MARKET WATCH

How Risky Is Individual Health Insurance?

Individually underwritten coverage often gets the blame for
uninsurance that results from problems in the group coverage market.

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ABSTRACT: This paper describes the relationship between type of insurance coverage in
one period and the likelihood of becoming uninsured in the next. We find that for people at
the median health status, becoming uninsured is most likely for those with individual insur-
ance, less likely for those with small-group insurance, and least likely for those with large-
group insurance. However, for people in poor or fair health, the chances of losing coverage
are much greater for people who had small-group insurance than for those who had individ-
ual insurance. We attribute these results to the offsetting effects of high loadings and guar-
anteed renewability in the individual market. [*Health Affairs* 27, no. 3 (2008): w242–w249
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AMONG THE VARIOUS ways Ameri-
cans can obtain private health insur-
ance coverage, the version usually
cited as most problematic is the individual
market. Data on this market show some prob-
lems relative to either private employment-
based group insurance or public insurance:
higher premiums relative to benefits because
of higher administrative costs and lower or no
tax breaks, risk-based underwriting, and
higher rates of turnover. Consumers clearly
are faced with more immediate challenges in
navigating the individual insurance market
than in other settings.

One unanswered question about different
types of health insurance markets, however, is
in many ways the most important one: once
someone has done what many would consider
to be the right thing, and obtained insurance
before becoming a high risk, how likely is he or
she to retain insurance if a high-risk chronic

condition hits? To what extent can being or
becoming a high risk trigger the loss of insur-
ance coverage? We know that the great major-
ity of uninsured high-risk people had some
private insurance sometime in their lives, so
one way to diminish the problem of the high-
risk uninsured would be to devise insurance
arrangements that make it more likely for peo-
ple to maintain coverage (in other words, that
have higher "persistence"), especially when
people transition into high-risk health states.
We also know that the vast majority of people
start out their adult lives as low risks and only
become higher risks as they age and as chronic
conditions pile up. Societal concern about not
having coverage should apply to people at all
risk levels, but we probably are more con-
cerned about the retention of coverage by peo-
ple who are or have become high health risks,
since insurance-impacted access to care may
have the greatest short-run consequences for

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health for people who are already sickly.

The common negative perception of individual insurance, based largely on its high net premiums attributable to high administrative cost and lack of tax advantages, suggests that it might score poorly on the persistence scale. But there is a feature unique to individual insurance that potentially works in the opposite direction: guaranteed renewability at class-average rates. This is a policy provision in which the insurer promises not to increase premiums differentially based on health risk for people seeking to renew. Although individual insurance is medically underwritten when newly issued, and the insurer is free to raise premiums for all in a risk class, individual insurance is not supposed to be "re-underwritten" if one buyer's risk should change; the buyer has an unqualified right to renew at the rate charged to others in the class, regardless of any change in his or her health state. Group insurance, in contrast, is often not guaranteed renewable at premiums independent of risk changes at the group level (depending on state insurance regulations and whether or not the group self-insures), because changes in group membership as workers leave jobs or are hired over time may change the risk or experience of the group. More importantly, there is no guarantee whatsoever of a continued long-term offer of coverage at nondiscriminatory rates to individual employees (or their dependents) who leave the firm's employment, whatever the offer of insurance to those who remain in the group. The Health Insurance Portability and Accountability Act (HIPAA) "guaranteed issue" rules that protect some workers leaving a group and transitioning to individual coverage do not specify anything about future premiums and, in particular, do not preclude the possibility that the offering of nongroup coverage to someone who became a high risk is at extremely high premiums.

Employees who are or become high risk who do not retain their jobs have at best a temporary option to continue coverage at average group premiums under provisions of the Consolidated Omnibus Budget Reconciliation Act (COBRA). However, these provisions do not apply to groups smaller than twenty. All job-losing workers will be left without a guarantee of the opportunity to obtain coverage at the previous group premiums after eighteen months.

This paper reports on analysis of panel data intended to see whether provisions for guaranteed renewability in individual insurance actually do provide good protection for higher risks against dropping or losing coverage, relative to what would happen under group insurance. There has been a fear that some individual insurers are able to avoid carrying out the obligations that such provisions appear to impose, by strategies such as dropping entire classes of insurance.[1] Whatever is reported in anecdotes, the more important question is how the protection actually retained by a full set of workers who have individual insurance with guaranteed renewability compares with that retained by a similar set of workers who have group insurance.[2]

Study Data And Methods

We used data from the Survey of Income and Program Participation (SIPP), a relatively large panel survey, to see what happens over time to people who initially obtained different kinds of insurance coverage. We examined differences in probabilities of becoming uninsured at insurance renewal time for workers at different risk levels who initially had individual, small-group, and large-group insurance.

