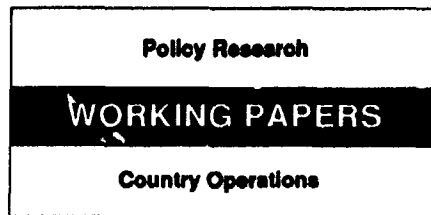


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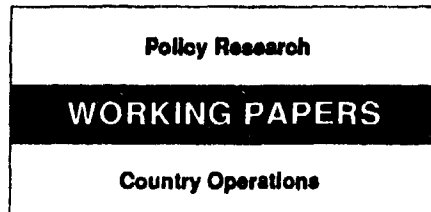
Reforming Health Care

A Case for Stay-Well Health Insurance

Željko Bogetić
and
Dennis Heffley

Many health care reform proposals expand insurance coverage without fundamentally changing the structure of health insurance. The stay-well plan used in Mendocino County, California, since 1979, offers an alternative insurance structure that provides direct incentives for consumers to control utilization and adopt healthier lifestyles.

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All countries — whether industrial, developing, or in transition to a market economy — are interested in health care reform. A central focus of reform everywhere is to make patients more responsive to health care costs without diluting the protection offered by public or private insurance.

Conventional insurance offers customers little incentive to monitor their own use of health care services or to adopt and maintain better health habits.

Bogetic and Heffley describe an alternative health insurance structure first adopted in Mendocino County, California, in 1979, and compare it with conventional forms of insurance. The Mendocino or “stay-well” plan offers consumers direct incentives to control their use of health care services and to adopt healthier lifestyles. How well this insurance can contain health care costs depends on the size of the incentives and consumer responsiveness to them.

Conditions in some developing countries and in many countries moving to market-based economies — overuse of services, poor health habits, and declining real incomes — improves the likelihood of a favorable response to such incentives.

How to structure the stay-well system depends on the country, but the stay-well plan is

a general, flexible form of insurance that subsumes most conventional plans as special cases. The rewards for low use might take many forms. As in the Mendocino plan, the rewards might be a credit to a retirement account, but they could just as easily be annual cash rebates or credits against out-of-pocket expenses that exceed an individual's or family's spending goal in a future period.

Administration of the stay-well plan appears not to be unduly complex. If anything, incorporating stay-well incentives in a single-payer or national health care system would be simpler than incorporating them in a self-insured fund. The success of the plan hinges on whether incentives shift the frequency distribution of health care spending by reducing unnecessary utilization in the short-run and through better health care habits, reducing long-run costs.

Despite additional payments to low users, the stay-well plan could be less expensive than conventional plans with similar coverage. As in any insurance plan, solvency is enhanced by larger groups, better risk-pooling, economies of scale in administration and claims processing, and greater bargaining power with health care providers.

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Reforming Health Care:
A Case for Stay-Well Health Insurance

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Figure 1: Conventional Insurance Plans.

Figure 2: The Stay-Well Plan.

REFORMING HEALTH CARE

Zeljko Bogetic and Dennis Heffley¹

I. BACKGROUND.

"There is a pervasive feeling of imminent crisis with respect to the delivery of medical services in the United States. Expenditures on medical care are rising without any offsetting decline in our mortality rates -- which compare poorly with those of many other countries. The costs of medical care are increasing at an accelerating rate. Many big-city hospitals, which service the poor, are in a state of financial distress. Medicare and Medicaid, the programs developed to enable the disadvantaged to obtain medical care, set off the current price spiral by creating a rapid increase in the demand for medical services while the supply of those services could be increased only slowly. The middle class now finds it difficult to obtain the kind of medical care it has come to expect, namely that of an interested, warm physician who is familiar with the family history. There is a perceived over-all shortage of nurses and physicians. Moreover, many concerned individuals believe that the existing physicians are not distributed well. They argue that there are relatively too few primary physicians and too many specialists, too few physicians in the inner cities and in rural areas, and too many in the affluent suburbs." (Lave and Lave, 1970; pp.253-254).

Much attention is being given to possible health care reforms in the United States.² The preceding description of problems, written more than two decades ago, suggests that the problems of the health care system are not new. Nor are the problems unique to the United States. Efforts to rethink and reform health care systems are widespread in other developed countries, Eastern Europe, and less developed countries in general.³

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2. Health care reform has emerged as a critical element of the Clinton agenda, but even the previous administration's economic advisors had come to view reform as an important issue. See Chapter 4 ("The Economics of Health Care") of the January 1993 *Economic Report of the President* for a thorough overview of the issues and a discussion of various reform proposals.

3. Health has been selected as the primary focus of the 1993 *World Development Report*, reflecting the concern of The World Bank and other international agencies for improving health care in developing countries and better understanding the role of health in stimulating economic development. In a survey of the link between health and development and the contribution of health research, Birdsall (1990) identifies "Analysis of alternative financing

Escalating expenditures and lack of universal insurance are the focal points of American health care reform, while in Britain, where expenditures are substantially lower and services are available to all, the length of queues, quality of services, and internal misallocation of medical resources have driven reform efforts. Many Eastern European nations face the dilemma of trying to maintain universal access to health care services in the face of sharp declines in public sector revenues associated with general economic reforms. The health care systems in these transitional economies often suffer from overstaffing, unnecessarily large physical facilities with inadequate medical equipment, and overutilization of services.⁴ Health care reform in the LDCs is focused more on the fundamental problems of inadequate medical resources (providers, facilities, equipment and supplies), the geographic distribution of these resources, and the failure of financing mechanisms to instill providers and patients with adequate concern for the cost of care. Between and within these blocks of countries there clearly are differences in the urgency, nature, and scope of health care reform efforts. Yet common elements do exist, and lessons learned in one context may help to solve related problems in other settings. This, of course, is why current U.S. health care reform efforts are being monitored closely by other countries and international agencies such as The World Bank.

