

TRENDS

Why Employer-Sponsored Insurance Coverage Changed, 1997–2003

Job quality plays a major role in workers' access to employer coverage and the conditions that encourage take-up.

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ABSTRACT: Four and a half million Americans gained employer-sponsored health insurance coverage during 1997–2001, while nearly nine million lost coverage in the ensuing economic downturn (2001–2003), after population growth was accounted for. Macroeconomic trends affecting employment, job quality, and incomes drove most of the coverage changes, although key factors varied during the two periods. Take-up rates affected coverage, mostly reflecting the interaction of premium cost trends and labor-market tightness, but take-up also was influenced by the implementation of the State Children's Health Insurance Program (SCHIP) during 1997–2001. Coverage among low-income people was most affected by economic conditions and premium costs. [*Health Affairs* 25, no. 3 (2006): 774–782; 10.1377/hlthaff.25.3.774]

THE CENSUS BUREAU reported in August 2005 that the share of the non-elderly U.S. population covered by employer-sponsored health insurance fell 0.6 percentage points between 2003 and 2004.¹ This decline occurred while the economy was growing, which suggests that the long-noted decline in employer coverage continues, contributing to greater uninsurance and growing burdens on public programs.

Researchers have long identified the state of the economy and the cost of health insurance as major drivers of changes in employer coverage rates.² Employment levels fluctuate during business cycles, consequently affecting people's access to coverage. The economy also affects the incomes of working families, which influences take-up rates. Health insurance costs primarily affect take-up rates, although

costs can also influence employers' offer and eligibility decisions.

Two other factors have recently received considerable attention. First is the crowding out of private insurance by public insurance, which is accentuated when public insurance eligibility expands or private insurance costs increase.³ Second are hypothesized structural economic changes that are reducing the average "quality of jobs" by shifting employment from larger to smaller establishments, from industries with traditionally high insurance offer rates to ones with low rates, and in general toward lower-wage jobs.⁴

This paper examines factors driving the job-based insurance rate over two contiguous, but very different, time periods: 1997–2001 and 2001–2003. We estimate that 4.5 million people gained employer coverage during 1997–

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2001, while nearly nine million lost it in the shorter 2001–2003 period, after population gains were accounted for. The first period was characterized by robust economic growth and modest growth in health care premiums; the second period, by a short but sharp recession in 2001 and a slow recovery along with double-digit annual premium increases. Comparing the factors driving changes in employer coverage during these two periods provides insights into the underlying dynamics of employer coverage.

Study Data And Methods

■ **Data source.** Our analysis used the Community Tracking Study (CTS) Household Survey, a large, representative telephone survey of the civilian population in the contiguous forty-eight states that covers a broad array of health-related topics. We used Rounds One, Three, and Four of the survey, conducted in 1996–97, 2000–01, and 2003, respectively. Response rates ranged from 59 percent to 65 percent. For simplicity, we refer to the periods defined by the three surveys as covering 1997–2001 and 2001–2003. All analyses used survey weights, and standard errors account for complex survey design. Our unit of analysis was nonelderly people, providing sample sizes for the three CTS rounds of 53,268, 51,676, and 39,262, respectively.

■ **Analysis.** We used a shift-share analysis to decompose changes in the coverage rate over time into structural components. We specified an equation explaining the coverage rate as a function of nine factors and then assessed the contribution of each factor to rate changes by, in essence, comparing actual coverage rates with those calculated to have occurred had each factor been individually held constant at its prior time-period value.⁵

■ **Components of coverage.** *Employment, offer, eligibility, and take-up.* As in most previous shift-share analyses of employer coverage rates, we investigated the role of employment rates and conditional offer, employer coverage eligibility, and take-up rates (the product of which equals the job-based coverage rate).⁶ Because the option of family coverage is virtually ubiquitous, provided to 99 percent of all

workers offered coverage in 2005, employment, offers, and eligibility are all defined in a family context.⁷ For instance, if one family adult has an employer coverage offer, all family members are assumed to have access to the offer.

