ABSTRACT

Issues of unequal risk distribution among sickness funds are given increasing attention in the current discussions on the reform of the statutory health insurance system in Germany. This paper examines the structural determinants of risk distribution and points toward the links between social stratification, competition, health risk and insurance status. A model showing the links between basic structural determinants is presented. Using health survey data from Germany and the U.S., statistical analyses are conducted. The results support the model and indicate its applicability for both health care systems. The paper concludes by indicating the relevance of such findings for health policy and future research.

The performance of national health care systems can be evaluated by various criteria: In Germany, as in the United States, since the end of the seventies, cost containment has been increasingly emphasized as the primary criterion for evaluation. By this standard, Germany, which spends 9.4% of its GDP on health care, does comparatively well when compared to the U.S. and other western countries. When access is used as a criterion, Germany's performance is even more impressive; under the universal health insurance system, virtually the entire population (98%) receives a very comprehensive set of benefits through enrollment in more than 1,200 sickness funds, and a relatively small number of private insurance companies.

As elsewhere, however, the continuous rise in health care expenditures has led to increasing concerns about the financial viability of the health insurance system. Accordingly, there has been widespread discussion of proposals to modify the present system. In fact, current plans for structural reform of the statutory health insurance system include increasing competition among the sickness funds as a means to increase efficiency and cost containment. It is an open question whether increased competition among sickness funds will ultimately lead to greater cost containment, though the U.S. experience with competition raises serious doubts.

There is the very real possibility, then, that structural reforms which increase competition may also diminish Germany's commitment to providing comprehensive benefits and adequate medical care to all the members of society. Sickness funds which face rising expenditures because of their risk burden may raise premiums (contribution rates) as is already commonly done, and/or reduce benefits to the minimum required by law. In either case, the result is increased inequity in the health system. In addition, increased poverty in Germany, especially in the eastern states, and the fact that low income groups are especially likely to be high risk, have made the current situation even more volatile. For Germany, as for the U.S. and other western communities, the insurance status of high risk groups is a critical issue in both the struggles for cost containment and for increased access.

Comparative Research Questions, Background and Hypotheses

The purpose here is to examine the increasingly important issue of risk distribution through a comparative analysis of survey data on the health status and health insurance coverage of representative samples of German and U.S. citizens. In this analysis, the most important and fundamental research question is: what are the basic principles, or factors, that lead to an unequal distribution of risk groups among sickness funds or insurance carriers? In response to this question, this
section of the paper provides (1) discussion and definition of the concept of health risks, (2) a brief description of the major structural features of both insurance systems that are especially relevant to risk distribution, and (3) statement of the major hypotheses on social status, insurance status, and health status and risk. The following sections report on the survey design, sample, and data, the results of the analysis, and the implications of the findings.

In this perspective, distribution of risk groups among insurers is seen primarily as a product of the social processes of stratification and competition. As Deborah Stone has argued, the concept of "risk" has become significant in modern welfare states as new sociomedical technologies are increasingly employed to identify people who are likely to develop disease or disability. In epidemiological terms, risk refers to the probability of the occurrence of disease in a defined population over a specific time period. Because the risk of disease is profoundly influenced, not only by genetic and biological factors, but also by life style and environment, the degree of risk for any particular group depends upon their relationship to the larger social structure, and especially their socioeconomic status. In general, higher risks, and higher morbidity and mortality, are associated with lower socioeconomic status, whether measured in terms of income, employment and occupation, and/or minority-group membership. The correlation between risk of disease, recognition of illness, and use of health services is complex; in general, however, high-risk groups are more likely to need and to use a greater volume of health services, particularly the more costly ones. In addition, because of the association between risk and socioeconomic status, high-risk groups are often unable to pay their full share of insurance costs, or may be completely uninsured. As Stone argues, identification of those who are "at risk" becomes important for employers, insurance companies, and government agencies who are socially and financially responsible for their health and welfare. Further, whereas the concept of "risk" may be most significant for profit-oriented commercial insurance companies, not-for-profit companies or sickness funds also have a powerful economic incentive to minimize their financial risks and control costs in order to remain financially viable.

