To keep the options open, the committee would like to see most students taught mathematics until they leave school. On the larger question of broadening the sixth-form curriculum, the committee puts forward some tentative suggestions. But the committee members seem to recognize that, in seeking fundamental changes in teaching, curriculum, examination practices, and governing attitudes in both schools and universities, they are asking for the transformation of a system which operates to the satisfaction of many of the people who run it. This makes educational reform difficult to achieve.

Premature specialization and the tightly interlocking relationship of secondary and university education are a peculiarly British phenomenon (to be more precise, an English and Welsh phenomenon; the Scots are credited with managing things better). And the chief value of the Dainton report is likely to be its authoritative demand for reform in these sectors, rather than anything new it adds to the discussion. Because despecialization is the dominant theme, the report has somewhat limited relevance for explaining the swing from science as an international problem.

The committee acknowledges that much remains to be done in determining how the image of science affects young people's decisions on careers. They grant that the swing from science is difficult to explain, since "the root causes lie more deeply in the individual." But the committee members are scientists and civil servants, and in the main they keep to the familiar territory of the schools, where, reasonably, they feel they may have some direct effect. They give little emphasis to the small but interesting body of research on ways in which attitudes toward science vary according to an individual's personality type and social class. They do not put much stress on indications that disenchantment with science may come at a very early age. Nor are they disposed to speculate on the impact of such things as television, the new avatar of social awareness, or juvenile emancipation brought about by affluence, permissive child-raising, and better nutrition and health, which may be the sort of influences that are really decisive in determining an individual's choice for or against a scientific career in the industrialized countries.

—JOHN WALSH

Hospitals: HEW Advisory Committee Urges More Supervision and Planning

"Disorganization" is the "key fact" about American health services today, an advisory committee on hospital effectiveness stated in a recent report. The committee, headed by John A. Barr, dean of the Graduate School of Business at Northwestern University, was appointed by the Secretary of Health, Education, and Welfare last year; most of the committee's recommendations can be expected to exert considerable influence inside the federal health establishment. The 16-member committee, many of whom are hospital directors or otherwise professionally familiar with hospital management, suggested a series of recommendations for establishing greater supervision and planning for American hospitals, and stated that their purpose was to hasten the day when hospitals would be "not just where the capabilities are but where the action is."*

The committee found that, at present, all too much of the "action" is in the realm of unnecessary duplication of facilities and ever-increasing costs. The group noted that hospital costs had increased by 16 percent in 1966 and again by 16 percent in 1967, and that average costs now totaling $65 a day may rise to as much as $100 daily within 5 years. "There can be no question that hospital costs are leading the charge" in the overall trend toward rising medical costs, the group stated.

One reason for pressure on hospital facilities, the committee noted, is that prepayment and insurance benefits have generally emphasized hospital care as opposed to service in nursing homes, physician's office, or the patient's home. To obtain reimbursement under many of these insurance plans, the patient must be sent to the hospital, even if it is more rational and less expensive to treat him elsewhere.

One of the main thrusts of the committee's report is that hospitals should be required to adopt the kind of planning that is imposed on private industry by "the forces of supply and demand, competition, and the drive for profits." Hospitals have not had to engage in such planning because of the breadth of community support and because of the power of the physician over hospital management. Nonetheless, "health-care institutions must be required to engage in the planning process—the rational ordering of means to achieve stated ends—if they are to continue to have the public confidence, and the public support, and the public funds which most of them still enjoy, albeit with some shrinkage of enthusiasm in recent years."

The committee hopes to get hospitals to engage in planning not only for the immediate future but for the next 5 years. It states that, ideally, long-range planning should be the full-time responsibility of a member of the institution's administrative staff. It also hopes that requirements for planning and budgeting will make hospital trustees and physicians associated with hospitals more conscious of long-term needs of their institutions.

The committee decided to concentrate its suggestions on topics which it thought would have a good possibility of achieving favorable action; it agreed that "its specific recommendations would be few in number, high in priority, and pregnant with potential consequences." The committee added, however, that no recommendations or laws could eliminate hospital abuses all at

* In addition to Barr, members of the HEW Secretary's Advisory Committee on Hospital Effectiveness are: Karl G. Bartscht, Ann Arbor, Mich.; Ray Brown, Affiliated Hospital Center, Boston; C. Wesley Eisele, professor of medicine, University of Colorado Medical Center, Denver; Ray Eppert, trustee, Harper Hospital, Detroit; Scott Fleming, Oakland, Calif.; Jack C. Haldeman, president, Hospital Review and Planning Council of Southern New York; Raymond Francis Killion, Metropolitan Life Insurance Company, New York City; Eleanor Lambertson, director, Division of Nursing Education, Columbia University Teachers College, New York City; Lawrence Martin, Massachusetts General Hospital, Boston; John Mayne, Mayo Clinic, Rochester, Minn.; Walter J. McNerney, president, Blue Cross Association, Chicago; Walter J. Rome, Children's Hospital, Pittsburgh; Harvey Stephens, Automatic Retailers Association, Philadelphia; James W. Stephan, Minneapolis; and John Tomayko, United Steelworkers of America, Pittsburgh. After 15 April, copies of the 59-page report can be obtained from Max Fine, Bureau of Health Services, Public Health Service, 7915 Eastern Avenue, Silver Spring, Md. 20910.

once: "They have been developing for years, and it may take years to eliminate them completely."