To better characterize how employment affects access to employer coverage, we characterized family employment not as simple rate, but in terms of the percentage of the population in families with two full-time workers, one full-time worker, or part-time workers only.

Job quality. We extended the previous shift-share analyses of employer coverage by adding several additional components. We investigated the hypothesized structural employment changes toward jobs that are less likely to provide health benefits: those in smaller firms, in certain industries, and with lower wages. We combined these various dimensions into a “job-quality” scale. Adding job quality (conditioned on family employment) allowed us to assess whether any changes in offer, eligibility, or take-up rates are attributable to firms’ altering their benefit policies as opposed to changes in the mix of jobs in the U.S. economy toward or away from those historically likely to provide any health benefits or health benefits of greater or lesser generosity. To create the job-quality scale, we used a sample of full-time workers from all four rounds of the CTS survey ($N = 82,090$) and regressed the likelihood that their job carried health benefits on interactions between six employer-size variables, fourteen industry and government categories, and four wage categories. Predicted values were then divided into eight equal-size groups and assigned to working families. In families with multiple workers, the best-quality job is assigned.⁸

Family income and SCHIP eligibility. We also included two components that are related to the likelihood of taking up employer coverage; this allowed us to better isolate the role of insurance costs on take-up. We accounted for changes over time in the distribution of family incomes among those with access to job-based coverage. Because we already controlled for family employment and job quality, changes in the distribution of family incomes (expressed

as a percentage of the federal poverty level, in five categories) are the result of changes in real wages, hours worked, and the quality of secondary jobs. We further accounted for the major expansion in eligibility for public insurance among low-income children resulting from the State Children's Health Insurance Program (SCHIP) of 1997, which might have motivated some to substitute public for private coverage ("crowding out").⁹

Nonworking and self-employed families. Finally, some nonworking and self-employed families retain coverage from former employers through the Consolidated Omnibus Budget Reconciliation Act (COBRA) or as a retiree benefit. Consequently, the final two components represent shifts in the coverage rates of

these two groups.

Altogether, we examined nine components: family employment; quality of best job in the family; insurance offer rate; insurance eligibility rate; family income; SCHIP eligibility rate; take-up rate; coverage rate among people in nonworking families; and coverage rate among people in self-employed families. With the exception of the last two components, each is conditioned on those preceding it.¹⁰

Study Results

■ Employer-sponsored coverage rates.

The percentage of the nonelderly population covered by job-based health insurance rose 1.9 percentage points during 1997–2001, while it fell 3.6 percentage points in the second and shorter period, 2001–2003 (Exhibit 1). Family

EXHIBIT 1 Trends In The Rate Of Employer-Sponsored Insurance (ESI) And Factors Contributing To It, Selected Years 1997–2003

Decomposition component	1997	2001	2003	Change over time ^a	
				1997–2001	2001–2003
ESI rate	65.1%	67.0%	63.4%	1.9**	-3.6**
Family workforce participation					
2 full-time workers	22.4	21.8	18.7	-0.6	-3.1**
1 full-time worker	52.7	53.2	52.7	0.6	-0.5
Part-time workers only	6.1	6.1	7.1	0.0	1.0**
Self-employed	2.8	2.8	2.6	0.0	-0.3
No workers	16.0	16.1	19.0	0.1	2.9**
Job quality (people in working families)					
Best (categories 1 & 2)	32.6	32.9	30.5	0.3	-2.4**
Good (categories 3 & 4)	27.8	28.7	27.7	0.9	-1.0
Fair (categories 5 & 6)	21.9	21.1	21.9	-0.8	0.8
Poor (categories 7 & 8)	17.7	17.3	19.9	-0.4	2.6**
Offer rate	88.0	88.9	86.7	1.0**	-2.2**
Eligibility rate	95.1	95.4	95.7	0.3	0.3
Income as percent of poverty (people in families with ESI access)					
<100 percent	7.4	5.8	5.7	-1.6**	-0.1
100–149 percent	8.7	7.1	6.9	-1.6**	-0.2
150–199 percent	10.2	8.0	8.8	-2.2**	0.8
200–299 percent	19.3	19.8	19.2	0.4	-0.6
300+ percent	54.3	59.3	59.5	5.0**	0.2
Have children, eligible for public insurance	4.0	9.9	9.8	5.8**	-0.0
Take-up rate	88.8	89.3	87.9	0.5	-1.5**
ESI rate in self-employed families	21.6	23.8	20.4	2.2	-3.4
ESI rate in nonworking families	26.1	30.5	30.0	4.4**	-0.4

SOURCE: Community Tracking Survey, 1996–1997, 2000–2001, and 2003.