In this analysis, the similarities and differences between the health insurance systems of Germany and the U.S. are critical. The most important differences are, of course, that Germany has a universal health insurance system, in which comprehensive coverage is mandated by the federal government for almost the entire population while the United States is a mixed insurance system which is primarily private and voluntary, with government insurance programs for the elderly (Medicare) and the poor (Medicaid). On the other hand, there are important similarities in structure that are especially significant for this analysis. In both countries, insurance status (e.g. enrollment and membership) is primarily determined by employment and occupational status. And in both countries, insurance benefits are administered through a very large and complex system of insurance companies or sickness funds.

The structure of the health insurance system in Germany is largely determined by the Reichversicherungssordnung, the R.V.O. (German Insurance Regulations). The basic principles of these regulations are that health insurance is mandatory for all but relatively high income groups, but that the obligations differ according to the individual's occupation and income. Blue collar workers and all other employees whose income is below a changing ceiling (currently 4,575 DM per month) must join a sickness fund associated with their factory (Betriebkrankenkassen: BKK) or their craft, or other occupation, if such a fund is available in their area. When sickness funds are not available through their workplace or work association, these workers are obligated to join a regional sickness fund (Ortskrankenkassen: AOK). In every case, the RVO requires that all sickness funds provide at least the same comprehensive benefits to all members, and that employers and employees share equally in contribution rates. Sickness funds are governed by local boards made up of employee and employer representatives. RVO regulations specify that they must accept all eligible employees, but allow funds to offer additional benefits, and to adjust contribution rates to reflect utilization and expenditures.

White collar workers, civil servants, and the self-employed face different obligations. White collar workers who make more than the ceiling must join a sickness fund as well, but may choose between the sickness funds in their factory or region, or join one of the seven large sickness funds organized especially for white collar workers (Ersatzkassen: EKK). These funds must conform to all RVO regulations, but can, and do, offer additional benefits, such as private hospital rooms, access to prestigious specialists, and rehabilitation facilities. In addition, because they enroll younger, more affluent, and healthier workers, their contribution rates are often lower than those of the BKK or AOK. Civil servants and high income, self-employed groups are exempted from the mandatory insurance laws, and may choose private insurance, any of the available sickness funds in their region, or even to self-insure.
Within Germany, there is some concern that the distribution of risk groups among sickness funds is essentially produced by the RVO regulations, which lead, of course, to an insurance system that is stratified by occupation and income. On the other hand, the segregation of risk groups is not unique or peculiar to Germany, but has been documented in the Netherlands as well as the U.S. Rather, the concentration or segregation of risk groups is likely in any society in which insurance status is primarily based on employment and occupation, and multiple insurers compete for enrollment from various groups. In Germany today, more than 50% of all employees can choose between sickness funds because they are white collar, above the income ceiling, are civil servants or are self-employed. Sickness funds and private insurance companies can and do compete for members on the basis of benefits, premiums, services, and even prestige.

Employment is also the most significant factor for insurance status in the U.S., not through government mandate, of course, but voluntarily, in response to the labor market, collective bargaining, and a wide variety of other factors. Of those under 65 who have health insurance coverage, approximately 65% are enrolled in employer sponsored plans. Like Germany too, the U.S. health insurance system is administered through a wide range of insurers. The most important difference here, of course, is the dominance of commercial insurance companies in the U.S. Whereas only 8% of the German population receive their primary coverage from a private commercial company, more than 50% of the U.S. population does so. In the U.S., then, as in Germany, insurance status is primarily based on employment and multiple insurers that compete for enrollment from various groups. In other words, both systems are characterized by stratification and competition. At the same time, of course, competition is much less restricted in the U.S. than in Germany. Voluntary enrollment for almost all under 65 in the U.S. means that the percentage of the U.S. population that potentially can choose among insurance plans, and is thus subject to competition, is much larger than in Germany. The absence of mandated benefits means that U.S. companies can and do compete on a much wider range of benefit plans than do German insurers. And the use of risk rating by U.S. companies, which is prohibited in Germany, means that companies can and do compete by seeking to enroll low-risk and to avoid high-risk groups. All of these factors, then, especially differences in risk rating, suggest that while stratification and competition are likely to lead to a concentration of risk groups in both countries, less restricted competition in the U.S. is likely to lead to more extreme effects.

The substantial effect of occupational and income status on health insurance status provides the starting point for our analysis on general principles of risk segregation. In many western societies, occupational and income status are important factors in health insurance enrollment, but these two factors are expected to play an especially decisive role in Germany and the U.S. Since occupational status is, in fact, the organizing principle in Germany's insurance regulations, we expect the effects of occupational status on insurance status to be stronger in Germany than in the U.S. In contrast, income is expected to play a stronger role in the U.S. system, where health insurance is largely voluntary and private.

