

bacteria are grown: bacteriophage may be a problem, and, with the slow growth rates currently attainable on methane, protozoa may be troublesome predators. Contamination problems will probably not be too difficult to solve, but certainly cannot be ignored.

Consideration of the economic factors involved in the production of protein from hydrocarbons makes it clear that research is needed on yield improvement, on the isolation of cultures of the highest-possible nutritive value, and on comparison of various practical hydrocarbon sources. Engineering research is needed on methods for harvesting bacterial cells, and on the design of fermentors of high capacity to transfer oxygen.

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#### NEWS AND COMMENT

## Medical Costs: Rapid Rise Causing Government Concern

After several months of study and research the Department of Health, Education, and Welfare has come up with a report\* that confirms what everyone who has been paying medical bills knows without being told—that medical costs are rising, and rising fast. The government's interest in this condition arises from the fact that, with the passage of Medicare, Medicaid, and a number of other new programs, it is increasingly a bill-paying participant in the process of medical care and not, as in the past, merely an interested onlooker. The report is a trifle weak on recommendations and is frankly gloomy in its forecast that continued increases are inevitable. It does not say very much that experts on medical economics and critics of American medicine have not been saying for years. But it is a remarkably lucid, sensible, and straightforward summary of what is ailing our medical economy, and its appearance as a government document marks a high

point in governmental perception of what the problems are.

The facts seem to be simple enough. According to the HEW report, doctors' fees, which had been rising at a rate of less than 3 percent per year, rose almost 8 percent during 1966. Hospital room rates rose about 16.5 percent, and are now about \$45 a day. Drug prices have not contributed significantly to recent overall increases in costs, according to HEW's analysis, but they do contribute significantly to the high cost of medical care in general.

The essential reason for the rise in doctors' fees, according to the report, is "a substantial and sustained increase in demand without a corresponding increase in supply." Recent growth in demand is attributed to many factors, beginning with the simple 28-percent increase in population between 1950 and 1965. In addition, the report says that changes in the internal character of the population have enlarged the groups that tend to seek medical care—there are more women, more city dwellers, more educated people, more children,

and more elderly. The expansion of insurance coverage has also played a role, as has the public's conviction that medical care has become more effective, hence more desirable.

During the same period (1950–65) the number of physicians increased by 33 percent. But the proportion of physicians in private practice declined from 72 to 62 percent; the remainder work in hospitals, medical schools, and so forth. And there was a numerical decline in the total number of family physicians—pediatricians, internists, and general practitioners—as more doctors entered specialties.

The doctors responded to this situation partly by increasing their productivity—seeing more patients per week, shifting from house to office visits, increasing their staffs, acquiring complex equipment, and entering into new organizational forms such as group practice and partnership. But they increased their fees as well, and they increased them far faster than the general rise in the Consumer Price Index.

#### Hospital Costs

As far as hospitals costs are concerned, they are affected by the same increase in demand and by the same increase in insurance coverage that affect the doctors. But HEW says that the major reason for the price rise is the rise in wages, which account for two-thirds of the costs of hospital care. Since the report notes that as recently as 1963 there were ironers in Memphis, for example, earning less than 45 cents an hour, it would seem that any changes

\**Medical Care Prices* (Superintendent of Documents, Government Printing Office, Washington, D.C. 20402; 20 cents).

## NEWS IN BRIEF

### ● FORD FOUNDATION REPORT:

The Ford Foundation plans to cut its rate of spending to bring its income a little more in line with its outgo. McGeorge Bundy, president, said that in recent years the Foundation has been spending approximately twice the amount of its income annually. According to the Foundation's latest annual report, covering the period from 1 October 1965 to 30 September 1966, the total of grants and other new commitments was \$307.7 million; income was \$154.4 million. Bundy said the Foundation intends to continue spending somewhat beyond its income, but at a rate lower than in recent years. In his first report as Foundation president, Bundy emphasized the need for increased funds for higher education. However, he said, "there is no solution to the problems of the private colleges and universities simply in giving away the Ford Foundation." Bundy warned of the dangers of a college president serving primarily as a promoter: "Colleges and universities expect these men to be the principal agents of innovation and reform but if they are preoccupied with paying their bills, other things will inevitably tend to take second place." He suggested three approaches to increased support: a five-fold increase in private gifts from wealthy individuals as well as greater corporate giving; continued federal assistance; and improvement in the investment yield of college and university portfolios. In reference to the latter, Bundy said the Foundation will undertake a survey of investment practices of institutions of higher education. Caution in investment, he said, may have in the long run "cost our colleges and universities much more than imprudence or excessive risk-taking." The report also announced the restructuring of the Foundation into four divisions. The new divisions and their heads are: International Affairs, David E. Bell; Humanities and Arts, W. McNeil Lowry; National Affairs, Bundy; and Education and Research, F. Champion Ward.

