

A new system of health care

In the last year alone, the total amount spent in the United States on health care has risen 11 percent. Total per capita medical expenditures are now \$324 a year, compared with \$216 in 1960. But only 40 percent of this increase has paid for improvements in quality and amount of care. The rest is pure inflation. Worse, health care prices have risen far faster than the general rate of inflation.

To meet what he calls a massive and deepening crisis, President Nixon presented to Congress last week his long-awaited plan for revision of the nation's present health care system.

The emphasis, he said, should be not on curing the sick but on prevention of sickness. "If more of our resources were invested in preventing sickness and accidents, fewer would have to be spent on costly cures." The President's plan is less radical and less expensive than other proposals for revision of the system of health care, but critics feel it may also be less effective.

Basically, President Nixon's proposal deals with six matters: reorganizing the delivery of service, meeting the special needs of scarcity areas, meeting the personnel needs of the medical system, malpractice suits and malpractice insurance, new actions to prevent illnesses and accidents and national health insurance.

The most far-reaching and controversial proposal is the national health insurance program. A proposed National Health Insurance Standards Act would require employers to provide basic health insurance coverage for their employes. The minimum program would pay for hospital, physician's and laboratory services and full maternity care, well-baby care, and \$50,000 for each family member to protect against catastrophic costs.

The costs of the program would be shared by employers and employes, with employes contributing no more than 35 percent during the first two and a half years and 25 percent thereafter. The program would not, however, cover state and local government workers, the self-employed, household domestics, or part-time and seasonal workers.

To meet the needs of poor families not covered by the act, Mr. Nixon suggests a Family Health Insurance Plan for families headed by unemployed, intermittently employed or self-employed persons. Medicaid was intended to accomplish this purpose but, said the President, has failed. The part of Medicaid that covers most welfare families would be eliminated. The Family Health Insurance Plan would be fully

administered by the Federal Government, and would cost about \$1.2 billion in additional Federal funds in the first full year of operation. Medicaid would continue for the aged poor, the blind and the disabled, and the aged would still have Medicare. Both programs would begin July 1, 1973.

Reaction to the President's plan has been decidedly mixed. Sen. Edward Kennedy (D-Mass.), who, along with 24 others Senators, has proposed a cradle-to-grave nationalized health program, was most harsh in his criticism of the Nixon plan, saying it would provide a "windfall of billions of dollars annually" to private insurance companies. The Nixon plan, however, would cost much less than the price tag of tens of billions of dollars on a nationalized program. Said Elliot Richardson, Secretary of the Department of Health, Education and Welfare: "We see no need to introduce a massive nationalized health insurance program."

Most major medical and health organizations, including the American Medical Association and the American Hospital Association, reacted favorably to the proposal.

The health insurance program would broadly affect the financing of health care, but the heart of the proposals for reorganizing the delivery of medical services would be the use of Federal funds to encourage the establishment of what are collectively termed Health Maintenance Organizations. Some 7 million persons are subscribers to the 30 such organizations already in existence. They include the Health Insurance Plan of New York, the Kaiser Plans of the Middle West and California and the Puget Sound Health Plan in the state of Washington.

These plans emphasize preventive medicine by providing a broad range of medical services such as annual physical examinations and immunizations to subscribers for a fixed contract fee paid in advance. Administration officials believe this approach would encourage efficiency and place emphasis on keeping people healthy rather than on treating illnesses after they develop. According to Dr. Roger O. Egeberg, HEW's assistant secretary for health and scientific affairs, H.M.O.'s have reduced by more than half the number of days a year their subscribers spend in hospitals in comparison with Americans covered by regular health insurance plans.

The Administration will seek \$45 million in fiscal 1972 to start 100 new H.M.O.'s. The money would fund planning grants and a program of Federal loan guarantees to help H.M.O. sponsors

raise the necessary capital and construct facilities. The goal is to establish about 200 H.M.O.'s in the next few years.

"Our aim is to try to have 90 percent of the population enrolled in H.M.O.'s by 1980," says Lewis H. Butler of HEW. A model statute will be prepared to override the laws in 22 states that prohibit or limit the group practice of medicine. □

MOON ROCKS

A different bag

The men who went to the moon last month faced some of their staunchest and often most vociferous supporters this week—some 200 of the thousand or so scientists involved with lunar rocks, instruments and photography.

