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by

Charles E. Phelps, Ph.D.[1]

I. INTRODUCTION

President Reagan's administration has proposed to alter the tax law
in a way intended both to help contain health care costs and (hopefully)
provide some assistance in balancing the budget. The change would
affect the incentives for individuals and families to obtain health
insurance through their place of work.

Under current law, if an employer provides health insurance to an
employee, or for the entire family of the employee, the imputed premium
for that insurance is not declared as taxable income. The employer may
continue to deduct the payments as normal business expense. Thus, these
insurance payments wholly escape the income tax system.

The amount of insurance purchased through this mechanism is both
large and growing rapidly. By current estimates (Phelps, 1982), some
$62 billion in premiums are paid by employers for employee health
insurance. The benefits paid through this insurance constitute about
one-third of all health care dollars in the country, and about 85 to 90
percent of all private health insurance premiums for persons under age
65. The rate of growth in premiums is large. In the past two decades,
the premium payments have grown from $13 billion to their current level,
reflecting a compound annual growth rate exceeding 8 percent. Adjusting
for general inflation puts the real growth rate at 5.6 percent per year.
Even after adjusting for the CPI health cost index, growth in premiums
is 4.6 percent per year. Such growth can only arise with expansion of
the scope of benefits, levels of coverage, or both.

The growth in coverage (and premiums) is predictable. First,
increases in income through time should lead to more health insurance
demanded (Phelps, 1973, 1976). Second, and of greater importance,

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[1] This paper was presented at the Western Economic Association
meetings in Seattle, Washington, in July 1983. Views expressed in this
paper are the author's own and are not necessarily shared by Rand or its
research sponsors.

higher incomes coupled with the progressive tax structure in the United States have forced people into higher and higher marginal tax brackets. Equivalently, the subsidy to health insurance has steadily increased through time.[2] Bracket creep--the effect of general inflation on marginal tax rates even without changes in real income--adds to the subsidy even further. On average for U.S. workers, the subsidy now exceeds 35 percent. (Before recent reductions in tax rates, the marginal tax rate--and hence the rate of subsidy to premiums--was 38 percent.) And finally, rapid increases in the ceiling income for FICA payments has made the payroll tax a marginal tax for more and more workers, while the combined rate paid by employers and employees has grown at the same time. These changes combined have roughly doubled the effective marginal tax rate for U.S. workers in the past two decades. Insurance demand has responded as one might expect, given the large price responsiveness of insurance demand to its own price (Phelps, 1973, 1976).

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[2] I assume that the incidence of the premium payments is on the employee in the long run, and hence apply individual tax rates. See Mitchell and Phelps, 1975, for discussion.

II. THE PROPOSED POLICY CHANGE

The change proposed by the Reagan administration would put a cap on the payments remaining tax exempt: $840 per year for individual insurance policies, and $2100 per year for family policies. Administration estimates suggest that only one-third of the workers in the country now receiving this fringe benefit would have any premiums exceeding this limit. Thus, for two-thirds of the workers, the change in incentives would be zero. For the remaining third, the consequences-- and actions chosen in response--would depend upon the composition of their current insurance holdings, the size of work group through which they held their insurance (and the desires of their co-workers, in part) and the options open to them by unilateral or group choice.[1] Predictably, the effects will be concentrated in such well-insured industries as petroleum, steel and aluminum, auto, aircraft, chemicals, and many public employees--will be affected. (See U.S. Chamber of Commerce (1983) for data on differences in coverage by industry.)

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[1] Some versions of the tax cap would eliminate the ability of employers to deduct premium payments above the tax cap. While this would provide a more immediate stimulus to employers to change the fringe-benefit/wage mixture than the alternative, the long-run incidence would still remain on the employee. Further, since about 25 percent of all workers in the United States are employed either by government or by not-for-profit corporations who do not pay corporate taxes, the effect on health costs and federal tax revenue enhancement would be diminished notably.

III. CONSUMER RESPONSE

In its most simple form, taxing health insurance has the same effect as raising its price. People will choose less insurance and more of other forms of compensation (such as wages). The actual composition of such changes is unfortunately difficult to predict. No empirical studies exist showing how people would select deductibles, copayments, internal maximums, fee schedule limitations, scope of benefit changes, or even switches to wholly different forms of insurance (such as HMOs) in the face of this tax change. We can only turn to first-principles to help predict what might happen.

Theories of demand for insurance suggest that people purchase more insurance when the variance in financial risk increases (Pratt, 1964; Arrow, 1971) and the same is shown to hold with reimbursement insurance that characterizes most health insurance (Phelps, 1973, 1976). But the reimbursement nature of health insurance distorts incentives to purchase health care. Indeed, this very distortion forms the crux of the issue with the proposed change in tax policy. Selecting the right amount of insurance is a balancing of the desire to avoid risk vs. the consequences of incentive distortion in health care markets (Zeckhauser, 1970).