### ● BIOLOGY AND ENVIRONMENT:

The U.S. National Committee for the International Biological Program (IBP), now preparing for its operational phase,

has called upon American biologists to join in the worldwide research effort on problems of man's changing environment. The IBP goals are to promote basic biological studies related to productivity and human welfare, which will benefit from international collaboration. The U.S. IBP committee was organized by the National Academy of Sciences-National Research Council under its Division of Biology and Agriculture. A report, "U.S. Participation in the International Biological Program," outlining opportunities and objectives of IBP, has been sent to 49,000 U.S. biologists and agricultural scientists. The report asks U.S. scientists to review their current research and suggest both new and ongoing projects that would contribute to solving the problems with which IBP is concerned.

### ● CORONARY DRUG PROJECT:

The Public Health Service has announced the addition of eight new centers to the National Heart Institute Coronary Drug Project aimed at determining if drugs can lower the death rate in patients who have survived one or more heart attacks. The project, which began its clinical phase in April 1965, has 28 centers already in operation, with plans to reach a full complement of 50 by mid-summer. The drugs being used have a common ability to affect blood lipids and to lower blood cholesterol. They include estrogens, nicotinic acid, dextrothyroxine, and CIPB. The study will require approximately 8000 patients to determine if any one of the drugs can conclusively reduce by as much as 25 percent over a 5-year period the mortality rate of men who have had previous heart attacks. Subjects being used are volunteer males, aged 30 to 64, who have no other life-threatening diseases. The control group will receive the same standard medical treatment but without lipid-lowering drugs. A coordinating center for data and study forms is located at the University of Maryland, Baltimore, and a Central Laboratory at the Communicable Disease Center, Atlanta, Georgia. The study is expected to take 10 years and cost an estimated \$4.5 to \$5 million a year during the peak years of operation.

in this department can only be applauded. The report points out, however, that the wage increases have not been "offset by any measurable increase in the 'productivity' of hospital employees," and that "the number of employees per patient is rising, not falling." According to the report, the "non-wage costs of hospitals are also rising, reflecting the growing complexity of hospital plant and rapid increases in the specialized care facilities available in hospitals."

The HEW study found that, although the reassessment of costs at the time Medicare went into effect probably made it seem timely to many hospitals to increase their charges, the increased occupancy rates engendered by Medicare were not in themselves responsible for the price rises. Increased occupancy does not necessarily result in higher costs per patient. By the same token, HEW found no evidence that Medicare was responsible for the rise in doctors' fees.

In the drug department, the HEW study reports that, while prices have not risen as rapidly as have other medical expenses, consumer expenditures on drugs have increased sharply. The report cites a number of reasons for the rising expenditures, but stresses chiefly the fact that more drugs are now available for more purposes. The report says that drugs are now frequently substituted for more expensive forms of treatment, that the public seems anxious to buy drugs such as sedatives and tranquilizers (retail sales of which increased 535 percent between 1952 and 1965), and that old people, of whom there are rising numbers, spend about 2.5 times as much money on drugs as do young people. The cause for concern in this area, according to the report, is that "although average drug prices are not rising appreciably, there is ample evidence that they are higher than they would be if there were greater price competition in the industry, either at the manufacturing or at the retail level. The pharmaceutical industry," it points out, "is characterized by high concentration, high advertising costs, and intense non-price competition."