The scene was the National Aeronautics and Space Administration's Lunar Receiving Laboratory at the Manned Spacecraft Center in Houston. The action ranged from intense questioning to shouts and claps of jubilation.

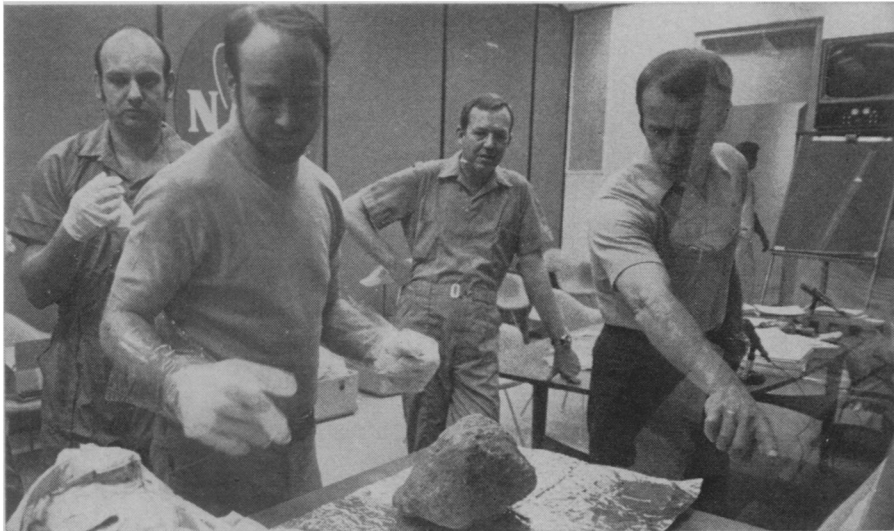
"It is a very exciting experience," says NASA's Dr. Paul W. Gast of the scientists' first look at the total return. "We are getting some first order answers to questions that this mission [Apollo 14] posed."

Before Apollo 14, scientists had many hypotheses about what might be found. They were reasonably sure that the Fra Mauro region was an ejecta blanket from the huge basin, Mare Imbrium. They believed that the material found would be considerably different from that of samples returned previously from three maria—perhaps similar in content to the unusual fragments found in the Apollo 12 samples called KREEP (SN: 1/16/71, p. 43). They hypothesized that the white anorthositic fragments could be of highland origin. The preliminary evidence after two weeks of study (SN: 2/20/71, p. 125) seems to confirm these hypotheses, says Dr. Gast.

"But the real surprise," says Dr. Gast, was confirmation of the idea expressed at the Apollo 12 Lunar Science Conference "that the highlands should be richer in radioactivity and more differentiated than the maria. We are now putting meat on that skeleton."

As well as the hoped-for confirmations, the Apollo 14 bag of rocks turned up some surprises.

Most lunar rocks are rounded by the erosional processes on the moon, such as solar wind and cosmic-ray particle bombardment and the thermal effects of temperature changes. But Astronauts Alan B. Shepard and Edgar D. Mitchell found two rocks with no eroded edges—clean, fresh-faced rocks with sharp, angular edges. "They look like they had been chipped off from a larger rock the day the men collected them," says one scientist. In lunar time, this



NASA

Mitchell and Shepard with the largest rock returned from Fra Mauro region.

could mean that the rocks were split a thousand or a million years ago: their surfaces would still be considered young. The investigators hope to determine when and how the rock was split.

Another Apollo 14 feature is the abundance of friable or crumbly rocks. Scientists are not yet ready to explain why these were not found in such abundance in the maria. But the astronauts reported while on the surface seeing many boulders which appeared weathered and fragile on the outside, but which were hard inside.

The rocks include some very hard ones ranging in size from a walnut to a basketball. The largest weighs about 20 pounds and measures about $10 \times 10 \times 11$ inches. Two smaller football-sized rocks weigh from 7 to 12 pounds each and two grapefruit-sized rocks, from 3 to 5 pounds each.