Our analysis is complementary to the recent study by Erika Ziller and colleagues, who also explored SIPP data on insurance coverage.[3] They looked only at people who began with individual insurance and at those who terminated spells of this type of insurance for a wide variety of alternatives (group insurance, public insurance, and becoming uninsured), not at those who persisted. In contrast, we compared people who started with group insurance as well as individual insurance. Specifically, we asked what the odds were that someone at a given level of health status who had either individual or group coverage continuously in the previous year would become uninsured at any point in the next year. We also

asked how the odds of becoming uninsured varied with the risk level for people with each type of coverage.

■ **A conceptual model.** We assumed that people are risk-averse, so they potentially value medical insurance, compared to the alternative of taking a chance on various levels of out-of-pocket payment. However, whether they will choose coverage in any given time period will depend both on the premium they would have to pay and on the benefits they would expect to collect. That is, a person is most likely to obtain insurance if the premium is low but the risk of seeking medical care (and therefore the benefits to be collected on average from a given policy) is high.

A measure that combines both of these factors is the "net loading" for an insurance policy: the difference between the net-of-tax premium the person pays and the average benefits the person might collect; this is usually measured as a proportion of the premium. The higher the loading, the less likely the person is to buy insurance in the first place. But what about the willingness to continue with coverage? Clearly, that will be lower should the loading increase. But it also seems plausible to assume that the higher a constant-over-time loading (and therefore the lower the net benefit) from insurance that one had bought, the greater the likelihood of failing to renew. A decline in disposable income, the onset of some other financial emergency, or even just lower marketing of or attention to the need for coverage is more likely to lead to neglect to renew when the price of insurance relative to its benefits was not very advantageous in the first place.

We can use this model to predict when there will be greater likelihood of dropping or losing coverage. On average, net-of-tax loading is known to be lowest for large-group insurance, higher for small-group insurance, and highest of all for individual insurance.[4] The

> **"A decline in disposable income is more likely to lead to neglect to renew when the price of insurance relative to its benefits was not very advantageous in the first place."**

worker who receives compensation in the form of a partially employer-paid premium (rather than as all cash) can reduce the payroll and income tax on a given amount of total compensation. In contrast, a person who buys individual insurance cannot reduce payroll taxes and can reduce income taxes only if self-employed and itemizing deductions. These observations imply that the likelihood of continuation of coverage for a person of average-to-good risk at a given income level should be greatest in large-group insurance and lowest in individual insurance, with small-group insurance being intermediate.

In theory, if risk were then to increase with the onset of a costly chronic condition, whether coverage would continue would depend on what would happen to the net premium the person would have access to as long as income was above some "affordability" threshold.[5] For individual insurance with guaranteed renewability, the most plausible hypothesis is clear: if the premium is guaranteed not to jump when risk increases, the person who has become a higher risk should, other things equal, be more likely than before to continue coverage, and probably more likely to do so than a person who remains a low or average risk. After all, a person who started guaranteed-renewable individual insurance when an average risk will find continuing to purchase even more attractive if health status worsens. In contrast, for group insurance, a key determinant of future premiums and coverage is employment status. If workers can hang onto the job, they can continue to obtain group coverage at a total net-of-tax premium (taking account of both explicit premiums and wage offsets) that remains low and constant. However, the group-insured person who becomes a higher risk is vulnerable in two possible ways. First, if workers leave or lose a job with coverage for some exogenous reason (relocation of spouse, downsizing, economic downturn), high-risk

workers may then have few low-premium alternatives. And second, if reasonably good health is needed to retain employment, the person who becomes a higher risk and no longer can work will face a very large increase in potential premium as well as lower income; in contrast, the individually insured person who becomes a high risk may face a similar lower income but does not face a higher premium. That is, whatever the reason for a high-risk person leaving the group, group coverage will disappear as an option, and the only options in most states for formerly group-insured people will be individual insurance at much higher medically underwritten premiums, or a high-risk pool at high premiums (if the pool is accepting more members). Thus, the relative impact of starting with group insurance on the likelihood of retaining coverage depends on a host of conflicting influences: the low future premium for the person who keeps his or her job, a stronger incentive to hold onto that job, and a much higher premium for the person who loses a job.[6] What will actually happen in the face of these conflicting incentives and circumstances is an empirical question.

