Health Economics and Preventive Care

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If one judges investments by the returns they bring, the American health care industry is becoming progressively less cost-effective (*1–3*). In this article we posit that the ever-increasing American expenditures on health care could be controlled by giving greater attention to the prevention of the major chronic diseases, that is, coronary heart disease, stroke, and certain cancers. We will review the available evidence to support this position and offer a framework for the development of future health care policies derived from that review.

There are two important features about American medical care that we wish to emphasize: (i) it is primarily a disease care rather than a health care system, and (ii) it lacks what economists call effective market controls. The system assures payment or reimbursement, through third-party (insurance) payers, for the medical care people receive in health crises—that is, when they are sent to the hospital. This arrangement results in eliminating effective consumer choice and supplier competition, usually present in the marketplace to restrain demand, output, and prices (*4*). It encourages ever-increasing demand for ever more expensive hospital services (*5*). Unless the economic incentives can be changed to encourage reduced utilization of medical services and increased attention to health conservation, there appears to be little hope of containing costs or of improving the well-being of our people.

Table 1 shows the increase of medical costs in the United States over the last 25 years. In 1950 we were spending 4.6 percent of the gross national product (GNP) on health; in 1975 we spent 8.3 percent on health. Except for a slight pause in 1973–74, the percentage of the GNP devoted to total health care has been rising steadily since 1929 (when it was 3.5 percent). The national hospital bill, which now accounts for 40 percent of total health expenditures, has been rising even more quickly than the total health care bill. Increased spending on physicians' services and drugs has also been rising, but at a slower rate than the total health care bill. The biggest rate of increase has been in nursing home care, reflecting the establishment of Medicare and Medicaid.

It has been suggested that whether we halved or doubled our total health care spending, longevity would not be changed significantly (*6*). Half of the increased spending since 1950 has gone to pay higher prices. The other half has gone largely for more hospital beds, more medical technology, more hospital admissions (up by about 50 percent since 1950), more hospital employees, and more patient-days in hospital. The available data do not indicate, however, that our health has improved significantly since 1950 (*7*).

The major causes of disability and mortality in our adult population—coronary heart disease, stroke, and cancer—have shown little net decline in incidence. The slight decline in heart disease mortality rates which began in 1968 may be due, at least in part, to changes in adult smoking habits and other primary prevention developments (*8*) rather than to increased spending on medical care. For example, when the children of participants in a long-term study of cardiovascular disease and risk factors (the Framingham study) were examined in 1972, the age-specific means of blood pressure, serum cholesterol, and cigarette smoking were found to be lower than those of the parent cohort in 1950, a difference that may have resulted from increased awareness of health and consequent primary prevention (*9*). Average cancer incidence has remained relatively static, except for declines in stomach cancer, which appear to be related to nutritional factors. Cancer survival rates have changed very little since 1950, and for lung cancer not at all (*10*). Injuries from automobile crashes and other accidents, which are the third major cause of death (*11*) and rank second in total economic cost because of their prevalence among young adults (*12*), have gone down by about 20 percent since 1973 because of the preventive effects of lower speed limits and higher gasoline prices. Since 1970, infant and maternal mortality rates have sharply declined in New York State, reflecting the legalization of abortion, declining birth rates, availability of prenatal care, and increased family planning—all aspects of preventive medicine.

A Sickness System

Approximately 90 percent of our population have some type of insurance covering hospital care, and almost as many have coverage for physicians' services performed in hospital. Relatively few people, however, are able to obtain insurance that pays for a substantial amount of preventive or ambulatory care—in other words, that rewards the physicians for keeping patients out of the hospital. Most medical insurance policies will pay 80 percent of all medical expenses over a certain minimum but do not cover periodic preventive services not related to a specific diagnosis or medical complaint. Given this unidimensional financial incentive structure, it would be surprising were there not abuses of the system in the form of excessive surgery and unnecessary hospitalizations (*13*). In Abelson's words (*6*), "When the major fraction of medical costs is borne by a third party, demand for care is practically infinite." Or as Mechanic has put it (*14*):

> Since . . . health insurance ordinarily includes few incentives for either the consumer or the physician to economize on the use of health resources, its effect is to substantially increase consumption and the overall price of medical care. The rise in price is not directly experienced by many consumers, and thus the real cost of the existing system is not clearly appreciated. The incentive for the physician under such policies is to provide a maximum level of services, regardless of their value, and the pattern of insurance facilitates his ability to generate demand without a consumer backlash.