With these notions in mind, the data in Table 1 suggest where possible changes in insurance coverage might be found. Column 1 portrays the variance in total expenses for various categories of health care. Column 2 shows how much demand for each service increases with added insurance coverage. (The data show the ratio of demand at full coverage to demand with large family deductibles or with no insurance. The data taken from Rand's Health Insurance Study reflect choices for approximately the same population that is currently covered by employer-group health insurance. See Newhouse, 1974, for details of this experiment. Other non-experimental studies are used where H.I.S. results are not yet available.) The third column shows the proportion of all persons in the U.S. holding insurance who (apparently) carry coverage for each type of service. Since major medical insurance covers

Tabl. 1

FACTORS AFFECTING DEMAND FOR HEALTH INSURANCE

Type of Care	Expenditure Variance[a]	Demand Responsive- ness	% of Insureds with this Coverage[d]	% All Non- Government Ex- penses Paid by Insurance[e]
Hospital	8.6 x 10exp(5)	1.33[b]	100	83
Physician	2.4 x 10exp(4)	1.63[b]	89	54
Dental	5 x 10exp(3)	1.80[c]	50	21
Drug (Beyond Major Me?ical)	6.8 x 10exp(3)	2.00[c]	(small)	10
Total	---	1.45[b]	---	47

[a] From Heal_h Insurance Data (H.I.S.), Year 1. Dental demand contains large transitory element, and hence overstates study-state response.

[b] Ratio of demand at full coverage to no coverage. Source: H.I.S.

[c] Ratio of demand at full coverage to no coverage. Source: Phelps and Newhouse, 1974. (No H.I.S. results yet available for drug or dental care.)

[d] *Source Book of Health Insurance Data,* 1982-83, App. II.

[e] Phelps, 1982, App. A.

hospital, medical, and prescription drugs above the deductible, there is an inherent ambiguity in this information. But with typical deductibles in a major medical policy, a person would have to be hospitalized or face a chronic illness with large ongoing expenses in order to have "routine" coverage of drugs. The data in Column 4 summarize both the frequency and depth of coverage, showing the proportion of all non-government health bills paid by private insurance. Hospital care is most broadly covered, followed by physician, dental, then drugs.

If the proposed tax change were simply a straight decrease in the subsidy for health insurance, perhaps one might expect reductions in all forms of coverage, although not necessarily identical in proportion for each. Larger deductibles, copayments, and internal limits might be selected. Some persons might even opt for an alternative way to reduce the financial risks--an alternative health plan such as HMOs, IPAs, or similar arrangements.

The Reagan administration's proposed change in tax treatment of health insurance premiums is not linear. To draw an analogy, it is more akin to a deductible in health insurance plans than to a coinsurance rate. We know from studies of health insurance that response to deductibles differs broadly from that for a flat coinsurance (Keeler, Newhouse, and Phelps, 1978; Newhouse et al., 1981). Similarly, we might expect choices of health insurance to differ when facing a hugely non-linear change in the price of insurance.

The data in Table 1 suggest that the insurance easiest (and most desirable) to eliminate in the face of the Reagan tax change would be "fringe" insurance coverage such as dental and drug insurance. The demand distortion (and hence the welfare loss from excess insurance) is greatest for those services, and the variance in expenditure facing the uninsured person is smallest.

Recall that only one-third of the population would face any incentive to change coverage. Coincidentally, this is not far from the fraction (50 percent) of persons holding dental care coverage. While no data exist to allow precise statements, it seems plausible that most people actually facing tax increases under the Reagan proposal could reach a near-equilibrium in insurance holdings by discarding drug or dental insurance. Employers and employees would need to strike a bargain on the new balance between coverage and wages, of course, and one might anticipate any pattern of changes in insurance. But the complexities of bargaining, and the relatively low value (in risk reduction) of the dental and drug insurance scope of benefit, suggest this is likely to occur. This bargaining process is only partly understood (see Goldstein and Pauly, 1976, for a useful model).

If this tax cap were put in place, the most likely picture of
changes in insurance coverage would be to play in reverse a movie
showing how coverage had expanded over the last decade: those coverages
acquired most recently (only when the tax subsidy became greatest) would
be the first to go. (For example, in 1972, less than 5 percent of all
persons with health insurance had any dental benefits.) Hospital
coverage would likely remain virtually unchanged. Perhaps, for some,
the response will be to choose a larger deductible on major medical
policies, but this would have only modest effects on hospitalization.[1]

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[1] Larger deductibles deter ambulatory care use, and apparently,
this in turn reduces hospitalization frequency (Newhouse et al., 1981).
Data from the H.I.S. show that hospitalizations for adults are 12
percent fewer on those with a $150 ambulatory care deductible than for
those with full coverage. But the data also indicate that the
incremental effect of larger deductibles is minimal. One variant in the
H.I.S. experimental insurance plans was a family deductible related to
income (5, 10, or 15 percent, all capped by $1000 maximum). No
differences in utilization could be found across these different plans,
while demand was substantially lower in all than in plans with more
generous coverage.