Occupation and income are also important factors in health status and the risk of disease. Many epidemiological studies have documented lower health status in the lower income and occupational groups in most western nations. Accordingly, in both countries we expect that social status has a significant effect on health status (Hypothesis One). Since Germany also provides a much broader network of state-supported social welfare services than the U.S., the association between social status and health status is expected to be somewhat weaker in Germany, and stronger in the U.S.

On the basis of these projected effects of social status on both insurance status and health status, we also expect a significant correlation between insurance status and health status in both countries (Hypothesis Two). Further, since in both countries there is substantial competition among insurance carriers, we expect that high risk groups are distributed unequally among the various insurance carriers and sickness funds (Hypothesis Three). Since there is much greater latitude for competition among insurers in the U.S., however, we expect that the concentration of risk groups will be substantially greater in the U.S. than in Germany.

The assumption which underlies these hypotheses, of course, is that the explanatory model (see Figure 1) is applicable to both nations, and to substantially different health systems. In general, then, the study is intended as an examination of the thesis that the basic determinants of risk segregation in pluralistic and decentralized health insurance systems are comparable, and, to some extent, independent of degree of state regulation. In short, the model being tested here assumes that the effects of stratification and competition on risk segregation can be modified by governmental regulation, but...
Figure 1
Model for Research Hypotheses

Social Status
- Occupation
- Income

(Hypothesis 1)

Insurance Membership

(Hypothesis 2)

Health Status

High Risk Groups

(Hypothesis 3)

Risk Group Distribution

Table 1
Income and Health Insurance Enrollment in Germany (In %)

<table>
<thead>
<tr>
<th>Sickness Fund Membership</th>
<th>Below Average</th>
<th>Below Average</th>
<th>High</th>
<th>All Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ortskrankenkassen (AOK)*</td>
<td>58.2</td>
<td>37.4</td>
<td>33.3</td>
<td>16.4</td>
</tr>
<tr>
<td>Betriebskrankenkassen (BKK)*</td>
<td>15.2</td>
<td>20.7</td>
<td>21.7</td>
<td>16.4</td>
</tr>
<tr>
<td>Ersatzkrankenkassen (EKK)</td>
<td>22.8</td>
<td>30.5</td>
<td>28.7</td>
<td>40.0</td>
</tr>
<tr>
<td>Privatkrankenkassen (PKK)</td>
<td>3.8</td>
<td>7.9</td>
<td>12.0</td>
<td>23.6</td>
</tr>
<tr>
<td>Other</td>
<td>---</td>
<td>3.6</td>
<td>4.3</td>
<td>3.6</td>
</tr>
<tr>
<td>Totals (percentages)</td>
<td>10.1</td>
<td>39.0</td>
<td>23.0</td>
<td>17.9</td>
</tr>
<tr>
<td>(N)</td>
<td>(79)</td>
<td>(305)</td>
<td>(258)</td>
<td>(140)</td>
</tr>
</tbody>
</table>

CHI² = 63.48; p<0.001

Table 2
Income and Health Insurance Enrollment in the United States (In %)

<table>
<thead>
<tr>
<th>Insurance Membership</th>
<th>Low</th>
<th>Below Average</th>
<th>Above Average</th>
<th>High</th>
<th>All Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Insurance</td>
<td>25.5</td>
<td>6.8</td>
<td>8.5</td>
<td>1.2</td>
<td>8.2</td>
</tr>
<tr>
<td>Public (Medicaid/Medicare)</td>
<td>30.9</td>
<td>15.2</td>
<td>8.5</td>
<td>4.7</td>
<td>13.0</td>
</tr>
<tr>
<td>Blue Cross/Blue Shield</td>
<td>6.4</td>
<td>20.0</td>
<td>15.9</td>
<td>23.8</td>
<td>18.1</td>
</tr>
<tr>
<td>Private (Commercial)</td>
<td>22.3</td>
<td>41.6</td>
<td>47.3</td>
<td>53.5</td>
<td>43.4</td>
</tr>
<tr>
<td>Other</td>
<td>14.9</td>
<td>16.5</td>
<td>19.9</td>
<td>16.9</td>
<td>17.2</td>
</tr>
<tr>
<td>Totals (percentages)</td>
<td>12.1</td>
<td>39.9</td>
<td>25.9</td>
<td>22.1</td>
<td>100.0</td>
</tr>
<tr>
<td>(N)</td>
<td>(94)</td>
<td>(310)</td>
<td>(201)</td>
<td>(172)</td>
<td>(777)</td>
</tr>
</tbody>
</table>

CHI² = 109.17 p<0.001
so long as stratification and competition exist, some segregation of risk groups will occur.