^aPercentage points.

** $p \leq .05$

employment changed little in the earlier period. Between 2001 and 2003, however, there was a sizable reduction in employment, most notably indicated by a 3.1-percentage-point decline in the proportion of people in families with two full-time workers and a 2.9-percentage-point gain in the proportion in families with no workers.

Job quality changed little in the late 1990s but declined in the later period. For instance, during 2001–2003 the number of people in regular working families with jobs in the two highest job-quality categories declined about 2.5 percentage points, while the number with jobs no better than the two lowest job-quality categories rose an equivalent amount. Offer rates grew a modest one percentage point during the earlier period but fell 2.2 percentage points over the later period. Incomes among those in families with access to employer coverage grew during 1997–2001 and changed relatively little during 2001–2003. Among those with access to employer coverage, the percentage eligible for children's public insurance coverage through Medicaid or SCHIP more than doubled during 1997–2001 but was unchanged in the later period. Take-up rates grew slightly during the earlier period but fell 1.5 percentage points in the later period. Finally, there was a

rapid increase in the percentage of people in nonworking families covered by employer-sponsored insurance over the 1997–2001 period, a trend also found in data from the Current Population Survey (CPS).¹¹

■ Decomposition of coverage changes.

The relative importance of the various factors differed considerably over the two periods, largely reflecting the different economic climates (Exhibit 2).

There was a small decline in coverage during 1997–2001 attributable to employment changes. This masks an increase in coverage attributable to increased employment during 1997–1999 and likely reflects a sharp increase in the unemployment rate during the latter part of the survey's 2000–2001 field period. In contrast, lower family employment accounted for more than half of the decline in employer coverage during 2001–2003, resulting in more than five million people losing coverage, a figure roughly corresponding to the number of people who lost employment during this period, after population growth is accounted for. The number of family workers and their full- or part-time status, rather than whether the family had a worker or not, are key to the likelihood of having job-based coverage. Had we only characterized people as being in working

EXHIBIT 2 Decomposition Of Changes In Employer-Sponsored Insurance (ESI) Coverage, 1997–2001 And 2001–2003

Component	1997–2001		2001–2003	
	Change in ESI rate ^a	Change in population	Change in ESI rate ^a	Change in population
Family workforce participation	-0.1	-261,000	-2.1	-5,122,000
Job quality	0.3	816,000	-1.1	-2,776,000
Offer rate	0.3	805,000	-0.2	-490,000
ESI eligibility	0.1	278,000	0.5	1,143,000
Income (among those with ESI access)	0.5	1,070,000	0.1	219,000
Child with public coverage eligibility	-0.3	-647,000	-0.01	-20,000
Take-up	0.4	829,000	-0.6	-1,459,000
ESI in self-employed families	0.1	128,000	-0.1	-223,000
ESI in nonworking families	0.6	1,474,000	-0.1	-205,000
Total	1.9	4,492,000	-3.6	-8,935,000

SOURCE: Community Tracking Survey, 1996–1997, 2000–2001, and 2003.

^a Percentage points.

families versus nonworking or self-employed families, employment effects in the earlier period would have nearly disappeared, and they would have been cut in half during the later period.

■ **Job quality.** Shifts in job quality had sizable effects on coverage rates. However, rather than the secular decline in job quality that some have posited, job quality appears to reflect business cycles.¹² During the period of economic growth in the late 1990s, job quality improved (Exhibit 1), translating into a gain of more than 800,000 people with employer coverage. However, average job quality fell dramatically during 2001–2003 and is associated with a decline of 2.8 million people with job-based coverage. The effect of declining job quality during 2001–2003 would have been even greater had we used the simplified employment variable, which suggests that it was often the best-quality job in families that was lost.