In addition to common concerns about how to finance and control rising health care expenditures,⁵ many countries face similar problems in encouraging healthier lifestyles that would reduce the need for medical intervention. While some developed countries report significant reductions in per capita consumption of tobacco and distilled spirits,⁶ personal health habits remain poor in many areas, including Central and Eastern Europe. For example, a recent review of Bulgaria's public sector notes that: "Indicators of the health of the population in Bulgaria show an overall pattern that compares unfavorably with Western Europe but is typical of the countries in Central and Eastern Europe." The report further notes that "...the main source of differences in life expectancy between Bulgaria and other countries is in diseases of the circulatory system, with mechanisms for health care, and alternative mechanisms for controlling costs" as a key area of potentially fruitful research.

4. For a detailed discussion of the problems and prospects for health care reform in these countries, see Preker and Feachem (1993).

5. Korea, for example, has experienced very rapid increases in health expenditures. In the 1980-1985 period, real health expenditures grew at an annual rate of almost 17 percent, of which 15.4 percent was attributable to rising utilization and intensity, only 1.4 percent of the increase was due to demographic factors. Overutilization appears to be a significant problem in Korea, despite considerable "out-of-pocket" financing (51 percent in 1985). For further details of the Korean experience, see De Geyndt (1991).

6. See, for example, Tables No.201 (p.123) and No.209 (p.127) of the *Statistical Abstract of the United States* (1991).

particularly high levels of stroke." (The World Bank, 1993a; ch. 6). In Hungary, where mortality rates are among the highest in the world, "...expenditures have not secured large gains in health standards, primarily because of unhealthy lifestyles and a bias toward curative hospital care." (Preker, 1993; p.4). Similarly, in a recent World Bank study of Romania, it was noted that morbidity patterns reflect "... (a) poor individual preventive health measures; (b) unhealthy behavior patterns (i.e., smoking)..." and that "circulatory diseases are the most important cause of death and disability, and account for 10 percent of hospitalizations." (The World Bank, 1992, p.107). Similar patterns exist in other Eastern European countries, but the incidence of behaviorally-induced diseases is also high in some Latin American countries. These problems have contributed to rising utilization rates and the escalation of health care costs, causing a number of countries (e.g., Chile, Costa Rica, and Brazil) to embark on major health reforms.⁷

The purpose of this paper is not to discuss U.S. health care reform, about which much has been written, but rather to describe an innovative, more flexible, and more general form of health insurance that has been overlooked in current discussions of reform. Some ideas about how this type of insurance might be adapted to a broad range of health care systems, regardless of whether insurance is privately or publicly funded, also will be given. The remainder of the paper is organized as follows. Section II describes a fundamental problem in most health insurance arrangements and poses a question that is central to the success or failure of proposed reforms. Properties of conventional health insurance are described in Section III, while Section IV outlines the essential features of an innovative plan that has operated successfully in one California county school system for more than a decade. Adaptation of this plan to national health care systems is discussed in Section V, and some final remarks are offered in Section VI.

II. A RECURRENT QUESTION: HOW CAN PATIENTS BE MADE MORE RESPONSIVE TO THE COST OF HEALTH CARE WITHOUT REDUCING INSURANCE PROTECTION?

To ensure greater access to services and reduce the risk of financial loss from illness, many health care systems have severed the link between the utilization and financing of health care services. This severance occurs in systems of socially provided care, as in Britain, as well as in systems where government serves only as the principal insurer, such as Canada. In both cases, health care services ultimately are financed through general tax revenues rather than direct user charges. Under both arrangements, effective prices at the time of utilization are negligible. The consumer is insulated from risk but also becomes less aware of the true social cost of providing health care. The fully insured consumer may have less incentive to undertake personal

7. See *World Development Report* (1993b), chapters 3 and 7.

activities that reduce the need for medical care. Both responses -- more utilization of covered services and less risk avoidance -- have been described as "moral hazard," the tendency for consumers to behave differently when insured.⁸ Because of these moral hazard effects, insurance increases the demand for medical services.⁹ If the supply of services cannot satisfy the demand forthcoming at a near-zero price, some form of non-price rationing must be adopted or inevitably will emerge.

Even in the U.S. health care system, where the private sector has played a more important role in insuring consumers and providing health care, the introduction of major public insurance programs (Medicare and Medicaid) and the spread of private insurance, especially through the workplace,¹⁰ have expanded the demand for care, raised concerns about moral hazard and socially inefficient levels of utilization, and stimulated the search for effective ways to control utilization and costs. These cost containment approaches include greater "cost-sharing" (higher coinsurance rates), various forms of utilization review under the rubric of "managed care," and the introduction of "alternative delivery systems" (e.g., health maintenance organizations or HMOs) that are thought to have stronger incentives or more effective ways to control utilization. However, any such effort to raise coinsurance rates or to limit access to services often is perceived by consumers as a benefit reduction and loss of insurance protection.¹¹ Indeed, the natural

8. Pauly (1968) generally is credited with explaining the economic incentives underlying the moral hazard problem. While moral hazard has been extensively discussed within the context of private health insurance plans, the same problem plagues public health insurance systems. For example, moral hazard appears to be a particularly acute problem in Eastern Europe. For an overview of the problem in the Bulgarian health care system, which is quite similar to those of other Eastern European countries, see The World Bank (1993a), Ch. 6.