There is ample evidence pointing to the overuse of our medical care system (*15–17*). A recent congressional study (*15*), extrapolating from small-sample data, concluded that 2.4 million unnecessary surgical procedures were performed

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in 1974 at a national cost of $4 billion (of which Medicare and Medicaid paid over $1 billion), and that these resulted in 11,900 unnecessary deaths. There has been criticism (*18*) of this congressional document and the extensive reporting of its results by the *New York Times*. It is likely that follow-up studies correcting for area differences, biases of selection, errors of projection from small numbers, and so on will yield significantly lower figures. But even if the new figures turn out to be only one-fourth or one-tenth of the congressional projections, there is no question that there is a substantial amount of unnecessary surgery, hospitalization, and waste of health care dollars in the United States.

The U.S. rate of elective surgery is one of the highest in the world. We have twice as many surgeons and twice as many operations in proportion to population as has Great Britain; in England, the hysterectomy rate is 40 percent that of the United States (*19*). The congressional committee report based its extrapolations largely on a study by McCarthy and Widner (*20*) of 1350 union members in New York City who had sought second opinions on recommended surgery. The consultant physicians had advised against the surgery in 16 percent of these cases. Two percent had had the surgery shortly despite the dissenting opinion; 3 percent had had it later because their symptoms persisted; and 11 percent had not yet found it necessary to resort to surgery 1 to 4 years after the second opinion was given. Whether or not the McCarthy-Widner data can properly be extrapolated to the nation (*21*), the American College of Surgeons supports the obtaining of second opinions as good surgical practice. A number of second-opinion programs are already in operation under the sponsorship of Blue Cross–Blue Shield and other insurers and unions.

There are other studies indicating that excessive surgery is stimulated not only by a high ratio of surgeons in a population but also by our payment system. A study of 8000 Medicaid families found that the rates of surgical admissions and general hospital use were approximately twice as high for persons under fee-for-service arrangements as for those under group practice plans of the Health Maintenance Organization (*22*). The probability of tonsillectomies in the families of U.S. government employees varied from 41 percent for Blue Cross–Blue Shield subscribers to 10 percent for subscribers to prepaid group practice plans (*23*).

There are similar studies of rates of hospitalization. In 1971 the U.S. Civil Service Commission reported that among employees in group practice plans under the Federal Employees Health Benefits Program hospitalization rates were 40 percent of the rates of those enrolled in the nationwide indemnity plan provided by Aetna and 46 percent of the rates of those enrolled under Blue Cross–Blue Shield (*24*). Another study showed that members of prepaid medical plans were hospitalized one-third as frequently as members of a comparable group in a traditional disease-care reimbursement system, and had lower rates of absenteeism (*25*).

Hughes of Mt. Sinai School of Medicine in New York City, Crile of the Cleveland Clinic, Zuidema of Johns Hopkins, and Stahl of New York University School of Medicine also offered evidence to the congressional committee (*15*, p. 12) on the fee-for-service incentive in excessive surgery and on the usefulness of second opinions and prepaid group practice to reduce the incentive. Hughes estimated that 20 to 24 percent of current surgical procedures could be safely performed on an outpatient basis, with substantial savings under a proper incentive system. He said:

> In fee-for-service settings . . . hospitals can receive no compensation for unfilled beds and unused operating rooms; and patients may receive little, if any, insurance reimbursement for elective surgical work performed in a doctor's office. The pressures from both directions may work towards the hospitalization of patients for minor surgical problems.

Table 1. Health care expenditures in the United States and their relation to the gross national product, 1950, 1965, and 1975. Data from (*52, 53*).

