of the National Science Foundation to prepare the report, which deals both with professional education and science and mathematics education in the schools.

The new report is not laden with data but, rather, summarizes the findings of existing studies or those commissioned specially for the report. The document is essentially an effort to define problems and make recommendations for Administration action, including budget initiatives.

The report's proposals for action in the realm of professional education differ from those of the manpower reports of the post-sputnik era, which urged general expansion of training of scientists and engineers and often set specific numerical goals.

The new report focuses on engineering and computer science and stresses obsolescence of equipment and a shortage of faculty, noting that industry is "luring faculty members away from universities with challenging well-paid positions."

The new report suggests such federal measures as incentives for Ph.D. candidates in shortage categories who plan to enter teaching and expanded support for research equipment for departments of engineering and computer sciences.

The report's appraisal of science and mathematics education in the schools puts strong emphasis on "a growing discrepancy between science, mathematics, and technology education acquired by high school graduates who plan to follow scientific and engineering careers and those who do not."

Results of standardized tests show "a decline in average science and mathematics achievement for the nation's youth over the last 15 years." The report says that there is a "severe shortage" of qualified mathematics and science teachers and identifies the most likely cause as "the disparity between salaries inside and outside education."

For the federal government, dealing with the problems of schools has inherent difficulties. As Press notes in a cover letter to the report, "we recognize that secondary education is primarily a function of our states and localities."

Proposals for federal help to the schools include revival of the curriculum development efforts and teacher-retaining programs that produced results in the post-sputnik days. This time, however, the "target group" would be different. The aim would be to engage the interests of students of average ability and less, who ironically seem to have been alienated by the brave new curricula of the 1960's.

Many of the proposals are aimed at improving the public understanding of science and thereby reversing "a shrinking of our national commitment to excellence and international primacy in science, mathematics and technology." One such proposal is for the creation of a President's Council on Excellence in Science and Technology Education, which would operate in ways comparable to the President's Council on Physical Fitness and Sports.—JOHN WALSH

Institute of Medicine Gets New President

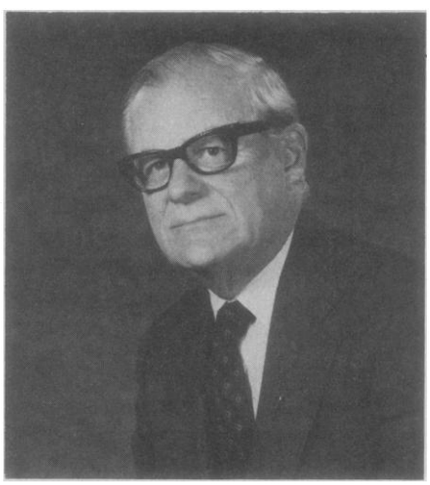
Frederick Robbins imagines IOM as the "Brookings" of health policy

A poster hangs in the office of Frederick C. Robbins that charts a hierarchy of medical specialists. At the top are dentists and dermatologists followed by some ten other specialties down the list. Glued at the bottom of the chart, below surgeons and psychologists, is a scrap of paper that says in scribbled handwriting, "Health policy guru."

That is the new job of Robbins, 64, who was recently inaugurated as president of the Institute of Medicine, succeeding David Hamburg. The Nobel laureate comes to the institute after serving 13 years as dean of Case Western Reserve University medical school.

Robbins, who has a friendly, easy manner, reflected on his new post in a recent interview in his third-floor office at the National Academy of Sciences building. Pictures waiting to be hung leaned against the sofa, but long shelves were already filled with books.

Robbins wants to encourage changes at the institute during his 5-year term but he said, "I'm not going to revolutionize things." He envisions enlarging the scope of the institute's work and hopes to rely less on government money to do it.



Frederick C. Robbins
New "health policy guru"

Colleagues describe Robbins not as an innovator but as a capable leader willing to compromise, traits that no doubt helped him serve longer than most medical school deans. William Danforth, of Washington University in St. Louis and chairman of the institute's presidential search committee, said Robbins was the group's first choice. "He has sensible ideas for the future of the institute and the ability to work them out. He's articulate and widely respected in Washington."

Robbins graduated from Harvard medical school and served almost a decade at Children's Hospital. In 1954, Robbins, Thomas Weller, and John Enders were jointly awarded the Nobel Prize in Physiology and Medicine for their research in tissue culture that led to the production of the poliomyelitis vaccine. Robbins and Weller were then assistants to Enders. Enders, in a letter read at Robbins' inauguration ceremonies, said that when his young assistant came to the lab, there was neither a desk nor room for a desk which "Fred somehow truly desired.

"This situation was depressing to him but usually he bore it with fortitude." Finally a place was found for Robbins.

Now Robbins sits behind a desk at the institute, an organization where over several years he has served in one capac-

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ity or another. He has guided national health policy as a member or chairman of numerous IOM committees that have studied human experimentation, the health effects of legalizing abortion, a review of polio vaccines, and the health risks of saccharin. During 1977 to 1978, Robbins was a senior scholar at the institute and examined U.S. aid for health programs in Egypt and also public policy in food safety.

Most recently he served as chairman of a congressional advisory council of the Office of Technology Assessment.

Robbins said he would like the institute to reevaluate a variety of aspects of medical education. He suggested a review of curricula on primary care and the possible need for two types of medical schools, one group emphasizing primary care, the other focusing on specialties. The needs of the elderly patient and children also warrant more attention by medical schools, he said.

The institute has not been active enough in examining facets of science policy such as peer review or the wisdom of increased use of contracts over grants, the new president said. In addition "attention to international health has been bumpy. Often people forget that we can learn from helping developing countries."