9. If the agency relationship between consumers and providers of health care extends beyond medical decisions to include financial interests, providers also may exhibit a form of moral hazard by recommending services to insured patients that would not be recommended to uninsured patients. We focus on the problem of structuring insurance to give consumers appropriate incentives, but the problem of structuring provider reimbursement to induce cost-effective forms of health care also merits attention.

10. In 1960, consumers directly paid 55.9 percent of U.S. personal health care expenditures. By 1990, this figure had declined to 23.3 percent [see Levit *et al.* (1991), p.50]. This average coinsurance rate for the entire population may understate the degree of insurance coverage among *insured* individuals, since approximately 35 million Americans have no insurance [*Economic Report of the President* (1993), p.134].

11. Beyond the problem of consumer resistance to cost-sharing, there is considerable debate about the effectiveness of higher coinsurance rates or copayments on utilization and expenditures. The Rand Health Insurance Study is viewed as one of the most comprehensive attempts to evaluate the effects of cost-sharing on utilization, expenditures and health status. Rand researchers conclude that "...the response to cost-sharing is nontrivial." [Manning *et al.* (1987)]. Implied price elasticities of demand in the Rand study are roughly -.2, but such estimates vary across

resistance by consumers to such changes has been an obstacle to meaningful health care reform in the U.S. and elsewhere. The success of reform efforts in many settings may well hinge on one central question: *Can we find more positive ways to encourage the rational use of health care -- ways that reward healthy lifestyles and prudent consumption of health care services -- without substantially reducing the financial protection offered by health insurance?* Finding an answer to this question may require fundamental changes in the structure of public and private health insurance.

III. PROPERTIES OF CONVENTIONAL HEALTH INSURANCE.

Consumers derive protection from health insurance by knowing that when expenses are incurred they will not have to pay the full amount out-of-pocket. Indeed, under full insurance (zero coinsurance, $c = 0$), common in many public insurance programs, out-of-pocket expense (E_o) is zero regardless of the full expense (E). In some public programs and most private insurance plans, some fraction of the total expense ($c < 1$) must be paid by the patient. The larger the coinsurance rate, the less the insurance protection. For each of these conventional types of insurance, full coverage and partial coverage, the relationship between out-of-pocket expense and total expense is shown in Figure 1.

[FIGURE 1]

In the absence of insurance ($c = 1$), out-of-pocket expense equals the full expense, as depicted by the 45 degree line in Figure 1. Under partial insurance plans, E_o rises with increases in E , but the lower the coinsurance rate (c), the less the increase in E will be felt by the consumer. Under full coverage, E_o is always zero and the consumer is entirely insulated from the full cost of care. Thus, conventional insurance, particularly full coverage, reduces the financial risk associated with illness, but also diminishes the consumer's sensitivity to the true cost of care; this, in turn, may lead to excessive utilization and reduced personal efforts to remain healthy (i.e., moral hazard). One way to discourage unnecessary utilization in conventional insurance plans is to impose a deductible, where coverage only begins after the consumer has expended a specified

different types of services and may be sensitive to the unusual insurance structure used in the experiment. In general, one would expect cost-sharing to be most effective in containing utilization of elective or non-emergency medical services, but the effectiveness of cost-sharing is also likely to vary with existing levels of price, coinsurance, income and other factors that influence the demand for medical services. For a thorough review of the demand-side literature, see Chapter 3 of Rosko and Broyles (1988).

initial amount (E_d) on health care.¹² In Figure 1, this case is depicted by the kinked relationship between E_0 and E . Note that any increase in the coinsurance rate or the deductible level will be viewed by the consumer as a reduction in insurance benefits.

A general problem with most conventional forms of insurance is that low utilization by consumers goes unrewarded. In partial or full coverage plans, low utilizers may be reassured by the fact that, if the need arises, a portion or even the full cost of care will be paid by the insurer. But invariably there may be a strong feeling that benefits of the insurance are "lost" if no medical services are consumed. There typically is no way to convert this foregone insurance benefit to some other form of reward. Apart from the psychic security of knowing he or she is insured, there is no way for the insured person to benefit from conventional forms of coverage unless services are utilized. This lack of reward for low utilization encourages unnecessary use of the system.

A second, related problem in conventional insurance plans is the lack of direct incentives for consumers to adopt healthier lifestyles. Although some private plans offer lower premiums to non-smokers, non-obese, or other groups who exhibit lower health risks, once an individual is enrolled in such plans there is little, if any, reward for maintaining or further improving personal health habits. The significance of this second flaw in the structure of conventional insurance grows as we acquire additional empirical evidence that lifestyle strongly influences the incidence of major diseases and the cost of health care.¹³

IV. AN INNOVATIVE FORM OF HEALTH INSURANCE: THE MENDOCINO OR STAY-WELL PLAN.

Health insurance markets in the U.S. have changed significantly in the past decade or two. Of particular note are insurers' efforts to monitor and control costs in more direct ways. These efforts, among others, include: the introduction of requirements for second opinions by physicians or pre-approval by the insurer for certain types of treatment; consolidation of health insurance and health care provision in the form of prepaid HMOs; and direct bargaining by the insurer for service fee discounts from a specific group of providers (preferred provider organizations or PPOs). Since the 1980s also has been a period of unprecedented increase in U.S. health care expenditures,

12. One problem with imposing a deductible is that it is properly viewed by the consumer as a reduction in insurance protection; the insured is now fully exposed for the first E_d dollars of expense. Hospital expenses are often subject to an initial deductible with additional expenses fully covered. In Figure 1, this insurance structure would appear as a kinked relationship following the 45 degree line to E_d and then becoming horizontal for $E > E_d$.