Item	Expenditures					
	In billions of dollars			In percentage of gross national product		
	1950	1965	1975	1950	1965	1975
Gross national product	$263.4	$655.6	$1424.0			
Total health care expenditures	12.0	38.9	118.5	4.6	5.9	8.3
Hospitals	3.7	13.2	46.6	1.4	2.0	3.3
Physicians	2.7	8.4	22.1	1.0	1.3	1.6
Drugs	1.6	4.6	10.6	0.6	0.7	0.7
Dentists	0.9	2.7	7.5	0.3	0.4	0.5
Nursing homes	0.2	1.3	9.0	0.1	0.2	0.6
Other*	2.9	8.7	22.8	1.1	1.3	1.6
Funded by government	3.1	9.5	49.9	1.2	1.4	3.5
Funded by private insurance†	1.3	9.6	31.7	0.5	1.5	2.2

*Includes public health and research. †Benefit payments made by all private insurance organizations, including Blue Cross and Blue Shield.

Table 2. Sources of payments for personal health care services in the United States, 1950, 1965, and 1974. Data from (*52*).

Source	Payments					
	In billions of dollars			In percentage of total personal health care expenditures		
	1950	1965	1974	1950	1965	1974
Government	2.1	7.0	34.0	20.2	20.9	37.7
Private insurance	1.2	9.0	24.4	11.5	26.9	27.0
Consumers	7.1	17.6	32.0	68.3	52.5	35.4

Economy and Preventive Care

Since 1950 government spending on medical care has increased at almost twice the rate of total health care spending (Table 1). The government now pays over 42 percent of the total medical care bill, including 53 percent of the hospital bill. Private health insurance spending in this period has risen at four times the rate of increase of total health care spending and paid 35 percent of our national hospital bill in 1975. A company may spend $800 to $1000 per annum per employee for a reasonably generous health insurance plan for employees and their families, a sum equal to 8 or 10 percent of many payrolls. Only a third of personal health care expenditures are now paid for directly out of the consumer's pocket (Table 2). As may be seen in Figs. 1 and 2, the expansion of governmental fiscal involvement (through Medicare and Medicaid) in a system which emphasizes sick care has

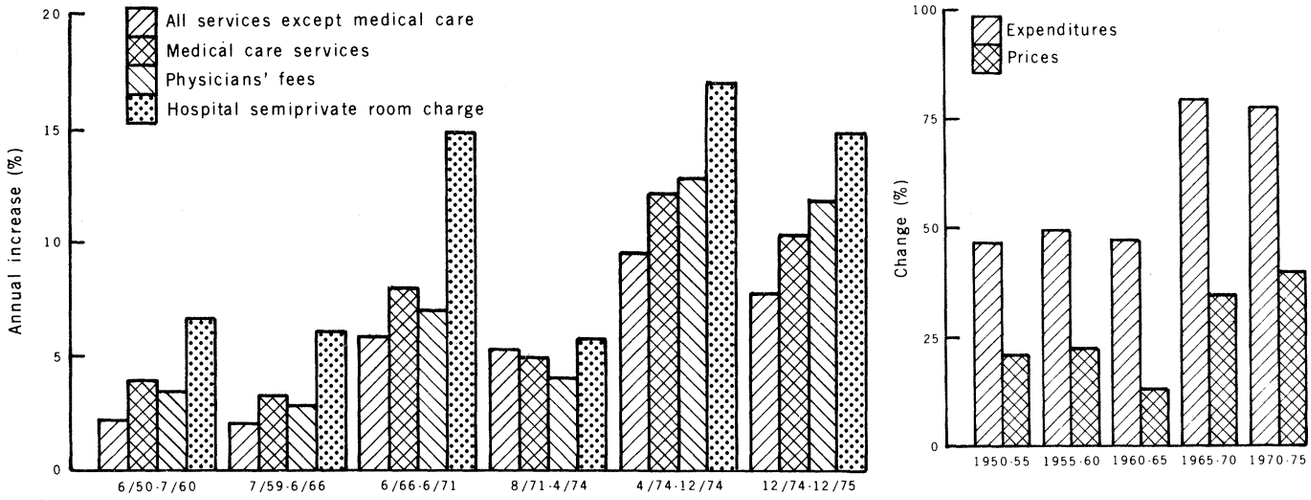

Fig. 1 (left). Mean annual rates of price increases in selected components of the Consumer Price Index (*54*). The major items in the "all services" index here are dry cleaning, domestic services, automobile repairs, recreation services, and personal care services. The index of medical care services combines physicians' fees and hospital room charges. Medicare was instituted in 1966. Price controls were in effect from August 1971 to April 1974, and included hospital charges. Fig. 2 (right). Changes in total expenditures on personal health care and in the medical care component of the Consumer Price Index, for 5-year periods. Based on data in (*52*).

