

Blueprint for reform of medical education

The Carnegie commission report calls for improved delivery of health care and quicker training of medical personnel

Medical education and the delivery of health care in the United States costs too much, takes too long and delivers too little. On this score medical educators, students, insurers, politicians and even the poor patient agree. The question is how to translate that general agreement into a series of workable answers.

One contribution to a solution to the nation's health crisis lies in a restructuring of the present system. Another lies in programs to expand the pool of health manpower. But, according to former University of California president Clark Kerr, "No matter how many health professionals are educated and no matter how adequately medical education facilities are distributed throughout the nation, Americans will not receive adequate health care unless a system is developed to deliver services to those who need them—regardless of income, geographic location, age or race."

Dr. Kerr is chairman of the Carnegie Commission on Higher Education which released a report last week outlining extensively a system by which chaos can be brought to order. Prepared by a corps of the country's most prominent scientists and educators, it is

expected to exert considerable influence on the directions medical education and health care delivery will take in the coming decades. Already its impact has been likened to the Flexner Report, another Carnegie-supported evaluation of United States medicine issued in 1910. That statement, prepared by the late Dr. Abraham Flexner, established study of basic biological science as the foundation of medical education, creating what is called the research model of education still in force today.

While in no way denying the validity of this research model, nor slighting the value of fundamental research and study as a valid base for medical education and an irreplaceable contributor to new medical knowledge, the Carnegie commission believes the time has come for change—not by abandoning the Flexner model but by injecting a greater diversity into the enterprise constituting medical education and patient care.

Though many of its recommendations sound revolutionary, most are based on experimental ideas already being tried by some of the nation's leading medical schools, institutions with reputations as

pacesetters whose ideas are eventually adopted nationwide. The fact that many of these experimental programs have received the endorsement of the Carnegie commission lends credence to the expectation that they will finally enjoy widespread implementation.

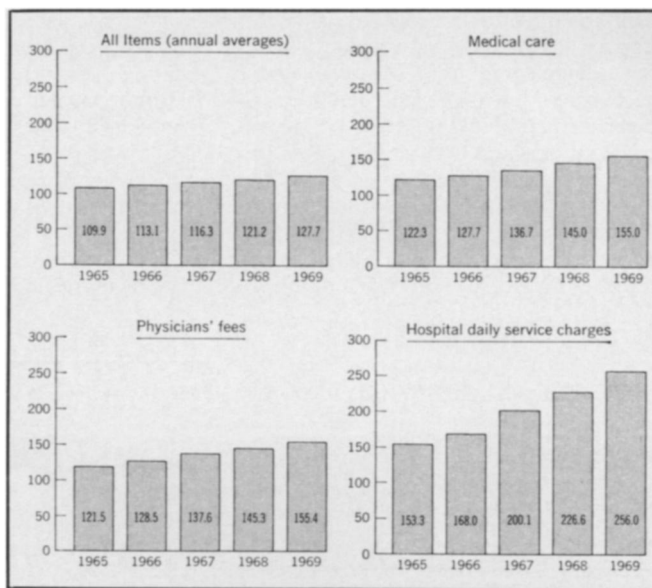
The thrust of the Carnegie report is its call for emphasis on health care delivery and its recognition that all too few individuals, whether poor or not, have ready access to quality medical attention at a reasonable cost.

To this end, it suggests that the cost of training physicians and dentists could be reduced and their numbers increased if:

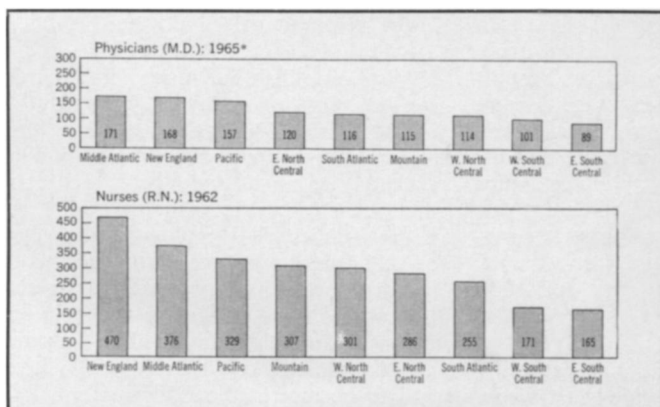
- The four years of medical school were cut to three and the four-year internship programs of postmedical school training likewise cut to three, and
- Many of the basic science courses in medical schools were merged with departments on main university campuses to eliminate duplication.

On the grounds that the majority of medical students do not practice in the states in which they go to school, the commission urges that the Federal Government carry the burden of financing medical education, with states assuming responsibility for greater financing of postmedical school training through grants and loans. A voluntary health corps is also suggested—a program by which health personnel would be "forgiven" part of their loans if they practiced for a given period in rural or inner city areas. Altogether, the commission estimates that implementing its recommendations will cost the Federal treasury \$785 million by 1975, \$1 billion by 1980.

A significant increase in use of allied health personnel, ranging from military medical corpsmen retrained for civilian



Art: Carnegie Commission
Medical care costs outstrip other consumer price rises.