13. For a detailed analysis of the social costs of poor health habits, see Manning *et al.* (1991).

there is little *prima facie* evidence that these structural changes have helped to contain outlays on health care.¹⁴

This lack of apparent success in controlling U.S. health care costs may reflect the fact that, even in prepaid plans, the fundamental problems of health insurance, cited earlier, have not been addressed. For example, once enrolled, the HMO or PPO member faces zero or very small copayments and has little incentive to control utilization; thus low utilization remains unrewarded. Similarly, the near complete coverage in prepaid plans provides little incentive for personal changes in lifestyle that might reduce the need for services. Unfortunately, popular reform proposals do little more to alter the basic *structure* of health insurance. Health insurance may be extended to a larger percentage of the population to reduce the problem of "uninsureds," but the structure of the insurance is apt to look much like one of the conventional forms of insurance depicted above in Figure 1. Alternatives, however, do exist.

The plan of interest is one that originated in California in 1979. In the late 1970s, California local and county governments were seeking ways to bring their costs into line with state-wide limitations on property-tax revenues. As a result, education officials in Mendocino County devised an innovative health insurance plan for their employees. The plan, which remains solvent and in effect today, provided incentives to limit unnecessary utilization and to adopt healthier lifestyles, without sacrificing relatively complete coverage.

Before the stay-well plan was introduced, Mendocino County school employees had enjoyed "first-dollar coverage" which, in 1979, cost about \$1260 per employee per year. The County terminated this plan and signed a new contract with Blue Shield of California, a non-profit insurer. The new contract called for a lower-premium (\$780 per employee per year) policy with a \$500 deductible. The savings (\$480 per employee) were set aside by the County in an interest-bearing, self-insurance fund that would be used to pay the first \$500 of any employee's annual medical bills. Total annual charges in excess of \$500 were to be paid by the new Blue Shield policy. Thus, from the employee's perspective, he or she still enjoyed complete coverage. This was an important aspect in eliciting employee acceptance of the new plan.

The most interesting and innovative component of the Mendocino Plan was a further stipulation that any portion of the \$500 in the self-insurance fund not used by an employee during the year would accrue in his or her name and be paid to the employee upon quitting or retiring from

14. Barth and Heffley (1992) give an overview and analysis of health care policy, recent expenditure patterns, and reform proposals. A more technical analysis of the potentially adverse effects of HMOs on health care prices is given by Beazoglou and Heffley (forthcoming).

County service. For example, an employee with only \$200 in claims during the year would not only have those claims paid by the self-insurance fund, but would receive a future bonus of \$300 (plus any other accumulated amounts) at the time of separation. This incentive component of the plan, similar to the "no claims bonus" found in some auto insurance policies, directly rewarded the employee for not overutilizing health care, but it also provided some incentive to adopt healthier lifestyles that might reduce the need for medical care. In addition to significantly reducing claims,¹⁵ the stay-well plan reportedly prompted a number of employees to increase their exercise, lose weight, quit smoking, reduce alcohol intake, etc. These, of course, are precisely the types of responses we would like a health insurance plan to evoke, yet conventional full-coverage plans are likely to *reduce* the insured party's incentive to adopt health-preserving habits.

The employer (Mendocino County) appears to have been very satisfied with this plan. The new, lower premiums were stabilized due to the favorable claims performance of the group and, although some of the premium savings placed in the self-insurance fund were paid out to meet the first \$500 of each employee's claims, not all of the funds were used, and the interest generated by the fund was retained by the employer.

Employees, too, benefitted. Despite some initial resistance of employee groups who feared a reduction in benefits, it soon became obvious that workers were truly better off. Effective first-dollar coverage was preserved for high-utilizers, since the first \$500 in claims were covered by the self-insurance fund and excess claims were covered by Blue Shield. Moreover, low-utilizers now had something that they had not enjoyed under the previous conventional plan. If a worker's total claims on the self-insurance fund were less than \$500, the "unused" portion of this self-insurance was converted to a future cash benefit for the employee. This reward for low utilization did not exist under the previous conventional insurance plan.

The Mendocino or stay-well plan received a good deal of national attention in the early 1980s,¹⁶ and a few other employers adopted similar plans. Yet, despite Mendocino County's apparent success and satisfaction with the plan, it has not been implemented on a much larger scale in the U.S.¹⁷ This may well be due to resistance from insurers to any plan that significantly reduces premium cash flow. For many insurers, investment income from the premium flow, as

15. Conway (1980) reports that only 38 of the 218 persons initially enrolled in the plan exceeded the \$500 figure and therefore received no bonus. Each of the remaining 180 persons had claims of less than \$500 and received a bonus, including 66 who received the maximum bonus of \$500 for having no claims.

16. See, for example, Conway (1980), *Newsweek* (1980), and *Time* (1980).

17. Zweifel (1988) describes a premium rebate scheme offered by some private health insurers in Germany. Empirical results tend to confirm that the plan contains costs more effectively than simple increases in coinsurance rates.

opposed to net income from selling and servicing policies, is a major source of final profit. Any private insurance reform that reduces the premium flow is likely to be opposed by insurers.

