

The NBER Digest

NATIONAL BUREAU OF
ECONOMIC RESEARCH, INC.

September/October 1985

Can We Maintain High Quality Health Care at Reduced Costs?

After four decades of rising costs for health care and medical insurance, governments and businesses have begun to implement changes in the U.S. medical system. While these changes should increase the efficiency of the system, they may also lower the quality of care for some patients, according to NBER Research Associate **Victor R. Fuchs**.

In **Paying the Piper, Calling the Tune: Implications of Changes in Reimbursement** (*NBER Working Paper No. 1605*), Fuchs describes three "revolutions" in the financing of health care in the United States since World War II. First, there was the extraordinarily rapid diffusion of private health insurance between 1945 and 1960. In only 15 years, the number of persons with hospital insurance jumped from 32 million to 122 million. The number with coverage for physician expense soared from less than 5 million to more than 83 million.

Second, there was the 1965 legislation that created Medicare and Medicaid. These programs provide substantial health insurance coverage to millions of Americans who are elderly or poor.

The third revolution has been a radical change in the way hospitals and physicians are reimbursed. This change, aimed primarily at limiting cost increases, began tentatively in the 1970s with the regulation of hospital reimbursement in a few states. It accelerated in the early 1980s in both the private and public sectors. Among the best-known changes are Medicare's prospective payment system based on diagnosis-related groups, California's contracts with hospitals to pay a specified amount per Medi-Cal (Medicaid) patient treated, increased deductibles and coinsurance, health maintenance organizations, and preferred provider organizations.

In this third revolution, the "third parties" (government and business) who have been "paying the piper" have decided to "call the tune," says Fuchs. They want to change the system, and Fuchs's paper looks at the economic and ethical implications of these changes.

The health care sector of the economy, he points out, has grown from only 4.4 percent of the nation's output in 1950 to 10.8 percent in 1983. In the 1970s and early 1980s, real health expenditures (after removing inflation) grew at a 4 percent annual rate. That's far higher than the 1 percent per annum growth in real national output in the late 1970s and early 1980s. "Sooner or later health spending must reflect the country's underlying capacity," Fuchs notes. If the trend in health spending and national economic growth of the past 30 years were to continue for another 30 years, health expenditures would amount to 20 percent of gross national product. The country, he adds, is currently in a pause or even a retreat from its previous thrust toward more equal access to care for all, regardless of their income.

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The fundamental problem of health care policy, Fuchs says, is how to provide insurance without pushing utilization far beyond the point where the additional benefit is equal to the additional cost.

Fuchs sees four basic thrusts in the ongoing changes in health care: (1) Lower costs for specific payers, rather than for health costs as a whole. For example, California's hospital-specific contracts for Medi-Cal patients are designed to save money for the government of California. (2) Payment for individual tests, visits, days in hospitals, and the like are being replaced by global payments for an illness episode, a hospital admission, or for a year of care regardless of services used. (3) Reimbursement rates are set prospectively rather than retrospectively. Buyers of health services are now negotiating in advance for a particular package of services. (4) Consumers must make more choices and accept more financial responsibility for their choices.

These changes, intended to slow the rate of increase in health care spending, may lower the quality of care along with eliminating unnecessary treatment. Since physicians will not automatically find the costs covered for an additional visit, test, x-ray, and the like, they will have a greater incentive to consider the extra value of what they do. Hospital administrators will be under pressure to consider the costs of improving the quality of services. "There is nothing that can match red ink for attracting the attention of trustees of hospitals or other organizations," maintains Fuchs. Health insurance companies, facing increased competition in selling insurance, are bargaining about the price they pay and are insisting on measures to reduce costs. Patients will be paying for some of their care directly through deductibles and coinsurance and thus may decrease their demand for health services.

Most of the belt-tightening, Fuchs says, will be felt first by the hospitals. As physicians realize that money spent for hospital care is money that could be spent for their services, they are likely to hospitalize fewer patients. Physicians will feel the need to join group practices or other organizations in order to bargain with insurance companies and other purchasers of care. Because of global reimbursement, hospital nurses are less likely to win their goal of separate billing of patients. Faced with a cost squeeze, hospitals will be reluctant to use revenues from patients to support medical research. Hospitals are likely to specialize in the diagnosis and treatment of particular health problems, thereby raising the quality of care and increasing efficiency. On the other hand, as group practice spreads, fewer physicians will specialize since they will not be able to get high fees to make up for low workloads.

Fuchs also wonders whether patients will trust physicians as much if they suspect that doctors are recommending lower-cost treatment to save money at the expense of the patients' health. He asks if increased and intense competition among hospitals and physicians will hamper the free exchange of information, the cooperation, and the mutual assistance that has characterized health care in the past.

"It is questionable whether the transformation of

the health care industry into an approximation of the used car industry represents social progress," Fuch concludes.

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Is the Strong Dollar Sustainable?

NBER Research Associate **Paul R. Krugman** predicted in June 1985 that the dollar was too strong relative to the currencies of our major trading partners and would decline substantially in value. His analysis, described in detail in **Is the Strong Dollar Sustainable?** (*NBER Working Paper No. 1644*), was based on calculations of the trade deficits and levels of foreign borrowing that would occur if the dollar declined slowly from its levels of early 1985.

Krugman first calculated existing differences in interest rates between the United States and its trading partners and the forecast of exchange rates that those differences imply. He then estimated the current account deficits, which must be financed by increased U.S. borrowing overseas, that would result with these rates.