■ **Offer and eligibility rates.** After job quality is controlled for, rising offer rates during 1997–2001 increased the number of workers with employment-based coverage by about 800,000, while about a half-million lost coverage during 2001–2003 because of fewer offers. Somewhat surprisingly, eligibility rates increased during both periods, resulting in increases of roughly 300,000 people in 1997–2001 and 1.1 million in 2001–2003 with job-based coverage. Had we not controlled for shifts in job quality, a greater portion of the change in coverage would have been attributed to offer and eligibility rates.

■ **Income, crowd-out, and take-up.** Not only did the number of people with access to employer coverage increase during the period of economic growth in the late 1990s, but among those with access to employer insurance, incomes rose. Even after family workforce participation and job quality are controlled for, higher real incomes resulted in 1.1 million people taking up employer coverage during 1997–2001, followed by a small increase in 2001–2003.

Growth in public insurance eligibility for children resulted in about 650,000 fewer peo-

ple taking up coverage between 1997 and 2001. During 2001–2003, however, eligibility rules changed little, and their effect on coverage rates was negligible. After allowing for family incomes and the effect of the SCHIP implementation, we saw take-up rates as increasing employer coverage over the earlier period by more than 800,000 individuals but decreasing coverage over the later period by about 1.5 million. The sizable drop in take-up during the later period is consistent with sharp increases in employee premium cost sharing (particularly for family coverage) and in consumer cost sharing for health care services.¹³

The contribution of higher take-up rates on coverage during 1997–2001 would have been larger had we not accounted for gains in job quality, which indicates that higher-quality jobs provide more-attractive insurance benefits. Similarly, higher family incomes during this period promoted take-up of insurance offers, both directly and by making fewer children eligible for public coverage. Had we accounted for neither family income nor SCHIP eligibility, take-up in the earlier period would have been shown as modestly suppressing employer coverage, consistent with the modest increases in insurance costs. In contrast, controlling for income levels or public insurance eligibility had negligible impacts on the take-up effects in the later period.

■ **Employer coverage among nonworking families.** Consistent with the patterns evident in Exhibit 1, more than a third of the increase in employer coverage during 1997–2001 is attributable to an increase in the percentage of people in nonworking families with job-based coverage. The most likely explanation for this phenomenon is an increase in COBRA coverage. Between 1997 and 2000, COBRA enrollment grew 1.4 million, closely corresponding with our results.¹⁴

■ **Effects on various socioeconomic groups.** Business cycles and rising health care costs are likely to have their greatest effect on the employer coverage of lower-income workers. Consequently, we replicated our analysis on three predicted income groups. The size and composition of income groups change

during a business cycle. As a result, had we defined the groups based on current income, we could not have distinguished the underlying reasons for changes in coverage from changes in the composition of the subpopulations we were investigating. Therefore, we defined our groups based on predicted (or “permanent”) family incomes, based on a model in which family income was regressed on “human capital” variables: age, race, sex, family composition, education, and health status. Income was defined as a percentage of the federal poverty level (less than 200 percent, 200–399 percent, and 400 percent or more), which adjusts for inflation and family composition. The regression used pooled data from all four CTS

rounds. Because of smaller sample sizes, public insurance eligibility could not be included as a component of these decompositions.

We classified 19 percent, 39 percent, and 42 percent of the population into categories of predicted low, middle, or high socioeconomic status (SES), representing populations equaling forty-four, eighty-nine, and ninety-six million people, respectively. Not surprisingly, changes in job-based coverage were felt the most among low- and middle-income groups (Exhibit 3). Gains in job-based coverage during 1997–2001 were 2.3, 2.4, and 1.0 percentage points for the predicted low-, middle-, and high-income groups, respectively. During 2001–2003, the three groups experienced de-

EXHIBIT 3 Decomposition Of Changes In Employer-Sponsored Insurance (ESI) Coverage, By Time Period And Predicted Income, 1997–2001 And 2001–2003