There have been concerns about the Mendocino plan. Critics, for example, worried about the possibility of truly sick employees foregoing needed care, resulting in poorer health and larger outlays in the future. Mendocino County and Blue Shield tried to minimize the possibility of such a response by issuing a brochure that encouraged members of the plan to be sensible about seeking care and alerted them to various symptoms that should not be ignored. It is also likely, that at least some of the reported reduction in claims was due to shifting of claims to other policies by employees with dual coverage under a spouse's health care plan. Yet, in a market setting, even this response could be beneficial: the adoption of a stay-well incentive by some insurers might force other insurers to adopt similar provisions to avoid the adverse effects of claims shifting. More recently, concerns also have emerged about the declining real incentives; the \$500 maximum bonus for zero utilization has not been increased since the plan began. Measured in 1980 dollars, the maximum bonus has decreased from \$500 to \$293 due to the effects of general inflation. Even more rapid inflation in medical care prices also has made it increasingly difficult for members of the plan to qualify for a bonus. These problems, which are readily overcome by appropriate indexing of the plan, have weakened but apparently not eliminated the initial incentives embodied in the stay-well plan.

The stay-well approach adopted in Mendocino County seems to have a number of attractive features including: the preservation of rather complete coverage; direct incentives for individuals to monitor their utilization without heavy-handed forms of managed care, since the implicit price of an unnecessary visit or procedure is a smaller future reward; incentives to adopt healthier lifestyles; an opportunity for low-utilizers and those with healthy lifestyles to convert unused portions of their health insurance into cash benefits; and potentially a lower overall outlay on health care for the insured group.

V. EXTENDING THE STAY-WELL CONCEPT TO A NATIONAL HEALTH CARE SYSTEM.

In order to see how the the stay-well incentive might be applied to a national health care system, as opposed to a particular group of workers, it is important to understand how this plan differs in structure from the conventional forms of insurance depicted in Figure 1. The stay-well plan contains three important parameters: (1) a goal expenditure level (per individual or household) which may be denoted E_g ; (2) a rate of reward, denoted r , for individuals or households with

health care expenditures less than E_g ; and (3) a rate of coinsurance, denoted c , for total expenditures in excess of E_g . Figure 2 illustrates the relationship between out-of-pocket expense and the full cost of health care for a hypothetical stay-well plan.

[FIGURE 2]

Note that when expenditures are less than the goal ($E < E_g$), out-of-pocket expense is *negative*, reflecting the potential reward to low utilizers. Here, where $r = 1$, the insured receives the entire difference between E_g and E . There is no reason why this value ($r = 1$) would be optimal, but the smaller the reward parameter, the weaker the incentive to remain healthy and to avoid unnecessary utilization. When full cost exceeds the goal ($E > E_g$), the coinsurance parameter (c) determines the portion of the excess cost that must be borne by the insured. In Figure 2, c is depicted as a fraction; full coverage would require a zero coinsurance rate. As in any insurance plan, the problem faced by the insurer is how to structure the plan or, here, how to select E_g , r , and c to achieve certain objectives. For commercial insurers, profitability, or at least actuarial soundness, may be the overriding objective; for public insurers the objective(s) may be more complex, reflecting concerns for the overall cost of the plan, its effects on particular groups of consumers and providers, and its impacts on measures of health status. Given the complexity of the problem, it is likely that the optimal structure will vary for different systems. However, if utilization and health habits are at all sensitive to financial incentives, there is a case for this type of insurance in a variety of institutional settings.¹⁸

Although we cannot say much about precisely how to structure such a plan in a given country without a good deal more country-specific information, several aspects of this plan are noteworthy. First, the stay-well plan is a *more general and more flexible* form of insurance, subsuming most conventional plans as special cases. For example, if E_g is set to zero and $c < 1$, we have conventional partial coverage. Similarly, if $E_g = E_d$, $r = 1$, $c < 1$, and the insured is required to pay a lump-sum "tax" equal to rE_g , regardless of the full expense for that individual, the stay-well structure in Figure 2 is shifted up so that it becomes equivalent to the conventional deductible plan shown in Figure 1.

Second, the rewards for low utilization might take a variety of forms. As in the Mendocino plan, the rewards might constitute a credit to a retirement account, but they could just as easily be annual cash rebates, or credits against out-of-pocket expenses that might be incurred if the

18. The plan may be particularly relevant to the Eastern European setting, where utilization is high, behaviorally induced diseases are common, and declining real incomes might cause individuals to respond favorably to new financial incentives to reduce utilization and modify unhealthy behaviors.

individual or family exceeds the expenditure goal (E_g) in a future period.

Third, administration of the stay-well plan does not appear to be unduly complex. In Mendocino, where initial expenditures ($E < E_g$) are paid by the employer from a self-insurance fund and subsequent outlays ($E > E_g$) are covered by the insurer, processing and coordination of claims is done through a local medical foundation. If anything, incorporation of a stay-well incentive in a single-payer or national health care system would be somewhat simpler. Insurance records of participants would need to contain information about the depletion (if any) of their potential reward, based on expenditures to date. At the end of the accounting period, these records would be used to issue reward checks or to credit the individual in some other fashion.