In the following pages, we report on the results of an empirical test of this model. We emphasize, however, that this study is not intended as a detailed and comprehensive comparison of the two insurance systems. The primary goal, instead, is a comparative analysis of those structures and conditions in both countries that are the principal factors in risk segregation. In this sense, the two nations examined here are not "objects" of our comparative analysis, but, rather, provide the "context" for the analysis.26 In short, while many comparative studies concentrate on the interesting detailed differences between countries, we have opted here for a broader vision that emphasizes basic similarities and common problems.27

Methods and Findings

For a first test of our hypotheses, we used data from the German-American Health Survey. This study was conducted in 1984/85 and used a random survey for telephone interviews of adults in Northrhine-Westfalia and Illinois (for methodological details see Ref. 28). The sample size was 802 completed interviews in Northrhine-Westfalia and 804 in Illinois. In Germany 43 % of those interviewed were male and 57% female; in the U.S. 44% were male and 56% were female. Average age in the German sample was 47 years (minimum 18, maximum 74) and 42 years (minimum 18, maximum 84) in the American sample.

For a test of the relationship between social status and health insurance enrollment in our sample, we examined the distribution of income groups and occupational status groups by the kind of insurance in both countries. Income groups were based on net household income in 1984. The four groups included I: persons with an income close to or below the poverty line; II: persons with an income higher than Group I, but below average income; III: persons with above average income but not in the highest income quartile; IV persons in the highest quartile of the income scale in the respective national samples. For the coding of the occupational prestige groups, we used the Standard International Occupational Prestige Scale by Treiman.29 Cases were coded into four groups of occupational prestige scores based on quartiles. Cases without a reported occupation were grouped according to the Occupational Prestige Score of the head of household.

Detailed information on the basic association between social status and health insurance status has been published elsewhere (for the U.S., Ref. 18, for Germany, Ref. 9), and is, therefore, only summarized here. In the German sample, 56.8% of the lowest occupational prestige group belong to the Allgemeine Ortskrankenkasse (AOK) and 29.5% to the Betriebskrankenkasse (BKK). Overall, almost 90% of the lowest occupational prestige groups are members of the RVO sickness funds. In the U.S. sample, as expected, the uninsured or publicly-insured were over-represented in the lower occupational prestige groups. Overall the expected systematic correlations between occupational status and insurance enrollment in both nations were found in our samples. For Germany the effect caused by the rather strict state regulations in the RVO is significantly stronger.

As expected, too, Table 1 shows for Germany an over-representation of the lowest income groups in the AOK (58.2% versus 34.4% of all cases). Persons in the highest income group are much more frequently members in the Ersatzkassen (40.0% versus 30.8%) and in the private funds (23.5% versus 11.6%). For the U.S., Table 2 shows a clear over-representation of the lowest income groups in the uninsured or publicly-insured categories. The highest income groups are more frequently found with private health insurance. As expected, the effects of income status on type of insurance are stronger in the U.S. than in Germany. Thus, the correlations described in the previous section between income and insurance status are found in both samples.

Our first hypothesis concerns the correlation between social status and health. In this instance, we expect, of course, lower health status among the lower social status groups. Three indicators for health status were used in the present analysis: (1) self-perceived health status (a four-point scale ranging from "bad" or "not so good" to "very good"); (2) number of physical symptoms in the last 12 months (10 items from the CHAS list modified by Cockerham et al.28); and (3) number of psychological symptoms in the last 12 months (12 items, 1 scale, modified by Cockerham et al.30). For comparability in both samples, the number of symptoms were recoded as follows: physical symptoms: 0 = low, 1 or 2 = medium, 3 or more = high; psychosomatic symptoms: 1-13 = low, 14-16 = medium, 17 or more = high. For clarity, Figures 2 to 5 present only percentages for the highest scores, i.e. for poorest health status. Chi-squared tests were computed for all hypotheses. Figures 2 and 3 show the proportions in poorest health in the respective income groups for both nations. The lowest income groups in both nations show (by far) the highest health burdens with respect to all three indicators. Moreover, the distributions indicate a linear relationship between increasing income and improved health status for the American sample.
Figure 2
Health Status and Income in Germany