IV. EFFECTS ON HEALTH MARKETS

As employees reduce their health coverage, they will in turn choose fewer medical services. Under the current proposal, the biggest reductions will come where there has been the least concern about rising health care costs--drugs, dental care, etc. Coverage for the most bothersome areas--notably hospital costs--will largely remain unaffected. Given the impressive problems in these areas, the Reagan proposal seems rather mild.

To seriously affect medical costs, a change in tax law would have to sweep with a much broader net, and would have to provide strong incentives to find cheaper ways to cover such "standard" medical c   as hospitalization and physician services. Hospital care accounts f(./er $125 billion of our annual $275 billion health bill. Any effecti   st containment activity must attend to the hospital sector, either by changing the way hospitals are paid for their services, or by providing strong incentives for patients to seek less costly forms of medical treatment. A host of alternatives to standard fee-for-service insurance, including prepaid group practice (HMOs), would become more popular. Private sector initiatives are already underway to strike deals between insurers and "preferred providers," who promise to keep their charges low in return for the guarantee of the business of the insured patients. These and other changes in the ways we provide and pay for our health care would become more prevalent if substantial changes in tax treatment of health premiums were chosen.

Taxation of a significant portion of everybody's premiums would do that, but taxing "fringe" coverage for a minority of the citizenry won't help much. If a substantial number of the affected workers choose to move directly from fee-for-service insurance coverage into an alternative system (such as HMOs), the effects could be more pronounced, but we don't know enough about how people make such choices to depend upon this type of response for substantial health cost control. Those workers affected by the Reagan proposal will, of course, not enjoy their sudden loss (about $70 to $100 per year in added taxes on average), and

the dentists and optometrists of the country will notice significant reductions in their business volume. But, unless there are substantial shifts to HMOs, you would need a microscope to find the effects on aggregate health costs, and eventual cost savings will concentrate in areas not currently of public policy concern. Thus, as a device to control health care costs, the Reagan tax reform appears weak. More major surgery would be required.

V. EFFECTS ON TAX REVENUE

The other obvious purpose for this change in tax law is to reduce the deficit. Here, this proposal also falls markedly short of what seems possible. Administration officials predict that $2 billion in revenues will rise from their proposed change--1 percent of the impending deficit. By contrast, if the tax were levied on half of everybody's premiums, $17 billion could be raised for the Treasury (Phelps, 1982). The extreme of taxing all health insurance premiums could raise over $27 billion in new revenues.

For an administration with supply-side concerns, this form of tax increase has another distinct advantage over many other potential revenue-raising devices--it is inframarginal to many people's labor supply decisions. Altering the taxation of health insurance premiums will add to the base income being taxed, but unless a person is pushed into a higher tax bracket by the change, there is no effect on marginal earnings. For some, the labor supply decision may be affected, even if marginal after-tax wages are unaffected, because the taxation of health insurance would represent a lump-sum tax on employment itself. But even this tax could, in concept, increase labor supply, if the income effect outweighed the substitution effect of affected workers.

VI. CONCLUSIONS

Sweeping changes in tax law would produce tidal waves--not ripples--in affected sectors of the economy. Health insurers would lose large amounts of their business. Changes in medical use would be considerable, affecting doctors, hospitals, and every type of medical supplier. How this would affect the health of us all is as yet uncertain.

Is the United States ready for serious tax reform in health insurance premiums? Many people would see the immediate personal financial damage from sweeping tax reform. Yet, considering the budget deficit facing the Congress and the President, and the alternatives recently under consideration (cancellation of the 10 percent income tax cut, surtaxes, or the effects of a $200 billion deficit on the economy), the taxation of health premiums may not be so undesirable. The issue is not whether the choice is painful, but whether it is less painful than the available alternatives.

Few people have the vision to see the benefits from reducing the massive subsidies to health care now generated by the tax system. But economists studying the health sector have shown how much our insurance choices have driven the spiraling expenditures in health care (Enthoven, 1980; Newhouse, Phelps, and Schwartz, 1974; Newhouse, Manning, Morris et al., 1981). Our excellent insurance coverage has led us to buy large amounts of medical care costing increasingly more for smaller and smaller gains in health. This is not to say that the health care is ineffectual, but rather that its benefits are less and less likely to match the added costs as our health care system grows in size and scope. The tax subsidy to health insurance has contributed considerably to the spread of coverage, while general inflation has increased the incentives for more health coverage. Reducing or eliminating these distortions would certainly help control own and our government's budgets. The Reagan proposal is but a small step in a direction m..ny economists have sought for decades (Feldstein, 1973; Feldstein and Allison, 1974; Feldstein and Friedman, 1977). Because taxation of health premiums

helps both the budget deficit and the health cost issue, it may be the most desirable choice available. One can only wonder whether current modest proposals are sufficiently strong for the task at hand.

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