	Predicted low income ^a		Predicted middle income ^a		Predicted high income ^a	
	Change in ESI rate ^b	Change in population	Change in ESI rate ^b	Change in population	Change in ESI rate ^b	Change in population
1997–2001						
Family workforce participation	0.6	289,000	0.2	182,000	-0.5	-535,000
Job quality	-0.2	-94,000	0.3	310,000	0.4	466,000
Offer rate	0.5	237,000	0.4	410,000	0.0	40,000
ESI eligibility	0.5	260,000	0.2	150,000	-0.2	-179,000
Income (among those with ESI access)	1.0	478,000	0.6	608,000	0.2	246,000
Take-up	-0.7	-346,000	0.2	187,000	0.5	539,000
ESI in self-employed families	0.1	37,000	0.2	168,000	-0.1	-137,000
ESI in nonworking families	0.5	248,000	0.3	269,000	0.6	659,000
Total	2.3	1,110,000	2.4	2,283,000	1.0	1,099,000
2001–2003						
Family workforce participation	-2.9	-1,438,000	-2.1	-1,992,000	-0.5	-491,000
Job quality	-1.7	-817,000	-1.7	-1,649,000	-0.8	-873,000
Offer rate	-1.2	-606,000	-0.2	-224,000	0.3	353,000
ESI eligibility	0.4	203,000	0.5	478,000	0.2	188,000
Income (among those with ESI access)	1.0	473,000	-0.4	-409,000	0.1	142,000
Take-up	-0.7	-327,000	-1.1	-1,034,000	-0.4	-401,000
ESI in self-employed families	-0.2	-121,000	-0.1	-78,000	0.0	-23,000
ESI in nonworking families	0.5	237,000	-0.1	-142,000	-0.4	-381,000
Total	-4.9	-2,397,000	-5.8	-5,050,000	-1.3	-1,487,000

SOURCE: Community Tracking Survey, 1996–1997, 2000–2001, and 2003.

^a Predicted income was based on a regression in which the log of family income as a percentage of the federal poverty level was regressed on family composition, education of family head and spouse (if any), age and sex of family head, health of family head and spouse, race/ethnicity of family head, and number of children. “Low income” includes those whose predicted incomes fall below 200 percent of poverty; “middle income” includes those at 200–399 percent; and “high income” includes those with incomes of 400 percent or higher.

^b Percentage points.

clines of 4.9, 5.8, and 1.3 percentage points, respectively, in their coverage rates.

Impact of economic changes. Macroeconomic changes affected the workforce participation of lower-income groups the most, in terms of both increasing their employer coverage during 1997–2001 and decreasing it during the economic downturn of 2001–2003. For instance, 2.9 percent of the predicted low-income group lost coverage because of lower workforce participation in the later period. Surprisingly, the highest-income group had declines in coverage associated with family employment of about 0.5 percent during both periods.

Impact of job quality. During the earlier period, both middle- and higher-income groups gained coverage because of improved job quality, while the low-income group experienced a small decline. The economic downturn during 2001–2003 likely contributed to reductions in job quality for all income groups, accounting for a 1.7-percentage-point reduction in the coverage rate for those in the low- and middle-income groups and a 0.8-percentage-point loss among those in the highest-income group. Although the percentage-point decline in the highest-income group was the smallest, job quality figured as the most important factor for this group, contributing to nearly 900,000 high-income people losing employer-sponsored coverage.

During the earlier period, income growth among those with access to employer coverage had its greatest effect in rising coverage among lower-income people. This is not surprising, since the take-up rate among higher-income people was already well above 90 percent. Yet coverage rates among low-income people fell because of lower take-up, after income is controlled for.

Effects of cost sharing and take-up. Although increases in average worker contributions to premiums and cost sharing for health care services were modest during 1997–2001, low-wage workers were most affected.¹⁵ During the later period, all income groups lost coverage because of lower take-up, with the greatest effect among middle-income people, accounting

for more than one percentage point of their 5.8-percentage-point decline in coverage. Even among high-income people, lower take-up accounted for 0.4 points of their 1.3-percentage-point decline in coverage.