<table>
<thead>
<tr>
<th>Income Groups</th>
<th>Poor or Fair Health</th>
<th>Highest Level of Psychological Status</th>
<th>Highest Level of Physical Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>I (Low)</td>
<td>50.0</td>
<td>36.5</td>
<td>36.2</td>
</tr>
<tr>
<td>II</td>
<td>51.8</td>
<td>39.0</td>
<td>36.2</td>
</tr>
<tr>
<td>III</td>
<td>42.6</td>
<td>34.2</td>
<td>36.2</td>
</tr>
<tr>
<td>IV (High)</td>
<td>15.8</td>
<td>26.5</td>
<td>32.6</td>
</tr>
</tbody>
</table>

Chi-squared test results:
- Avg. = 14.9 Chi$^2$ = 27.5**
- Avg. = 37.1 Chi$^2$ = 8.4
- Avg. = 37.1 Chi$^2$ = 27.3**

Figure 3
Health Status and Income in the U.S.A.

<table>
<thead>
<tr>
<th>Income Groups</th>
<th>Poor or Fair Health</th>
<th>Highest Level of Psychological Status</th>
<th>Highest Level of Physical Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>I (Low)</td>
<td>17.5</td>
<td>33.1</td>
<td>26.9</td>
</tr>
<tr>
<td>II</td>
<td>49.5</td>
<td>33.2</td>
<td>28.9</td>
</tr>
<tr>
<td>III</td>
<td>48.1</td>
<td>33.1</td>
<td>18.1</td>
</tr>
<tr>
<td>IV (High)</td>
<td>18.3</td>
<td>33.3</td>
<td>18.1</td>
</tr>
</tbody>
</table>

Chi-squared test results:
- Avg. = 5.6 Chi$^2$ = 79.9***
- Avg. = 30.5 Chi$^2$ = 36.0***
- Avg. = 33.9 Chi$^2$ = 12.4*

* probability ≤0.05  ** probability ≤0.01  *** probability ≤0.001
Figure 4
Health Status in Various German Sickness Funds

Figure 5
Health Status in Various U.S. Insurance Groups

*Sickness Funds*
- Poor or Fair Health Status % - Only
  Avg. 14.9 Chl = 37.3
- Highest Level of Psychological Distress % - Only
  Avg. 37.3 Chl = 5.0
- Highest Level of Physical Symptoms % - Only
  Avg. 37.3 Chl = 8.0

*Insurance Groups*
- Poor or Fair Health Status % - Only
  Avg. 5.7 Chl = 60.2**
- Highest Level of Psychological Distress % - Only
  Avg. 30.1 Chl = 12.9
- Highest Level of Physical Symptoms % - Only
  Avg. 34.1 Chl = 12.5

* * probability ≤0.05  ** probability ≤0.01  *** probability ≤0.001
Our second hypothesis concerns the unequal distribution of health burdens among different types of insurance carriers. According to our model on the correlations between social status, health insurance and health status, we expect a higher proportion in poor health for the RVO funds in Germany and among the uninsured or publicly-insured in the U.S. As Figures 4 and 5 show, the predicted relationships are confirmed only for the indicator "self-perceived health status." The distribution of persons with poorer subjective health is according to our hypothesis in both nations, and highly significant. For both symptoms indicators there are higher burdens among the uninsured in the U.S. only. These results, then, only partly support our assumptions about such correlations. Our third, and most important hypothesis, concerns the systematic segmentation of high risk groups. For our respective analyses, we have grouped individuals on the basis of their scores on all three health indicators. Persons who indicated lower health status on all three indicators (above the sample mean) were classified as Risk Group I. Persons whose scores were in the upper quartile of all cases based on all three indicators were classified as Risk Group II (very high risk group). For the statistical comparisons, odds ratios were computed (for methods see Ref. 31). Figure 6 gives the results on the respective statistical tests. In Germany the probability of RVO members belonging to Risk Group I was 1.6 times higher than for persons in other funds. The probability of belonging to Risk Group II is, among RVO members, about twice as high. But in the U.S., there is an unequal distribution of risk groups which is even higher. The uninsured or publicly insured run a 1.7 times increased probability of belonging to Risk Group I, and an almost four-fold probability for the very high risk group (Risk Group II).