They differ from Apollo 11 and 12 rocks not only in size but in type and composition. The Apollo 11 returns were divided equally between breccia—fragmented rocks, usually coarse grain, formed by crushing or some sedimentary process—and basaltic rocks—finer grained, crystalline or igneous rocks. The Apollo 12 returns were higher in crystalline content.

The Apollo 14 rocks, on the other hand, are much more fragmented. Another unusual feature, according to Dr. Dale Jackson of the U.S. Geological Survey and Dr. Everett Gibson of MSC is the fine grain of the material—“almost like silt stones.” This is unlike anything seen before from the moon. There are some brecciated rocks but they look different from the Apollo 11 and 12 breccias. Only one rock appears as a crystalline basalt. “It is the only unambiguous igneous rock” in the batch, says Dr. Gast. This means that little, if anything, has happened to the rock (such as shock metamorphism) since its crystallization. Its contents are simi-

lar to the Apollo 11 and 12 basalts with one exception—it has two types of pyroxene instead of only one. This is an indication that it could be related to KREEP, if, in addition, it turns out to have a high content of potassium, uranium and thorium.

This week's debriefings refined one further fact about the crew's climb up Cone Crater. The men came within 50 feet of the rim. □

CERN ACCELERATOR

300-GeV machine approved

The council of CERN, the European Organization for Nuclear Research, approved construction Feb. 19 of CERN II, a proton accelerator of 300 billion electron-volts energy. The project, which has been subject to several years delay involving changing plans and dithering by several countries over the question of participation (SN: 12/12/70, p. 445), will go forward with 10 countries contributing: Austria, Belgium, France, West Germany, Italy, the Netherlands, Norway, Sweden, Switzerland and the United Kingdom. The new accelerator will be built on a site across the road from the present CERN laboratory in Geneva. Like the present laboratory, it will straddle the border between France and Switzerland.

The new proton-synchrotron will be at least 10 times larger than the existing CERN 20-30 GeV accelerator, which has been operating now for nearly 12 years. The program of construction is to begin sometime this summer and last about eight years, with research planned to begin during the sixth year, in 1976.

Dr. John B. Adams, a physicist long associated with CERN and with the Culham Laboratory in Great Britain, is the Director-General of CERN II. □

ALASKA PIPELINE

Search for alternatives

The proposed pipeline from Alaska's North Slope to the port of Valdez has looked like a sure thing for a long time despite conservationist opposition (SN: 1/23/71, p. 64). No one really believed conservationists could successfully buck the economic power of the oil companies and an entrenched public belief in progress as measured by the pace of new technological development.

So hearings held last week on the pipeline by the Interior Department were viewed by many as merely a sop to the conservationists. One Interior official had gone so far as to say the hearings could not produce new information substantial enough to require any major revisions in Interior's pro-pipeline draft report on the massive project.

But rumblings of official unhappiness with the pipeline began just before the hearings when Russell Train, chairman of the Council on Environmental Quality, told a television audience that CEQ was less than satisfied that the pipeline was the best alternative. That Train's view reflected other high views in the Administration became clear after the hearings when Interior Secretary Rogers C. B. Morton said he was impressed by conservationist arguments; he was, he said, a long way from deciding the pipeline was the best way to meet the energy requirements of the nation.

Morton's statement, made at a Senate appropriations committee hearing, strongly emphasized a point conservationists have been making for a long time: That the nation lacks any sort of coherent energy policy which could demonstrate that the Alaska oil is really badly enough needed to justify the risk to the environment in building the pipeline.

Train's comments indicated that he does not necessarily oppose development of the Alaska oil. Rather, he suggested that there may be alternatives to the Alaska pipeline. One, he said, would be an all-land route for the oil via a pipeline through Canada.

Canadian officials, who say they fear the damage spilled oil from tankers might do to their Pacific Coast, have lately been suggesting such an alternative. And two Alaska state legislators, concerned about the effects spilled oil could have on Alaskan fisheries, introduced a resolution for study of the Canadian alternative.

Conservationists at the hearings strongly stressed the need for more studies and for a review period after Interior incorporates information from the hearings in its draft report. Morton's statement is a strong indication they