stimulated the demand for these services and is one of the main causes of the great rise in medical care costs and expenditure in the last decade (*26*). These facts need to be borne in mind when considering the economic efficacy of any national health insurance proposals which would operate within the current American medical care system. Experience with Medicare and Medicaid strongly suggests that a move to national medical insurance (other than insurance for catastrophic illness) without substantial changes in controls of the medical care delivery system may prove economically disastrous (*27*). One can readily predict ever-rising costs (*3*, p. 7; *28*, p. 138) and higher taxes.

Ten years ago medical care spending, at 5.9 percent of the GNP, was a relatively small factor in the economy. In 1976, at over 8.3 percent of the GNP and rising, it supports the second largest industry in the nation. Further, it adds to the consumer cost of nearly all American goods and services, making them less available to the poor and less competitive in the world market. As a consequence, nationally, we face curtailment of other basic services and goals in order to pay for a medical care system which does not commensurately improve our health.

Preventive care offers a workable means of resolving this difficulty (*29*, *30*). For example, in a recent screening of 1 million people the Community Hypertension Evaluation Clinic found 21 percent to have high blood pressure (diastolic of 95 mm-Hg) (*31*, *32*). Only 45 percent of these were receiving adequate treatment. The total annual direct and indirect cost of hypertension to the country is estimated at $16 billion. Expected annual savings from successfully treating all hypertensives would be 50 percent of this sum, or $8 billion (*33*). Annual per patient cost of treatment of high blood pressure has recently been estimated at $100 (*34*) to $200 (*35*) (the figure depending on degree of use of professional health personnel other than physicians). It has also been estimated that there are 25 million hypertensives in the United States. A national program to find and treat all of them would cost at most $5 billion; the least favorable benefit-cost ratio would be 1.6 : 1. The national net benefit in better health, reduced premature mortality, and higher productivity would be at least $3 billion a year (*35*, *36*).

Thus it would be in the public interest to have an expanded national program of hypertension control, one designed to identify hypertensive persons and provide effective medical follow-up to assure continuing proper control of blood pressure. Logically, the treatment phase should be incorporated within the present medical care system. Pilot efforts in New York City and Milwaukee have demonstrated workable and effective hypertension control programs (*34*). The efficient and effective use of allied health professionals in such programs also has been demonstrated (*34*).

A more comprehensive health policy structure is needed which can guide the American health industry in new directions, particularly toward services to preventive care. In recent legislation, efforts have been made to move in this direction, for example, the development of 200 local health systems agencies (HSA's) around the country, establishing medical peer review, regulating occupational safety, and encouraging health maintenance organizations (HMO's). These may help to restrain future increases in medical care spending and to prevent unnecessary duplication. However, as mandated by law, their effectiveness lies primarily in restraining present practices rather than in encouraging preventive health care. The efforts to develop HMO's and effective arrangements for prepaid medical care delivery have not as yet attracted a significant number of providers and customers (*37*).

Without more meaningful efforts in preventive medicine, governmental systems of restraint may only lead to poorer health care on the average and newer and more sophisticated abuses of the system. The National Consumer Health Information–Health Promotion Act provides authority for new federal actions in prevention, but it appears too diffuse in its objectives to be effective. Further, it appears much underfunded for fiscal 1977.

Primary Prevention

Most major chronic illnesses in America have environmental and behavioral components which play important parts in their etiology. For that reason, the environment or specific products must be modified (managerial prevention) to protect susceptible individuals. At the same time, individuals must be taught to protect themselves (personal prevention). Instruction in personal pre-

vention may be directed at children or at adults. To be effective, these efforts must be more than didactic exercises. In our experience, high-risk individuals must first become known to themselves and then must engage in behavior change programs. A brief, focused medical examination, including the taking of a short medical history, can initiate this process. For children, the American Health Foundation has developed a new school program, "Know Your Body" (KYB), which is designed to (i) promote a diet low in cholesterol, in fat, and in total calories, and otherwise nutritionally balanced; (ii) eliminate cigarette smoking; (iii) control blood pressure; and (iv) enhance physical fitness.