Fourth, success of the stay-well plan in reducing overall costs to the system hinges on the capacity of the incentive to shift the frequency distribution of health care spending. The purpose of the stay-well incentive is to reduce unnecessary utilization in the short-run and, in the long-run, to further reduce the need for care by stimulating better health habits. If utilization and personal habits are sufficiently responsive to such incentives, the plan may reduce overall system costs.¹⁹

Fifth, financial solvency of the plan requires that revenues from various sources (premiums paid by individuals and/or employers, government subsidies, and income from any initial endowments) be sufficient to cover not only the insured portion of charges for high utilizers ($E > E_g$), but also the insured charges and *rewards* for low utilizers ($E < E_g$), as well as any administrative costs and allowed profits. Again, the plan has a better chance of remaining independently solvent (i.e., not dependent on external subsidies) if participants' demand for health care and their willingness to adopt better health habits are sufficiently responsive to financial incentives. It should be emphasized that, despite the additional payments to low utilizers, the stay-

19. One might argue that hospital expenditures, which typically account for a significant proportion of total health care expenditures, will be less affected by the stay-well incentive. First, the demand for hospital care will be less responsive to financial incentives than other, less expensive types of services (e.g., routine office visits or exams). Second, the power of the stay-well incentive hinges on the size of the reward; the lower the reward, the lower the power to affect excessive utilization and, particularly, to reduce the use of costly hospital services. We would argue, however, that this is essentially an empirical question that crucially depends on the expenditure distribution, demographic factors, and lifestyle characteristics of the population. Relationships between these features of the population and their responses (both utilization and health habits) to financial incentives would need to be studied before a large-scale stay-well plan is introduced (see the Section VI for some thoughts on this matter). If, however, poor lifestyle is an important contributor to illnesses or diseases that ultimately require hospitalization, or if a portion of "inappropriate" hospitalization is initiated by routine physician visits, even relatively modest incentives provided by the stay-well plan might be effective in reducing hospital costs, particularly in the long run.

well plan is potentially less expensive than conventional plans with comparable coverage. If the incentive causes consumers to reduce utilization, search for less expensive providers, and adopt better health habits, and if these responses also reduce the frequency of claims and administrative costs, the stay-well plan may lower overall costs. Also, as in any insurance plan, solvency is enhanced by group size, due to better risk-pooling (less exposure to "large loss" effects), potential economies of scale in administrative costs and claims processing, and greater bargaining power for the insurer in exacting favorable terms from providers of medical care.

Finally, the stay-well plan has certain intergenerational implications. For example, younger participants, with better immunological and health characteristics, could be the main beneficiaries of the plan's financial incentives if a single expenditure goal (E_g) is established. This problem could be addressed by scaling the expenditure goal to age or other relevant characteristics, thereby giving a broader range of opportunities for individuals to benefit from reduced utilization and improved health habits. Such modifications could increase administrative costs, but increasing the number of parameters of the insurance plan also might reduce medical expenditures by allowing administrators to better "fit" the plan to characteristics and responses of the population. It also should be pointed out that, even if they cannot directly benefit from the financial incentive, "inherently high utilizers" may enjoy lower out-of-pocket costs if savings induced by the stay-well incentive can be used to provide more complete insurance coverage (lower coinsurance rates).

VI. CONCLUDING REMARKS.

The fundamental dilemma facing health care reformers in many different settings is the conflict between expanding or maintaining access to health care and controlling health care costs. Under conventional insurance, attempts to remove financial barriers to care by lowering coinsurance rates or extending existing coverage to the uninsured tend to increase demand for care, forcing up utilization and prices in a market setting or increasing the need for rationing in a non-market system. This increased demand stems from the lower (perhaps zero) out-of-pocket cost to consumers, as well as the reduced incentive for consumers to avoid health problems. It follows that one way to increase access without necessarily increasing health care costs is to alter the structure of insurance to provide stronger incentives for well-protected consumers to adopt healthier lifestyles and to avoid unnecessary utilization.

The stay-well plan is a simple, yet more general, form of insurance that rewards lower utilization of health care services and encourages positive health habits. Mendocino County's thirteen years of experience with this type of plan suggest that it may be a useful way of balancing

the objectives of cost containment and comprehensive insurance protection. Why this type of insurance has not spread or come to the forefront in current discussions of health care reform is unclear. Private insurers may simply lack the incentive to develop or accept innovations in the structure of insurance that would lead to lower premiums.²⁰ To our knowledge the plan has not been implemented in a public health care system, but the structure of the plan is general enough to allow it to be adapted to a wide variety of health care systems.

Further study of the stay-well plan is clearly needed. Much of the information about the response of consumers to this incentive-based plan is anecdotal in nature. Existing plans ought to be studied more closely, but such plans appear to be scarce and the study of any existing plan is subject to questions about the representativeness of the sample. An alternative approach to acquiring more information about the feasibility and effectiveness of stay-well insurance might be the establishment of demonstration projects, in which individuals or families are randomly assigned to either stay-well or conventional insurance plans. Establishing sufficiently large samples and using multivariate techniques to control for personal or demographic characteristics that might also influence behavior, the effects of the difference in insurance structure could be estimated. Given the policy importance that has been attached to health care reform, the cost of operating such projects might be small relative to the potential payoff.

There are no easy solutions to the fundamental question posed in Section II, regarding the difficulty of instilling consumers with appropriate incentives without significantly reducing the protection afforded by health insurance. Insured consumers have economic incentives to be less careful about their health habits and to consume even those services that do relatively little to maintain or improve health. The more comprehensive the coverage, the stronger these adverse incentives will be. The stay-well plan provides a countervailing incentive for even fully insured persons to monitor their own health habits and to avoid unnecessary utilization. We believe that some additional incentive of this type is needed to obtain the desired balance between the social objectives of insurance protection and health care cost containment. There may be other forms of insurance that would achieve this balance as well or even more effectively than the stay-well plan. What seems clear is that conventional insurance has failed in this regard and, if we are to resolve the "health care crisis," we need to think much more creatively about the *structure* of insurance and the signals it conveys to consumers and health care providers.