■ **Data and model specification.** We used the nationally representative SIPP data, which cover the period 2000–2004.[7] Participants are interviewed every four months, so that every month one-third of the participants are interviewed about the preceding four months. Our sample consists of those people who reported being employed at the observation of initial insurance coverage. Among those with individual coverage are both self-employed workers and other workers who bought individual rather than group coverage, generally because the latter was not offered. Workers may be covered either as the primary insured or owner of the policy or as a dependent on a family policy. We combined the periodic waves into annual intervals, since most insurance policies provide coverage for twelve months. (There are some explicitly temporary individual policies, intended to bridge short-term gaps in coverage as between graduation in June and starting a job with benefits in September. These can be taken for various inter-

vals of time and do not carry guaranteed renewability, but their market share is very small.)

While individuals in the SIPP data can in principle be followed for some time, both attrition and complexity grow the longer we try to follow a given individual. Attrition is especially a problem for the individual insurance market, which, even in this large-sample data set, starts with a relatively small number of observations and goes down from there. Accordingly, we were able to look at insurance purchasers who were documented as being insured only for one year (that is, observed for two years); however, this is long enough for renewal to be an issue. We then asked: given that we have observed a person with a given type of insurance continuously for one year, what determines the probability that the person will become uninsured at some point in the next period? We compared workers who began with large-group insurance (more than twenty-five workers in the firm), small-group insurance, and individual insurance. In addition to the initial type of insurance arrangement, we also included measures of household income, change in income, age, sex, and the level of the worker's health status in the initial period.

Over a two-year time frame there are too few changes in health status to justify including change in workers' health status as a regressor, and in preliminary specifications the change in health status was not statistically significant. However, many of the workers who are in worse health states made the transition from lower (if not low) risk in the recent past.

Exhibit 1 shows means for the sample of workers who had a given type of coverage for at least one year. The most interesting finding here is the proportion in each insurance setting who are uninsured by the end of the next period. As expected, that proportion is lowest for people in large groups and highest for those with individual coverage. This data reinforces a well-known proposition: large-group coverage is good if you can get it (and good [high-paying] large-firm jobs carry good insurance).

EXHIBIT 1
Sample Means And Characteristics In The Survey Of Income And Program Participation (SIPP) Data On Workers With At Least One Year Of Continuous Coverage By Type Of Coverage, 2000–04

Characteristics	Individual coverage	Small-group coverage	Large-group coverage
Number in sample	620	1,675	14,011
Average age (years)	41.56	39.18	40.84
Average health status[a]	2.04	1.98	2.01
Average household income	$59,411	$65,186	$74,898
Percent male	41	55	51
Percent without coverage after one year	17	13	6

SOURCE: Authors' calculations from SIPP data.
[a] 1 = excellent, 2 = very good, 3 = good, 4 = fair, 5 = poor.

We examined the persistence of coverage for both sizes of groups, but we concentrated on comparing persistence and its determinants in the small-group sample (where many firms are small enough to be exempt from the COBRA requirement) versus the individual samples.

To understand the determinants of dropping or losing coverage in each sample, we estimated separate logit regressions for each insurance setting that relate the (log) odds of dropping or losing coverage to various covariates, including initial health status as a measure of risk level.[8] Health state was transformed into a continuous variable (with "excellent" taking on the value of 1 and "poor" being 5).

All regressions were statistically significant according to the Wald test.[9] The multivariate analysis indicated that income, sex, and age are significantly related to the odds of dropping or losing coverage in all settings. Higher-income, older, or female workers in both the group and individual settings were less likely than lower-income, younger, or male workers to become uninsured. Those with a larger increase in wages were less likely than those with smaller increases in wages to drop or lose coverage in the group settings but not in the individual setting.