A 5-year (1975–80) KYB program among 2500 school children aged 10 to 12 years is now in progress. It includes annual determination of blood pressure, serum cholesterol, height, weight, hematocrit, and random blood glucose; a physical fitness test; a test of health knowledge; and a survey of such habits as smoking and alcohol consumption. After completion of the tests, the children receive a "health passport" in which to record their test results. Some of the results resemble those of other studies (*38*); we have found cigarette smoking (daily) in 10 percent and high blood cholesterol (over 180 mg per 100 ml of serum) in 18 percent of these children. The next step in this program is preventive intervention through which risk factors can be controlled or reduced. Students, teachers, and parents participate in this structured program (formal printed guidelines on how to reduce risk factors have been prepared for teachers, for example). The educational experience is designed to develop a greater appreciation of healthful life-styles. If reduction in risk factors can be demonstrated, efforts such as KYB may become an integral part of every school system in the United States.

For adults, the early identification of those who are at high risk of chronic disease should be a major objective of preventive medicine. Such individuals should be given every opportunity to participate in special programs of nutrition control, smoking cessation, and hypertension control. Through concentration of our preventive efforts on high-risk persons our current knowledge of disease prevention can be most effectively utilized.

We are currently testing a health maintenance service (HMS), a partly federally sponsored program in which sizable adult populations are given brief tests for chronic disease risk factors at their places of work. This is a low-cost procedure utilizing mainly health workers other than physicians. We have found that over 50 percent of the persons tested have one or more of the risk factors—cigarette smoking (ten or more daily), high blood cholesterol (over 220 mg per 100 ml of serum), obesity, or hypertension (over 95 mm-Hg diastolic, 160 mm-Hg systolic). We have also initiated intervention programs designed to bring cost-effective preventive medical procedures to places of employment. It has been shown that through individual counseling and group therapy some 25 percent, and when recidivism is dealt with 50 percent, of heavy cigarette smokers have been able to stop smoking for 1 year. Also, weight control (for 1 year) has been achieved for obese persons (*39*). The cost of the smoking cessation intervention has been about $80 a person.

We have calculated cost-benefit ratios of almost 2 to 1 for smoking cessation programs and 2 to 1 for alcohol abuse programs, and have estimated highly favorable benefit-cost ratios for the installation of seat belts to prevent auto crash injury even when rates of use are as low as 33 percent. We know that a significant proportion of heavy smokers and drinkers can be assisted to stop their self-destructive and socially costly habits. Given the current state of our knowledge in disease epidemiology, control of these risk factors should lead to a continuing reduction in coronary heart disease and cancer (*40*).

Managerial Preventive Medicine

Managerial preventive medicine pertains to health risks that can be controlled through environmental management rather than by personal behavior. Malaria in the United States was prevented primarily by clearing swamps and wetlands near population centers, thereby controlling the mosquito carrier; rickets by fortifying our milk; goiter by adding iodine to salt; tooth decay by fluoridating drinking water.

An important example of current managerial preventive medicine is the development of less harmful cigarettes. During the past 25 years the tar and nicotine content of cigarettes has been reduced by over 50 percent (*41*). The trend in bioassays of tars over the years appears to indicate that on a gram-to-gram basis present-day tars are less active than those of 25 years ago (*42*). Most significantly, this change in cigarette smoke condensate already appears to be reflected in a decrease in incidence of lung cancer in younger smokers and may be responsible for the observed decline in the rate of heart attacks (*43*). One can safely predict that as fewer harmful cigarettes are smoked, and as cigarettes become less and less harmful, the risk of tobacco-related diseases will significantly decline over the next 25 years. For the present, however, antismoking programs and education in stopping smoking will continue to be a necessity. Similarly, the food industry needs to be encouraged to reduce the content of saturated fat and cholesterol in the American diet, an area of managerial preventive medicine where much progress can still be made.