20. The stay-well plan was accepted by the insurer, Blue Shield of California, but was designed by Ed Nickerman, an Assistant Superintendent of Schools in Mendocino County.

REFERENCES

Barth, Peter and Dennis Heffley, 1992, "Moving toward national health care policy," in *Workers' Compensation Health Care Cost Containment*, J. Greenwood and A. Taricco (eds.), Horsham PA: LRP Publications, 285-309.

Beazoglou, Tryfon and Dennis Heffley, "Reevaluating the 'pro-competitive' effects of HMOs: a spatial equilibrium approach," *Journal of Regional Science*, forthcoming.

Birdsall, Nancy, 1990, "Health and development: what can research contribute?" *World Bank Policy Research Working Paper Series*, No.545, Country Department 1, Latin American and the Caribbean Regional Office, Washington DC: The World Bank.

Conway, John, 1980, "Payoff on health," *Forbes*, 126 (September 1): 6.

De Geyndt, Willy, 1991, "Managing health expenditure under national health insurance: the case of Korea," *World Bank Technical Paper*, No.156, Asia Technical Department Series, Washington DC: The World Bank.

Economic Report of the President, 1993, Washington DC: U.S. Government Printing Office.

Kutzin, Joseph and Howard Barnum, 1992, "How health insurance affects the delivery of health care in developing countries," *World Bank Policy Research Working Paper Series*, No. 852, Population and Human Resources Department, Washington DC: The World Bank.

Lave, Judith and Lester Lave, 1970, "Medical care and its delivery: an economic appraisal," *Law and Contemporary Problems*, 35: 252-266.

Levit, Katherine, Helen Lazenby, Cathy Cowan, and Suzanne Letsch, 1991, "National health expenditures," *Health Care Financing Review*, 13: 29-54.

Manning, Willard, Joseph Newhouse, Naihua Duan, Emmett Keeler, Arleen Leibowitz, and Susan Marquis, 1987, "Health insurance and the demand for medical care: evidence from a randomized experiment," *American Economic Review*, 77: 251-277.

Manning, Willard, Emmett Keeler, Joseph Newhouse, Elizabeth Sloss, and Jeffrey Wasserman, 1991, *The Costs of Poor Health Habits*, Cambridge MA: Harvard University Press.

Newsweek, 1980, "Making good health pay off -- in cash," 96 (August 25): 73.

Pauly, Mark V., 1968, "The economics of moral hazard," *American Economic Review*, 58: 231-237.

Preker, Alexander, 1993, "Hungary: pension administration and health insurance," *Health Policy*, World Bank Newsletter, June (No. 2), Population, Health and Nutrition Department, Washington DC: The World Bank.

Preker, Alexander, and Richard Feachem, 1993 (forthcoming), "Health care and market mechanisms," in *Human Resources in Transition: Labor Markets and the Welfare State in the CEE*, N. Barr (ed.), Oxford: Oxford University Press.

Rosko, Michael, and Robert Broyles, 1988, *The Economics of Health Care*, Westport CT: Greenwood Press.

The World Bank, 1992, *Romania: Human Resources and the Transition to a Market Economy*, World Bank Country Study, Washington DC.

The World Bank, 1993a, *Bulgaria: Public Finance Review*, Europe and Central Asia Region, Country Department 1, processed, Washington DC.

The World Bank, 1993b, *World Development Report*, Washington DC.

Time, 1980, "Wealth for the healthy," 116 (August 25): 60.

U.S. Department of Commerce (1991), *Statistical Abstract of the United States*, Washington DC: U.S. Government Printing Office.

Zweifel, Peter, 1988, "Premium rebates for no claims: the West German experience," in *Health Care in America: The Political Economy of Hospitals and Health Insurance*, H.E. Frech III (ed.), San Francisco CA: Pacific Research Institute for Public Policy, 323-352.