There was no effect of risk variation on the odds of dropping or losing coverage in the individual sample. However, being in worse health greatly increases the odds of losing or dropping group coverage. That is, the worse health status is, the greater the likelihood of dropping or losing all coverage in group markets, although the odds of dropping or losing coverage at any risk level are lower for large-than for small-group settings.[10]

Because the relationships of variables are complex in the logit functional form, and the numerical magnitudes of regression coefficients hard to interpret, we present some sample results derived from these regressions by means of a simulation. We simulated the probability of dropping or losing coverage as a function of health status for three hypothetical workers: a middle-age male with high income levels and growth, and a young male and a young female worker with lower income and growth (Exhibit 2).[11]

Study Results

At the median health status ("very good"), as expected, the coverage-loss rates for group coverage were consistently lower than those for individual coverage. However, the most striking finding is that this order is reversed for group workers with "fair" or "poor" health status. Sicker workers who began with small-group coverage were more likely to drop or lose any and all coverage compared to healthier workers in the same setting and compared to sicker workers who initially had individual

EXHIBIT 2
Probability Of Uninsurance After One Year Of Continuous Coverage, Among Three Hypothetical Insured Workers, By Type Of Coverage

Male age 28, family income $50,000 annually, expecting a 4% increase in income

	Probability of uninsurance by coverage type		
Initial average health status	Individual insurance	Small-group insurance	Large-group insurance
Excellent	0.23	0.13	0.08
Very good	0.23	0.18	0.11
Good	0.24	0.25	0.14
Fair	0.24	0.34	0.18
Poor	0.24	0.44	0.22

Male age 45, family income $80,000 annually, expecting an 8% increase in income

Excellent	0.16	0.05	0.02
Very good	0.16	0.07	0.02
Good	0.16	0.10	0.03
Fair	0.16	0.14	0.04
Poor	0.17	0.20	0.06

Female age 28, family income $50,000 annually, expecting a 4% increase in income

Excellent	0.17	0.09	0.06
Very good	0.17	0.13	0.08
Good	0.17	0.19	0.10
Fair	0.17	0.26	0.13
Poor	0.17	0.34	0.17

SOURCE: Authors' calculations.

coverage. Large-group workers in poor health were more likely than those in good health to drop or lose coverage, and they were almost as likely as individual workers in poor health were to drop or lose coverage. In the simulations as in the regressions, the rates of drop-ping or losing individual coverage did not vary strongly with health status.

Some evidence on the path by which higher risk affects a covered employee's vulnerability to dropping or losing coverage when employment status changes is shown in Exhibit 3. As

EXHIBIT 3
Percentage Of Workers Losing Employment And Losing Insurance, By Initial Insurance Setting And Health Status

			Percent losing or dropping coverage	
Insurance setting	Health status	Percent becoming nonemployed	Among nonemployed	Among employed
Large group	Good or better	8	20	4
	Fair or poor	11	51	7
Small group	Good or better	10	19	11
	Fair or poor	11	67	11
Individual	Good or better	18	18	20
	Fair or poor	27	9	17

SOURCE: Authors' calculations from SIPP data.

indicated there, poor health status modestly increased the probability that workers would become nonemployed (at any point in the second time period). But the likelihood of subsequent noninsurance for nonemployed high risks is much greater than that for low risks. Apparently, the much higher price for remaining insured faced by higher risks who lose small-group employment was the main cause of their overall higher rate of dropping or losing coverage, compared to low risks. Exhibit 3 also shows similar calculations for people who began with individual insurance. None of the differences in proportions across health status categories were statistically significant.[12]

Discussion

These results are consistent with a complex characterization of the effect of high risk on individual insurance premiums: high risks pay more if they seek individual coverage after they have become high risks, but individual coverage provides better protection (compared to group insurance) against high premiums for already individually insured people who become high risk. Specifically for an initially insured person of average or better risk, dropping or losing health insurance coverage is more likely if the coverage was expensive individual insurance than if it was cheaper and tax-subsidized group insurance. But group insurance has a tear in its net of protection: it leaves a person who becomes a high risk more vulnerable to dropping or losing any and all coverage than does individual insurance.

The point estimate from the simulations indicates that a young male high risk who initially had small-group coverage faces a 44 percent chance of becoming uninsured in the next period—a risk nearly twice as great as it would be if he initially had individual insurance. Somewhat ironically, the usual blame for such a person's lacking coverage will be laid at the door of the medically underwriting individual insurer, which quotes a high premium, rather than being referred in part to the group insurance system that plunged this person into such a vulnerable situation in the first place.

"Neither the individual nor the group insurance system is strictly preferable; they both have advantages and disadvantages."