There are also legal measures that can reduce preventable illness. Objectives of such legislation could include reducing the saturated fat and cholesterol content of food and increasing essential amino acid content; reducing the risk of injury in auto crash through surveillance of alcohol consumption, improved passenger restraints, and lower speed limits; and ridding the environment, particularly the work environment, of toxic substances. In nutrition, for example, there is ample precedent for food regulation in current Food and Drug Administration legislation.

Secondary Prevention

Another element of prevention is early detection of disease. This differs from risk-factor detection in that, rather than identifying a probability of illness ("risk"), one is looking for the earliest possible evidence of illness. Examples of methods include the Papanicolaou test for cancer of the cervix; breast palpation, thermography, and mammography for breast cancer; blood pressure measurement for hypertension; eye tonometry for glaucoma; and spirometry for emphysema. Hundreds and sometimes thousands of individuals must be screened in order to find one case of the disease in question. The individuals identified must voluntarily comply with a specific clinical regimen. The costs of such medical screening per treated case are often substantial. Except for hypertension screening and control, where the cost-effectiveness has been well established, screening procedures for early disease detection must be studied in detail to determine their cost-effectiveness for various age levels, population groups, and other risk-determining characteristics (*44*). The probable (differential) success of intervention therapy for a given condition should also guide our decisions about

undertaking secondary prevention procedures. Secondary prevention methods should be employed when the screening and early treatment costs are low, the effectiveness of early therapy high, and the cost of late treatment sizable.

Administrative Prevention

In this short examination we cannot discuss the relative cost-effectiveness and importance of what might be called "administrative prevention," that is, cost-effective management practices in health care. Examples of such practices include the use of allied (nonphysician) health professionals (*45*), use of ambulatory rather than inpatient medical and surgical services, and peer review of elective surgery and medical care. These obviously important issues require a separate discussion. One would logically expect that, if used to the full, administrative prevention would result in less-expensive, better, and better-distributed medical care. The incorporation of preventive care into a revised general system of health care would undoubtedly be accompanied by various new administrative practices.

Cost-Effectiveness of Life-Style

A preliminary result of our studies indicates that generally prevention can be cost-effective, particularly managerial primary prevention, individual primary prevention (healthful life-style) (*46*), and selective screening and appropriate early therapy (*44*). We are involved in further detailed studies to clarify areas of cost-effective prevention in order to guide policy-makers toward efficient choices.

It can be said unequivocally that a significant reduction in sedentary living and overnutrition, alcoholism, hypertension, and excessive cigarette smoking would save more lives in the age range 40 to 64 than the best current medical practice. In addition, it would add to national productivity by reducing absenteeism and illness (*31, 47*). The significantly lower incidence of cancer of most sites among Mormons and Seventh-Day Adventists, and their lower mortality rates, are evidence of the preventive effects of healthful life-styles, that is, of abstention from tobacco and alcohol and maintenance of a nutritious diet commensurate with the degree of physical activity required by the individual's way of life.

The average total mortality rate in 1970–72 for Mormon men over 35 years of age in California was between 46 and 69 percent of the U.S. rate for all men over 35. The Mormon cancer death rate for 1970–72 in the age group 45 to 64 was 62 percent of that of U.S. whites (and included lower rates for certain cancer sites not associated with smoking and drinking). Similar findings were reported for Mormons compared with non-Mormons in Utah. (Per capita cigarette and alcohol consumption in Utah was 50 percent of the U.S. figures in 1970.) An 8-year study of Seventh-Day Adventists living in California found their cancer mortality (standardized for age and sex) to range from 50 to 65 percent of that of the general California population (*48*). The rate of coronary artery disease and myocardial infarction has been 50 percent lower among male Seventh-Day Adventists than among white American males generally (*49*). The life-style of Mormons and Seventh-Day Adventists is reflected in their lower medical care expenditures. For example, total federal and state personal health care expenditure per capita (largely Medicaid and Medicare, but also including contributions of the Veterans Administration, the Department of Defense, Workmen's Compensation, and so on) in 1969 in Utah was significantly below what would be expected for a state of its per capita personal income and its welfare load (*50*).

