and P. Farley, *Estimation and Sampling Procedures in the NMCES Insurance Surveys*, DHHS Pub. no. (PHS)84-3369 (Rockville, Md.: NCHSR, 1984); and S. Cohen and W. Kalsbeck, *NMCES Estimation and Sampling Variances in the Household Survey*, Instruments and Procedures 2, DHHS Pub. no. (PHS)81-3281 (Rockville, Md.: NCHSR, 1981). For 1987 NMES methods, see S. Cohen, R. DiGaetano, and J. Waksburg, *Sample Design of the 1987 Household Survey*, NMES Methods 3, AHCPR Pub. no. 91-0037 (Rockville, Md.: AHCPR, 1991). For the 1996 MEPS methods, see A. Monheit and J. Vistnes, *Health Insurance Status of Workers and Their Families: 1996*, MEPS Research Findings 2, AHCPR Pub. no. 97-0065 (Rockville, Md.: AHCPR, 1997).
7. Using the Consumer Price Index (CPI), I have expressed all prices in constant 1998 dollars. A dollar in 1977 would purchase $2.62 in 1998.
8. P. Farley, *Private Health Insurance in the United States*, Data Preview 23, DHHS Pub. no. 86-3406 (Rockville, Md.: NCHSR, September 1986).
9. These figures are from the Current Population Surveys (CPS) of 1979, 1989, and

1996. We were unable to obtain data from the 1977 NMCES and 1996 MEPS on the education level attained by the head of the family. The CPS altered its definition of *uninsured* in 1987. This change may affect the absolute number and percentage of uninsured persons, but not the relative number of uninsured persons by educational attainment.

10. Note that Exhibit 2 examines coverage from one's employer. Exhibit 1 examines coverage of workers from their employer or coverage from another employer for which a household member works.
11. "Take-up rate" refers to the percentage of eligible employees who accept their firm's coverage offer. See P.F. Cooper and B.S. Schone, "More Offers, Fewer Takers for Employment-Based Health Insurance: 1987 and 1996," *Health Affairs* (November/December 1997): 142–149.
12. These data are from the HIAA and KPMG/KFF surveys of employers. For the 1988 and 1998 data, statistics are calculated at the firm rather than the establishment level. In some cases, the firm may not offer a plan at all establishments. In addition, in a hypothetical situation in which Aetna offers a POS and a PPO plan, the survey instrument would record this as two plans. Some household-survey respondents may regard this as one plan. Hence, the reader should regard the figures in Exhibit 3 as maximum amounts.
13. KPMG Peat Marwick 1996 Health Benefits Survey and 1998 KPMG/KFF Health Benefits Survey.
14. Data for these calculations are from Farley, *Private Health Insurance in the United States*; 1988 HIAA Health Benefits Survey; and 1998 KPMG/KFF Health Benefits Survey.
15. 1988, 1989, and 1990 HIAA Health Benefits Surveys; 1991–1997 KPMG Health Benefits Surveys; and 1998 KPMG/KFF Health Benefits Survey.
16. Bureau of Labor Statistics Web site, 146.142.4.24/cgi-bin/surveymost?ee.
17. I have included HMOs as having a $0 network deductible.
18. 1998 KPMG/KFF Health Benefits Survey.
19. These estimates are derived from the 1988 HIAA survey.
20. *Fundamentals of Employee Benefit Programs*, 35.
21. M. Carroll and R. Arnett III, "Private Health Insurance Coverage in 1977: Coverage, Enrollment, and Financial Experience," *Health Care Financing Review* (Fall 1979): 3–23.
22. R. Kronick and T. Gilmer, "Explaining the Decline in Health Insurance Coverage, 1979–1995," *Health Affairs* (March/April 1999): 30–47.
23. B. Bluestone, "The Inequality Express," *American Prospect* (Winter 1995): 81–83.
24. U.S. Census Bureau, Historic Income Tables—Households (1 June 1999).
25. J. Gabel et al., "Class and Benefits at the Workplace," *Health Affairs* (May/June 1999): 144–150.
26. For a discussion of studies on the subject, see D. Shactman and S. Altman, "A Study of the Decline in Employment Based Health Insurance" (Prepared for the Council on the Economic Impact of Health Care Reform, Washington, D.C., May 1995).
27. www.bls.gov/news.release/ecopro.table2.htm.
28. www.hcfa.gov/stats/nhe-oact/tables/nhe97.txt.