Discussion

The results of the statistical analyses confirm, with some exceptions, the correlations expected from our model. On the basis of the general association between social status, health insurance enrollment, and health status, we have examined hypotheses concerning the systematic and unequal distribution of risk groups among sickness funds and insurance carriers. Results on the correlation between social status (income) and health status in relation to the first hypothesis confirm once again the well-known relationship between lower class membership and greater health burdens. As for Hypothesis 2, a general association between health insurance enrollment and health status was not unequivocally confirmed. Yet perceived health status was systematically and significantly lower in both the RVO funds in Germany and among the uninsured and publicly insured in the U.S. The most important result of the analysis, however, is the confirmation of Hypothesis 3 on segregation of risk groups. In both countries, there is a systematic unequal distribution of risk groups among various sickness funds and insurance carriers. Very high risk groups in Germany are more than twice as likely to be members of RVO sickness funds than others, and in the U.S., where the imbalance is even stronger, more than four times as likely to be uninsured or publicly insured.

The results presented here are also in accordance with results from other studies. For the U.S., statistics from the Center of Health Administration Studies show higher health burdens among the uninsured and publicly insured when perceived health status, number and severity of symptoms are considered.32 For Germany, the results from the German Cardiovascular Prevention Study indicate substantially higher health burdens and risks among the AOK or RVO insured. This unequal distribution includes, among others, chronic diseases such as rheumatism, diabetes, high blood pressure, angina pectoris and myocardial infarction.33 The higher burden among the RVO funds is especially apparent when the number of chronic diseases per patient is considered.34 Other statistics show, with respect to frequency and duration of hospital stays, a higher burden among the RVO funds.35 Overall, then, these studies also confirm our hypothesis about a correlation between insurance status and risk group distribution.

As suggested in our introduction, the most important and fundamental research issue here is to identify the basic factors and principles that lead to unequal risk distribution among sickness funds or insurance carriers. The hypotheses tested here were based on a model which involves two essential factors: stratification of insurance enrollment and competition among insurance carriers and sickness funds. The confirmation of these hypotheses also supports, then, the more general model from which they were derived, and suggests that the same factors may operate in any system characterized by stratification and competition.

With respect to earlier explanations about risk group segregation in Germany, these results suggest that it is not the RVO regulations on mandatory membership which are the fundamental cause of risk group segregation. Rather the regulations are instead a legal expression and continuation of the historical development of social stratification in Germany. In effect, the system implemented in 1893, which provides the basic structure for the present system, was essentially a stratified
Figure 6
Risk Group Membership by Type of Insurance, Germany

Figure 7
Risk Group Membership by Type of Insurance, U.S.A.
system, and remains so today. In countries like the U.S., where insurance is provided through a market economy, it is clear that in the absence of government regulations, the interaction of stratification and competition will produce even more drastic segregation of risk groups.36

Given this background, regulations in the statutory health insurance system in Germany (GKV) should be judged primarily for their protective function. To date, these regulations, especially those that make membership mandatory, insure a minimum set of comprehensive benefits and prohibit risk selection, have minimized the adverse effects of competition and stratification. In our view, the proposed reform of the GKV would weaken the protective function of these regulations, and, as the evidence from the U.S. suggests, lead to a greater segregation of risks, primarily by a transfer of lower risk groups from the RVO funds to the Ersatzkassen (EKK), or white-collar funds.37

In our view, too, the German experience is especially significant for the U.S. and especially for those proposals for universal health insurance based on employment and administration by multiple insurers. The German experience suggests, in fact, that a pluralistic and decentralized model of universal health insurance that includes employer participation and limited competition among insurers will inevitably confront some problems in risk distribution, but that even the highest risk groups can be provided with the same comprehensive coverage as their lower risk brethren, and that costs can be better contained in the process. A more extensive discussion of implications for the U.S. will be found in our other work.5

Of course, further research is needed to examine these issues of risk distribution in other health insurance systems. For the future, there are several urgent tasks: (1) the development and testing of more meaningful risk categories; (2) development of measures on the dimensions and degrees of competition among insurers; (3) more differentiated analysis within the U.S. and German insurance systems (i.e. risk distribution within the RVO funds, and within the private sector in the U.S.); and (4) additional comparative studies. Given the existing plans for European integration, there is an especially urgent need for analysis of risk distribution in E.C. membership countries after 1992.

References


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