Several of the committee's recommendations are summarized in the following paragraphs:

● Every health-service institution shall be included in the jurisdiction of an areawide health-service planning agency and shall submit an annual institutional service plan to the areawide agency. ● Every areawide agency shall publish an areawide plan for health services. ● Each state health department shall have a single agency responsible for the licensing and regulation of all health-care institutions and shall require prior review and approval of any change in physical facilities which significantly affects the program of any health-care institution. Approval of state plans for prior review and approval of changes in health facilities by the HEW Secretary shall be required for federal health-facility grants.

● As a condition for receiving federal funds, every health-care institution shall prepare a detailed budget and a plan for services for the coming year. The institution's medical staff and trustees are to be involved with the submission of this plan.

● Each state shall have an agency with specific responsibility for setting up a system for accumulating and publishing detailed information on the operations of health-care institutions. ● Federal financing for health services shall be authorized only in states which require noncancelability of all health prepayment and insurance policies.

● The HEW Secretary shall establish a committee to recommend a procedure and time table requiring a minimum range of benefits for health prepayment plans and insurance policies, including inpatient hospital services, outpatient ambulatory services, extended-care services, home-care programs, and physicians' services in and out of hospitals.

● Congress shall authorize a system of federally insured borrowing for capital purposes by health-care institutions, similar to the federal housing administration loan program. Such borrowing is to be in addition to existing federal grants and loans, and with a limit of 80 percent of the total project cost for the aggregate of grants and borrowed funds. ● Reimbursement to all hospitals and, where possible, to other health-care institutions having third-party contracts shall be based on rates negotiated and agreed to annually between the third parties and the participating health-care institutions.

The obvious implication of many of these recommendations is a greater federal and state influence over the nation's hospitals than at present. On the part of the federal government, this desire to influence health services toward greater efficiency can perhaps be understood when one considers the increasing federal role in the payment of medical services, especially through Medicare and Medicaid. As President Johnson stated in his recent Health Message to Congress: "It is appropriate that the Government—which pays more than 20% of the nation's medical bill—take the lead in stemming soaring medical costs."

Although the committee on hospital effectiveness was near-unanimous in its recommendations, there was some dissatisfaction within the group. One of the two members who expressed partial disagreement was Scott Fleming of the Kaiser Foundation Health Plan who said: "Though not so intended by the committee, the combination of governmental control, franchising and free governmental financing is a fair blueprint for evolving a nationalized health-care system. I dissent."

Philip R. Lee, HEW Assistant Secretary for Health and Scientific Affairs, is scheduled to complete review of the report by the end of April. There is no reason to believe that HEW, which created the committee, will express dissatisfaction with the general tenor of the recommendations. From all indications, the committee's report will play a key role in determining the Administration's strategy in its current major effort to refocus the activities and expenditures of the federal government in dealing with the nation's hospitals.

—BRYCE NELSON

Heart Transplants: NAS Board Proposes Criteria

The primary justification for heart transplants is the creation of new scientific knowledge rather than benefit to recipients, the National Academy of Sciences' Board on Medicine declared in a statement issued on 28 February. Institutions considering performing heart transplants are urged to proceed cautiously and to set meticulous scientific standards for the selection of donors and recipients, and for following up the recipient throughout his lifetime. The board asked institutions which might be prepared to perform heart transplants from a surgical viewpoint, but which lack specific capabilities for intensive long-range scientific observations, not to undertake the operations since "only a relatively small number of careful investigations involving cardiac transplantation need be done at this time." The statement also said that, although medical knowledge of transplants is sufficient to justify human cardiac transplants, the extension of such operations "to man is itself an investigative process." However, heart transplants, "in contrast to the transplant of a paired organ," raise new and complex problems. The report said the most serious are that "the life of the donor cannot be maintained" and that "the recipient's life cannot be salvaged if the transplanted heart does not function. Highly important is the fact that the length of time that the recipient can survive is as yet conjectural . . . the procedure cannot as yet be regarded as an accepted form of therapy. . . . It must be clearly viewed for what it is, a scientific exploration of the unknown, only the very first step of which is the actual surgical feat of transplanting the organ."

The board recommended that heart transplants be made in institutions which can meet stringent criteria, including an injunction that the surgical team have "extensive laboratory experience in cardiac transplantation." Regarding the selection of donors and recipients, the board said that a "group of expert, mature physicians—none of whom is directly engaged in the transplantation effort—should examine the prospective donor," and that the group should agree unanimously on the donor's acceptability.

The board's statement was somewhat unusual for a National Academy body in that it was initiated by the board itself rather than at the request of a federal agency.—K.S.