FIGURE 1: Conventional Insurance Plans

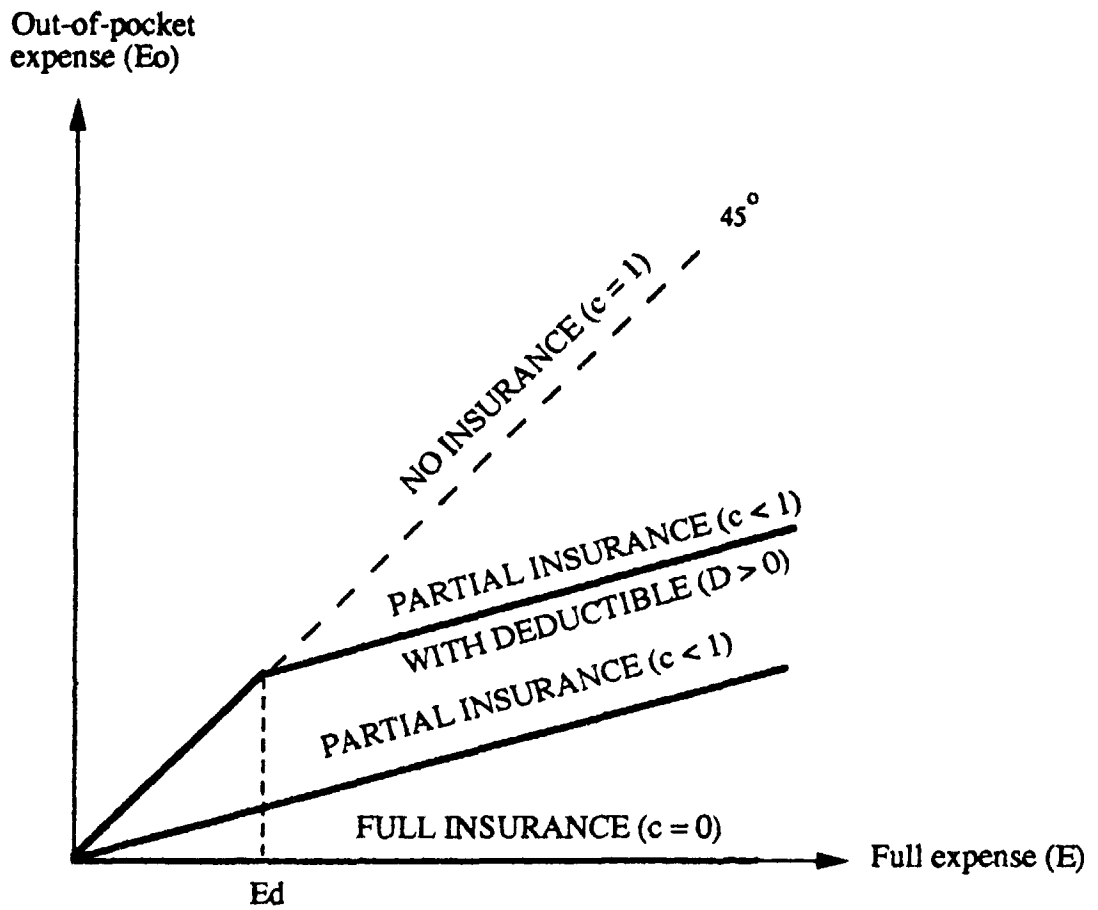
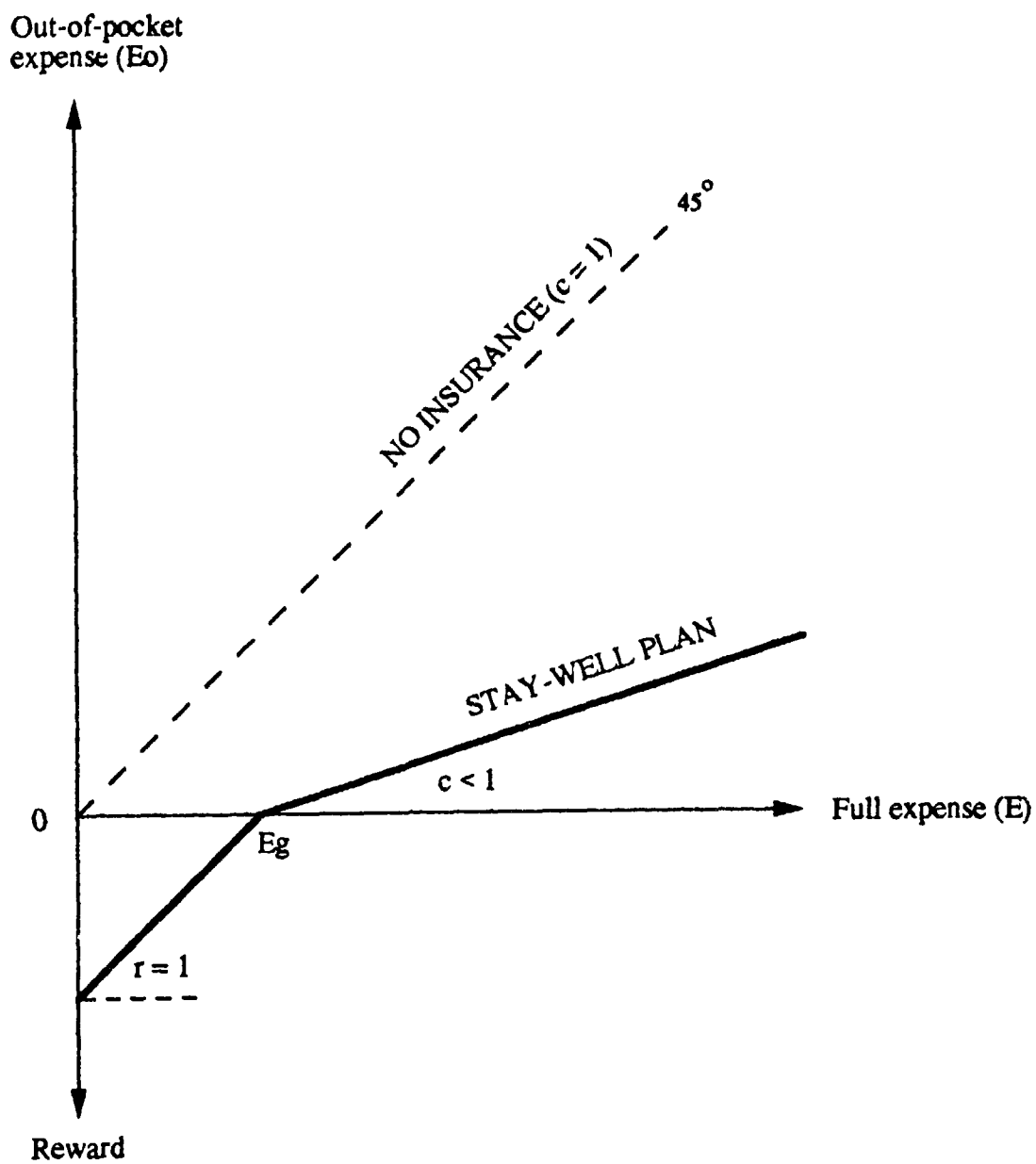


FIGURE 2: The Stay-Well Plan



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