In summary, in terms of long-run insurance protection, neither the individual nor the group insurance system is strictly preferable; they both have advantages and disadvantages. It might be possible to design a group policy that did provide the protection it now lacks: build in and charge for guaranteed renewability at class-average premiums for small-group-insured people upon conversion to individual coverage from the same insurer. However desirable this feature might be from a social perspective, and despite the fact that group-to-individual conversion is offered by some insurers, it might be a hard sell to many employers. Employers may want to offer insurance to attract and retain employees; the employer may balk at appearing to pay more up front to provide protection for employees who quit or get fired. Perhaps wise employers might see that by offering workers a less risky framework for insurance purchasing, they could get better workers for the same money wage or could get workers to sacrifice even more alternative compensation for such an attractive benefit.

At least in the short run, leveling the tax playing field between individual and group coverage might be help with (although not solve) the problem of retaining protection for high risks, as with many others. At a minimum, some of the negative perception of individual insurance might be undeserved.

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NOTES

1. M.A. Hall, "Of Magic Wands and Kaleidoscopes: Fixing Problems in the Individual Market," *Health Affairs* 21 (2002): w353–w358 (published online 23 October 2002; 10.1377/hlthaff.w2.353).

2. For information on guaranteed renewability in individual insurance and the prevalence of this feature, see M. Pauly, A. Percy, and B. Herring, "Individual versus Job-Based Health Insurance: Weighing the Pros and Cons," *Health Affairs* 18, no. 6 (1999): 28–44; B. Herring and M.V. Pauly, "Incentive-Compatible Guaranteed Renewable Health Insurance Premiums," *Journal of Health Economics* 25, no. 3 (2006): 395–417; M.V. Pauly and B. Herring, "Risk Pooling and Regulation: Policy and Reality in Today's Individual Health Insurance Market," *Health Affairs* 26, no. 3 (2007): 770–779; V. Patel and M.V. Pauly, "Guaranteed Renewability and the Problem of Risk Variation in Individual Health Insurance Markets," *Health Affairs* 21 (2002): w280–w289 (published online 28 August 2002; 10.1377/hlthaff.w2.280); and R. Feldman and J. Schultz, "Consumer Demand for Guaranteed Renewability in Health Insurance," *Journal of Consumer Policy* 27, no. 1 (2004): 75–97.

3. E.C. Ziller et al., "Patterns of Individual Health Insurance Coverage, 1996–2000," *Health Affairs* 23, no. 6 (2004): 210–221.

4. M.V. Pauly and L.M. Nichols, "Ten Myths of the Uninsured," *AHIP Coverage* 45, no. 3 (2004): 16–22.

5. M.K. Bundorf and M.V. Pauly, "Is Health Insurance Affordable for the Uninsured?" *Journal of Health Economics* 25, no. 4 (2006): 650–673.

6. B.C. Madrian, "Employment-Based Health Insurance and Job Mobility: Is There Evidence of Job-Lock?" *Quarterly Journal of Economics* 109, no. 1 (1994): 27–54.

7. U.S. Census Bureau, *Survey of Income and Program Participation User's Guide*, 3d ed., 2001, http://www.sipp.census.gov/sipp/usrguide/sipp2001.pdf (accessed 28 March 2008).

8. This flexible form allows all coefficients to differ across initial insurance setting, our main focus.

9. Regression results are available in a statistical appendix, online at http://content.healthaffairs.org/cgi/content/full/hlthaff.27.3.w242/DC2.

10. We also explored (results not shown) another specification in which health state was a binary, with those with "fair" or "poor" health in one category, and those with "good," "very good," and "excellent" in the other. The measures of goodness of fit were less good for this specification, but the overall pattern was the same as that shown with the continuous measure: people initially with small-group coverage who were in fair or poor health were more likely than those in good to excellent health to drop or lose coverage, whereas there was no effect of health status for those with individual coverage.

11. Although we selected these relative income levels primarily to illustrate the effect of changing income on discontinuation of insurance coverage, we note that the lower income levels are close to the U.S. median income and to the average income of individual insurance purchases, as documented by Henry J. Kaiser Family Foundation, "How Non-Group Coverage Varies with Income," 4 February 2008, http://www.kff.org/insurance/upload/7737.pdf (accessed 28 March 2008).

12. Logit regressions adding change in employment status as an explanatory variable, in results not shown, found that the change in status is a statistically significant predictor of dropping coverage for workers initially in small and large groups, but for the individual sample, change in status has a small but statistically significant effect decreasing the likelihood of dropping or losing coverage.