Krugman calculates that if the dollar were to decline no faster than the difference between U.S. and foreign interest rates, then U.S. foreign debt would grow faster than GNP for the next 23 years. By that time, U.S. foreign debt would equal 46 percent of GNP, comparable to the debt-to-GNP ratios of Brazil and Mexico.

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Krugman finds that the United States does not face insolvency. In other words, interest payments and foreign debt will not grow faster than GNP indefinitely, even at the exchange rates and interest differentials that existed in May 1985. However, he believes that the accumulation of debt implied by these exchange rates and interest rate differences is unrealistically large. Krugman is skeptical of the willingness of foreigners to hold such a large fraction of their wealth in U.S. assets and of the United States to run high current account deficits for so long, and to incur so much foreign debt.

Krugman notes that uncertainty about future economic and political developments can modify the conclusion that the strong dollar cannot be sustained. However, a careful analysis of the major sources of uncertainty reinforces rather than weakens the prediction that the dollar must fall.

Government Deficits and Corporate Finance

Large federal budget deficits encourage U.S. corporations to issue more equity and less debt, according to NBER Research Associate **Benjamin M. Friedman**. Moreover, this change occurs whether the government finances its deficit with short-term bills or with long-term bonds.

In **Implications of Government Deficits for Interest Rates, Equity Returns, and Corporate Financing** (*NBER Working Paper No. 1520*), Friedman reaches these conclusions after examining rates of return on short- and long-term debt instruments and on equity in U.S. markets between 1960 and 1980. He finds that increases in the amount of (short-term or long-term) government debt outstanding tend to raise the rates of return on debt relative to the return on equity. For example, when the government issues additional debt, rates of return on debt rise by more than rates of return on equity do. Alternatively, if the increase in government debt outstanding is accompanied by an expansionary monetary policy that lowers rates of return in general, then equity returns will decline by more than debt returns. In either case, corporations that need to raise additional capital therefore find that the cost of equity finance has declined relative to the cost of debt finance. Presumably their financing strategies will adjust accordingly.

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Friedman estimates that each additional \$100 billion of short-term government debt reduces the rate of return on equity by 0.33 percent relative to the return on short-term debt, and 0.27 percent relative to the return on long-term debt. Each additional \$100 billion of long-term government debt reduces the rate of return on equity by 0.24 percent relative to the return on short-term debt, and by 0.34 percent relative to the return on long-term debt. Friedman concludes that, in the current context of continuing government deficits of approximately \$200 billion per year, the change over time in the cost of raising capital resulting from such large government borrowing could have substantial effects on corporate debt-equity decisions.

Unionism and Police Compensation

Police department salaries in 1978 were about 30 percent higher in highly unionized states than in less unionized states, according to a recent study (*NBER Working Paper No. 1578*). In other words, the predominance of unions may push compensation up even more in the public sector than it does in the private sector.

Moreover, collective bargaining seems to affect both union and nonunion police departments: in states that allowed collective bargaining for police in 1978, salaries for both were higher, and there was no salary differential between the union and nonunion police departments, according to NBER associates **Richard B. Freeman** and **Casey Ichniowski**, and **Harrison Lauer**.

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In **Collective Bargaining Laws and Threat Effects of Unionism in the Determination of Police Compensation**, the authors find that in states without legal provisions that permit collective bargaining in the public sector, unionization has little impact on compensation. For example, in 1965 only four states—California, North Dakota, Rhode Island, and Wisconsin—had provisions for collective bargaining. In those states, 4.8 percent of the surveyed police departments engaged in bargaining, and unions had no effect on compensation. Similarly in 1978, among states without bargaining laws only 6.8 percent of the sampled police departments engaged in bargaining. The union effect on salaries then was estimated at 5.5 percent.

Within a state, unionization pushes compensation up between 9.9 and 18.1 percent, the authors estimate. However, unions raise fringe benefits more than salaries. In their study, Freeman, Ichniowski, and Lauer consider only two fringe benefits: retirement and insurance programs. They find that “when a state is entirely unionized, municipal police departments . . . have 2.3 percent more of their compensation package made up of fringe benefits than do police departments in virtually nonunion states.”

For this study, the authors used 1978 data from about 800 municipal police departments in towns with populations of at least 10,000. About three-

quarters of those departments were in states with high levels of bargaining between the municipality and the police department. For purposes of comparison, they used smaller samples of departments in municipalities with populations of at least 25,000 in 1965 and 1973.

R and D and Productivity in the Bell System

Spending on R and D by the Bell System caused productivity to grow rapidly and at increasing rates during the postwar period, according to a recent study by NBER researchers **Roger H. Gordon** and **Mark Schankerman**, and **Richard H. Spady** of Bell Communications Research.

In **Estimating the Effects of R and D on Bell System Productivity: A Model of Disembodied Technical Change** (NBER Working Paper No. 1607), the authors find that spending on R and D increased the productivity of both capital and labor. They estimate that labor productivity in the Bell System increased at an annual rate of 5.3 percent between

1947 and 1981, while the productivity of telephone-related capital increased an average of 3 percent during the same period.

These productivity increases in capital alone imply a real rate of return on R and D spending of 12 percent between 1947 and 1956, 15 percent between 1957 and 1966, and 18 percent between 1967 and 1978. By including the effect of R and D on labor productivity, and taking account of biases caused by the regulations on R and D expenditures, estimates of the return to R and D might be twice as high.

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Finally, these figures assume that productivity increases in the Bell System have occurred primarily through investment in new equipment that reflects the results of Bell's R and D. This assumption is much more consistent with the data than the alternative: that productivity increases occur in existing equipment with or without investment in new capital.

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