Robbins entertains the idea that the institute should tie itself more closely with academic institutions so that scholars can conduct original research at the IOM, similar to the practice at Brookings Institute. That way, the institute could take more of the initiative in its work rather than respond to requests for study. "We'd like to be ahead of the game rather than behind it, but it's hard to do in this town."

Robbins has no fund-raising plan up his sleeve to expand the work of the institute which currently has a $4 million budget. More money should come from private sources rather than the government. He said that too many government contracts inhibit research. "You can't do the studies you want to do."

Beyond these ideas, Robbins takes a broader view of the institute. "It's important that people trust the institute, respect its product, and know that they're getting an objective view of a matter."

Robbins has already had to weather criticism of the institute from National Academy of Sciences President Philip Handler, who originally resisted the idea of the IOM as more than a policy-advising body. At Robbins' inauguration, Handler chose the occasion to chide the institute for not always addressing the right questions in its reports. Handler criticized suggestions that the IOM conduct a study of the health effects of nuclear war, even though the institute has yet to consider seriously the idea. Robbins says that the study may be worthwhile. Of Handler's remarks, he states, "You have to take Handler for who he is. He's smart but a prickly character."

Whatever the conflict, it will be of short duration. Handler is expected soon to be succeeded by Frank Press, currently the science adviser to President Carter. That leaves Robbins and Press to carve out a working relationship for themselves.—MARJORIE SUN

IOM Elects New Members

Forty-two new members have been elected to the Institute of Medicine, raising the total active membership to 399. In addition, seven persons were elected to senior membership.

The following were newly elected to the Institute:

Linda H. Aiken, The Robert Wood Johnson Foundation, Princeton, New Jersey; **Samuel P. Asper**, American College of Physicians, Philadelphia; **Jack D. Barchas**, Psychiatry and Behavioral Sciences, Stanford University School of Medicine; **William Bevan**, provost, Duke University; **Mark S. Blumberg**, Kaiser Foundation Health Plan, Inc., Oakland, California; **Alexander M. Capron**, President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research, Washington, D.C.; **David R. Challoner**, dean, St. Louis University School of Medicine; **Thomas W. Clarkson**, radiation biology and toxicology, School of Medicine and Dentistry, University of Rochester; **Linda H. Clever**, occupational health, Presbyterian Hospital of Pacific Medical Center, San Francisco.

James A. Clifton, medicine, University of Iowa Hospitals and Clinics; **D. Walter Cohen**, Thomas W. Evans Museum and Dental Institute, University of Pennsylvania; **Ernest G. Cravalho**, Whitaker College of Health Sciences, Technology, and Management, Massachusetts Institute of Technology; **Edgar G. Davis**, vice president, corporate affairs, Eli Lilly and Co., Indianapolis; **Floyd W. Denny**, pediatrics, School of Medicine, University of North Carolina at Chapel Hill; **Daniel D. Federman**, dean for students and alumni, Harvard Medical School; **Maurice S. Fox**, biology, Massachusetts Institute of Technology; **Charles Fried**, Harvard Law School; **Harold S. Ginsberg**, microbiology, College of Physicians and Surgeons, Columbia University; **J. Thomas Grayston**, vice president for health sciences, University of Washington, Seattle; **Marie-Louise Johnson**, medical education, Benedictine Hospital, Kingston, New York; **Stanley B. Jones**, National Association of Blue Cross-Blue Shield Plans, Washington, D.C.

Albert R. Jonsen, bioethics, School of Medicine, University of California, San Francisco; **Barbara M. Korsch**, pediatrics, Children's Hospital of Los Angeles; **Richard M. Krause**, National Institute of Allergy and Infectious Diseases, Bethesda, Maryland; **Robert I. Levy**, National Heart, Lung, and Blood Institute, Bethesda, Maryland; **Leah M. Lowenstein**, Boston University School of Medicine; **Ida M. Sather Martinson**, University of Minnesota School of Nursing; **Charles A. McCallum**, University of Alabama in Birmingham; **Thomas C. Merigan**, medicine and infectious diseases, Stanford University School of Medicine; **C. Arden Miller**, maternal and child health, School of Public Health, University of North Carolina at Chapel Hill; **Richard J. Reitemeier**, gastroenterology, Mayo Graduate School of Medicine and the Mayo Clinic, Rochester, Minnesota; **Clayton Rich**, University of Oklahoma Health Sciences Center, Oklahoma City; **William C. Richardson**, School of Public Health and Community Medicine, University of Washington, Seattle; **Barbara G. Rosendrantz**, history of science, Harvard.

Edward Rubenstein, postgraduate medical education, Stanford University School of Medicine; **Jay P. Sanford**, School of Medicine, Uniformed Services University of the Health Sciences, Bethesda, Maryland; **Thomas C. Schelling**, political economy, John F. Kennedy School of Government, Harvard University; **Aaron Shirley**, Jackson, Mississippi; **Robert B. Talley**, Stockton, California; **Alvin R. Tarlov**, internal medicine, University of Chicago; **Joseph V. Terenzio**, United Hospital Fund of New York, New York City; **Irwin M. Weinstein**, Beverly Hills, California.

The following were elected to senior membership:

Konrad E. Bloch, Harvard School of Public Health and Department of Chemistry, Harvard University; **Kenneth M. Brinkhous**, pathology, University of North Carolina School of Medicine, Chapel Hill; **James M. Dunning**, Harvard School of Dental Medicine; **John S. Millis**, Cleveland Heights, Ohio; **Norton Nelson**, Institute of Environmental Medicine, New York University Medical Center; **Charles E. Odegaard**, president emeritus, University of Washington, Seattle; **Robert F. Rushmer**, Center for Advanced Studies in the Biomedical Sciences, University of Washington, Seattle.