Time for a Change

In view of the epidemiologic research indicating that the incidence of cardiovascular disease, many cancers, and other chronic diseases may be significantly reduced through preventive care, the potential social and economic benefits to be realized through preventive medicine seem staggering. While there is much yet to learn about preventive intervention, putting into effect what is currently known would provide substantial social benefits.

Economic incentives are missing, however, to establish these improvements. Our present health insurance system provides little financial inducement for doing so. The public, physicians, the drug industry, and the hospitals do not focus their attention on any of these preventive procedures (*51*). It is important to note that an increased emphasis on preventive health care does not imply questioning the worth of continued improvements in clinical medicine and fundamental research. The problem is one of priorities and husbanding scarce resources. Cost-effective selective screening and risk-factor reduction can lower morbidity and mortality rates and medical costs and lead to an increase in total real national output. Early identification and preventive intervention should also mean more resources for the medical care industry to focus on unavoidable illness, without further large increases in the proportion of the GNP going to medical care.

A two-pronged approach is needed: one related to cost control and disease care services, the other instituting a cost-effective incentive program of preventive medicine on a national scale.

The needed structural changes are eloquently described in *The Forward Plan for Health* (*30*) under the heading "Theme: Prevention":

> . . . further expansion in the nation's health system is likely to produce only marginal increases in the overall health status of the American people . . . the greatest benefits are likely to accrue from efforts to improve the health habits of all Americans and the environment in which they live and work.

The report then outlines the improvements needed in health education, nutrition, child health, and environmental health; it also briefly discusses smoking, mental illness, alcohol and drug abuse, infectious diseases, dental disease, and inadequate physical activity.

What is lacking in this presentation, or so it seems to us, are provisions for meaningful incentives and specifically funded programs to assure that the proposals will be executed. These and related preventive proposals require implementation. In this article we have outlined those preventive programs which we believe are ripe for implementing now.

If a national, comprehensive preventive program is to be implemented and succeed, it must have the enthusiastic support of the medical profession, to which the public has entrusted its well-being; of the government, which alone has the resources to create a national approach and to provide the necessary incentives; of the medical insurance industry, which must cooperate with the government in this effort; and of the individual, who must accept a greater responsibility for his or her own well-being and exert the self-discipline required in modifying life-style habits. With such a partnership, a true health care system can be created for this generation and those to follow.

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36. It is not intended in this line of argument to ignore R. Fein's caveats [*Bull. N.Y. Acad. Med.* **51**, 235 (1975)]. In a sense, our calculations provide minimum arguments for preventive medicine, because they heavily discount the productive value of older persons, women, and other groups with low measured dollar contributions to the economy.
37. The HMO Act of 1973 is intended to aid the expansion of prepaid group practice by a 5-year demonstration program of grants, contracts, and loans. In general, HMO subscribers' spending on inpatient care is 50 to 70 percent of the national average (*22–25*). Employers are required by the HMO act to offer their employees an HMO option if it is available. While there has been a substantial growth in recent years in group practice plans, HMO still accounts for only a small fraction of medical care and few new plans have actually provided care. In addition, HMO's are seeking legislation to limit their required services, to restrict high-risk members, and to suspend the requirement of a uniform premium for all. The 1973 act requires mental services, alcohol and drug abuse services, and preventive dental care for children, and so causes the HMO plans to cost much more per employee than existing medical insurance, thus impeding the expansion of HMO's. However, the move by HMO's to restrict services and high-risk membership serves to strengthen the arguments of those who say that HMO's are not the solution for the problems of improving the delivery of health care services and controlling their quality and cost. These questioners of HMO's argue that the economies observed in existing group practice plans largely reflect highly selected groups of subscribers who use health care services significantly less than the population at large. In addition, incentives under HMO fixed, prepaid fee practice could lead to lower quality (in a sense, a "charity clinics for all" allocation system) and neglect of needed services. Also, there is little evidence that HMO's improve the general health of the populations they serve (*28*, p. 140).
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55. We thank P. Rogatz, R. Klarberg, L. E. Jensen, B. Abel-Smith, J. D. Pole, W. R. Holland, and others for help from which this paper has benefited greatly. This investigation was supported by National Cancer Institute grants CA-17867-02 and CA-17613-02.

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