### What Should Be Done?

HEW believes that, in order to help keep prices down, changes should be made in six major areas. First, the department believes that alternatives to hospital care should be encouraged. The report points out that hospital services

are the most expensive ingredient of the medical-care bill and that, while most people now have hospital insurance, "far fewer people have insurance which covers less expensive medical care services, such as care in nursing homes and convalescent hospitals, outpatient care, or organized home health services." As a result, the report continues, "doctors often put patients in hospitals for diagnosis or treatment rather than utilizing less expensive alternative services because a third party will pay the hospital bill." It adds that in many communities lower-cost alternatives to hospital care do not exist.

Accordingly, the department believes that "comprehensive community health care systems should be developed, demonstrated and evaluated," under the auspices of a National Center for Health Services Research and Development, recently proposed by the President. It also believes that group practice should be encouraged by federal action, and that both private and public insurance plans should be broadened to cover more alternative types of health care.

In its second group of recommendations the report calls for an end to "uncoordinated development of health services and facilities [which] often leads to costly duplication and under-utilization of facilities, as well as to serious gaps in the availability of health services." This is, in short, a call for planning, and the report proposes that individual states create strong planning agencies "with the power to affect the rate of

expansion of health facilities," and that the federal government supply funds to assist the states in this process.

A third category of recommendations is directed at "improving the internal efficiency of hospitals and other providers of health services." The report proposes that the new health care research center demonstrate ways of reducing costs, and that the government should attempt to provide incentives to hospitals to increase their efficiency.

The HEW report leaves detailed suggestions on manpower to the President's Commission on Health Manpower, a group that has been at work on this question for some time, but the report's main thrust can be summed up in the word "more." It also suggests that, in an effort to use both present and future manpower more efficiently, attention be given to programs such as the President's recent proposal to train physician-assistants (*Science*, 17 February 1967).

A fifth category of recommendations—likely to make the pharmaceutical industry extremely edgy—calls for "improving the knowledge and the flow of information on the effectiveness of drugs." While this goal seems innocuous enough, HEW is proposing to implement it in ways that undercut the present structure of industry sales: first by studying the possibility of requiring prescription of drugs by their generic names under government-financed programs; second, by having the Food and Drug Administration provide informa-

tion for doctors on the efficacy and side effects of drugs. Generic prescription has been an industry nightmare since Kefauver, and the drug lobby—in evident anticipation of new governmental moves—has recently stepped up its campaign against it. The suggestion that FDA give doctors drug information directly would have the effect of reducing the physicians' present near-total reliance on the companies for supplying that information, and might have consequences the industry would find equally unwelcome.

Finally, the HEW report calls for "a continuing national effort to improve the efficiency of medical care delivery," proposing by way of implementation a national conference on medical-care costs and a continuing monitoring of medical prices by HEW and the Department of Labor.

On the whole, it has to be said that the report is considerably longer on analysis than on specific proposals to end the rise in medical prices. For the most part its proposals are for the more forceful implementation of existing federal authority, not for more powers. There is a heavy preponderance of calls for cooperation, consultation, and conferences. Whether these gentle means will be effective it is hard to judge—the report itself betrays very little optimism on this score. But at least, for the first time, the people and institutions that are raising their charges will know that somebody out there is watching them.—ELINOR LANGER

## Albany: New York State University Center On the Way Up

*"A parvenu university, that's what we are—parvenu," a state official discussing the development of the State University of New York system.*

Albany, N.Y. Many scientists at the State University of New York center at Albany say that this institution will become a major national center for the study of the atmospheric sciences in-

cluding research on air pollution. But "pollution" does not now seem to be dominant here; rather, the air seems to be faintly perfumed with the sweet smell of money.

The expenditure of large sums is most apparent in the university's physical facilities. For the past 3 years a new campus costing more than \$106 million has been under construction in

west Albany on a 350-acre site which was once the location of a country club and golf course.

Edward Durell Stone served as the architect for the grandiose campus and apparently regards it as one of the great accomplishments of an illustrious career. Stone has also designed the U.S. embassy in India, the American exposition at the Brussels World's Fair, and the Huntington Hartford Museum. In his campus creation, Stone reportedly had the full support of Nelson A. Rockefeller, the state's governor. At the university, it is believed that the state's political leadership wanted to make the Albany campus the central architectural gem of the state's tiara of university construction. A university pamphlet notes that the new Albany campus "has been termed the most