Summary And Discussion

■ **Business cycles and other drivers of change.** Many interrelated factors influence employer-sponsored health insurance rates. Foremost, business cycles are important drivers of short-term trends in employer coverage. These operate primarily through workforce participation but secondarily through the average quality of jobs and family incomes. Higher-quality jobs are more likely to provide both access to employer-sponsored coverage and conditions that encourage insurance take-up: higher wages, lower employee cost sharing, and more generous plan benefits.

During the economic boom years of 1997–2001, the gain in employer coverage was moderated by dramatic expansions in public insurance eligibility for children as a result of SCHIP. Although crowding out can occur through other, less direct mechanisms, the effect on take-up is likely to be the most important component. Yet the estimated loss of coverage (–667,000 workers) over the two periods is quite modest compared with the 3.7 million children enrolled in SCHIP and Medicaid expansion programs by 2003.¹⁶

After workforce participation, job quality, family incomes, and SCHIP eligibility are controlled for, we would expect take-up rates to follow trends in health insurance premiums and benefit packages. Indeed, we found a sharp drop-off during 2001–2003, when a portion of double-digit premium increases were shifted to workers in the form of greater premium cost sharing and benefit buy-downs. Although premiums grew at a modest rate during the late 1990s, we found that take-up increased. This suggests that benefit packages and hence take-up are influenced by the interaction of both underlying costs and the tightness of the labor market.

Lower- and middle-income workers are most susceptible to business cycles. They en-

joyed the greatest gain in coverage rates in the late 1990s but also suffered the greatest decline in coverage in 2001–2003. Lower-income workers are also the most susceptible to cost pressures on the system. They alone lost coverage because of lower take-up during the late 1990s when cost pressures were modest.

■ **Future trends.** What do the results portend for the future? Although the improving economy foreshadows gains in the number of people with employer-sponsored insurance, the recent Census Bureau numbers suggest that other forces could continue to weaken the employer coverage system over the long term. Most important and well established is that health care costs grow faster than wages, a trend largely driven by improvements in health care technology.¹⁷ Although this trend briefly reversed itself in the mid-1990s at the height of managed care's influence, there are few technical, market, or policy tools on the horizon likely to reverse it anytime soon.¹⁸ Increasing health care costs will likely continue to depress take-up rates and, for firms that employ mostly low-wage workers, perhaps offer and eligibility rates as well. Although higher-wage workers are likely to see the effect in the form of lower wages and less generous health benefits, low-income workers are the most likely to lose employer-sponsored coverage altogether.

The second long-term trend concerns the decline in job quality. Whether or not such a decline actually exists is in dispute.¹⁹ Although our research suggests that job quality is an important driver of employer coverage, we also found that coverage is responsive to business cycles. Our data series, which covers a single business cycle, is too short to establish whether a long-term trend exists.

Finally, the strong association between macroeconomic trends and employer coverage suggests that publicly sponsored health insurance programs have an important countercyclical role. Most of the decline in employer coverage between 2001 and 2003 was offset by increases in public coverage through a combination of automatic stabilizers (job loss makes some eligible) and policy changes.²⁰ Policy-

makers should keep this in mind as they grapple with Medicaid and SCHIP's severe budgetary strains.

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5. The equation consisted of three additive components, comprising the coverage rate for people in regular working families, nonworking families, and families with only self-employed workers, weighted by population shares. The first component, accounting for roughly 80 percent of the nonelderly population, is further specified as the product of conditional offer, eligibility, and take-up rates in 240 subgroups defined by three family employment, eight job quality, five family income, and two child public insurance eligibility categories, which is aggregated by weighting

- each subgroup by its share of the population. The contribution of these last four factors to coverage rate changes was assessed by manipulating their population shares. A covariance term is also part of the equation. We suppressed it by ratio adjusting other results because it is always small and not interpretable.
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 8. Although families with better-quality jobs will tend to have higher incomes, the measure is independent of secular income trends or changes in the tendency of specific types of jobs to carry health benefits. This is because the regression uses pooled data, and wages are normalized by the Bureau of Labor Statistics (BLS) employer wage index.
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