The numbers of physicians and nurses per 100,000 population in the U.S. show uneven geographic distribution.

work to individuals receiving a health degree intermediate between the bachelor's degree and M.D., is seen essential to providing sufficient health manpower and to leaving highly and expensively trained physicians free to focus on serious health problems. The medical schools of Duke University in Durham, N.C. (SN: 1/25/69, p. 97), the University of Colorado in Denver and the University of Washington in

Seattle are cited as pacesetters with various programs of this kind.

Finally, naming Johns Hopkins in Baltimore as an exemplary pioneer, the commission urges major university centers to take an active role in health care research and in establishing systems for providing care to persons in the inner city and to those living in rural or suburban areas surrounding these centers. □

PREGLACIAL EVIDENCE

Early man in America



Photos: R. D. Simpson

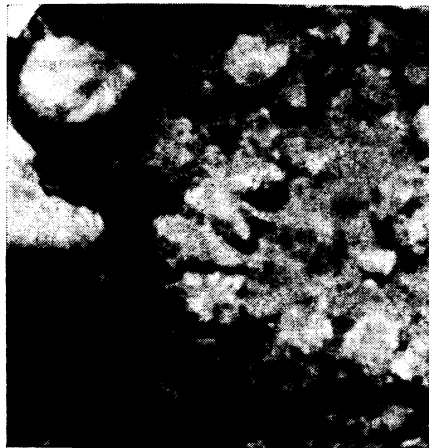
Calico site: Six years of excavation have turned up claims of ancient man.

It is generally believed that man came first to America from Asia, crossing the Bering Strait when there was a land bridge joining the two continents. From Alaska, so the theory goes, he spread throughout the Northern and Southern Hemispheres.

There is ample evidence that man has been in America at least 11,000 years, and probably more. Since the 1920's, stone projectile points have been found with extinct animals in many geological strata that could be dated, and in fact the human bones recently found in the Marmes rock shelter in Washington state (SN: 1/24, p. 91) have been estimated to be between 10,800 and 13,000 years old.

For periods earlier than that there is an abrupt drop-off in artifacts and other evidence. And archaeologists had what they felt was a good reason why: The glacial ice that covered much of North America in earlier times, blocking any migration, is estimated to have receded at about this time, opening up a corridor through which men could have passed southward from Alaska.

But some archaeologists have refused to accept the 11,000 or 12,000 year upper limit on human presence in the continent. The search has continued for older evidence—evidence of a stage that is sometimes called pre-projectile point, to distinguish it from the later pointed-stone cultures. Although several sites are claimed to be older, there



Leakey inspects wedge-shaped stones.

is still controversy about the reliability of the evidence.

The most ambitious project has been in an alluvial fan stretching out from the Calico Mountains near San Bernardino, Calif. There for six years a team, put together by Dr. Louis S. B. Leakey of African archaeological fame and directed in the field by Ruth Dee Simpson of the San Bernardino County Museum, has carefully dug through a surface level of material to a stratum of rock which they estimated to be 50,000 to 100,000 years old.

In that stratum, Dr. Leakey announced at an international gathering of archaeologists that ended last week,

the diggers found many stone objects that he regards as clearly having been made by man.

Even more important, they found a group of wedge-shaped stones that form what could have been a hearth or fireplace about 17 inches wide. There were nine rocks all about the same size, and nine smaller rocks. The small ends of the rocks were all pointed inward like wedges of a pie.

Tests of one of the rocks, reported Dr. Rainer Berger of the University of California at Los Angeles, showed that the smaller end had a higher amount of magnetism than the bigger end, indicating that it could have been subjected to high heat. He plans to do similar tests on another rock from the opposite side of the group to see if its smaller end also shows higher magnetism. This would go far toward eliminating chance magnetic anomalies as a possible cause. Some doubts would remain, however, about the claim that the rocks formed a manmade hearth. There are no signs of fire, points out Dr. T. Dale Stewart, retired director of the Smithsonian Institution's Museum of Natural History: no charcoal, no cracks or discolorations in the rocks as are usually found in a hearth.

But if man came from Asia 50,000 or 100,000 years ago, how did he cross the glacier-blocked North? The theory, says Miss Simpson, is that there were successive progressions and recessions of the glacial ice in the millennia preceding the last great opening out about 12,000 years ago. As the glaciers formed, they drew water from the Bering Strait, exposing a land bridge between the continents. But they also drew water from along the continental shelf of the West Coast, exposing a strip of land several miles wide, down which animals, and man living off them, gradually extended their range throughout America. There was no need for them to come through the ice-blocked passage down the center of the continent.

Although Miss Simpson and her co-workers, including Dr. Leakey, are confident that the evidence they have uncovered will convince the rest of the profession, the chances are that skepticism will continue. So much of archaeology is guesswork that proof is hard to come by.

"For establishing man's presence," says Dr. C. Vance Haynes Jr. of Southern Methodist University in Dallas, "the minimum requirements (are) a human skeleton, or an assemblage of artifacts that are clearly the work of man . . . within undisturbed geological deposits. . . . The minimum age of the site must be demonstrable by primary association with fossils of known age or with material suitable for reliable isotopic age dating." Those requirements have still to be met at the Calico site. □