

## Institute of Medicine: Taking on Study of Cost of Medical Education

When John Hogness became the first president of the Institute of Medicine (IOM) last August, he declared that as the institute established its identity, he hoped it would emerge as an unbiased but aggressive, conspicuous, and influential figure in the arena of national health policy. In an effort to achieve that ambition, the 108-member institute, a semi-autonomous branch of the National Academy of Sciences (NAS), has decided to get its feet wet by telling the government how much it costs to educate a doctor. The IOM may tackle the problem of coming up with a figure for the cost of educating seven other categories of health professionals as well. It could hardly have found a more difficult, conspicuous, and potentially controversial assignment.

Certainly any group bold enough to put a price tag on a freshly minted doctor is laying itself open to sniping from all sides. It means that somehow someone is going to have to say just when a man (or woman) becomes a doctor. Is it the day he graduates from medical school, or finishes an internship or residency? Or, does education continue through the last grueling years of specialty training? (While postgraduate training clearly constitutes education, there is considerable dissension among doctors, educators, and politicians about whether there is any justification in asking the public to underwrite training that so markedly enhances a person's earning power.) It also means that someone is going to have to separate the cost of medical education from medical service and say just how much research can be written off as essential to education and how much must stand on its own. "One of the reasons we're in financial trouble in medical schools is that we've been bootlegging research money," says Robert Glaser, vice president of the Commonwealth Fund. For years, medical schools have been heavily supported by money from research grants and few persons want to have that practice analyzed to death. Whatever the institute does with the cost of education problem, it is going to make

some people unhappy. But, as Hogness points out, the IOM cannot advertise itself as the wisest and most unbiased assembly of professionals around and then refuse to take on the very kind of study it says it is most qualified to handle.

In agreeing to undertake the cost of education study, the institute responded to a congressional request written into the Comprehensive Health Manpower Training Act of 1971. The government, which, under the act, will provide funds to medical schools and other institutions on a capitation basis, wants to know what health education costs. The Department of Health, Education, and Welfare, which has already given the IOM \$175,000 in planning money, will support the study.

The cost of education study was very much on everyone's mind earlier this month when institute members met for 2 days to talk about how they will go about their business of offering what they hope will be definitive guidance to health legislators.

Rashi Fein, professor of the economics of medicine at Harvard Medical School, officially kicked off the debate by advising against any attempt to define what he called "the" cost of medical education. "There should be," he said, "no single number, but rather a range of costs." He based his view on the idea that to set a single dollar figure would imply that medical education can take place in only one way, that all of it is equal, and, therefore, that all medical school costs should be the same. He urged the institute to refuse to tackle the problem if it meant coming up with one price tag. When Fein was through, lawyer Adam Yarmolinsky, of the Welfare Island Development Corporation, stood up to remind the members that, when the study was completed and the report was written, there would be a headline; the IOM, he argued, should come up with something clear-cut which Congress and the public can grasp. Hogness agreed that the institute would be under great pressure from Congress to

come up with a single figure. Then in a freewheeling, open atmosphere, other members chimed in with various opinions on the subject. In the end, if there was anything close to a consensus, it seemed to be in favor of producing a single figure for the cost of education, if only because that would be most useful to Congress. "If the institute cannot think simply, if it addresses itself only to philosophy and cannot be pragmatic, it will have little impact on the Hill," one participant sagely declared.

The question of the institute's impact on public health policy came into focus again and again as members talked about priorities, discussing ways of choosing their options. There appeared to be agreement that the IOM must select carefully those issues it will take up from the more than 80 that have been proposed. Ideas, which come from Congress, members, government agencies, and any other interested parties, run the gamut. A panel to consider the problems of allowing an individual "death with dignity" has been created under the chairmanship of Eugene Stead of Duke University. A workshop to probe ways of educating various health professionals to work as a team is being planned for October with Edmund Pellegrino, of the State University of New York at Stony Brook, as head of the steering committee. The IOM hopes the workshop will produce a publication that will constitute a "how-to-do-it" guide for faculties interested in integrating health professionals by finding some means of having them go through parts of their education together. Other issues up for consideration include: (i) A study of the peer review system that the National Institutes of Health and other government agencies use in reviewing grant applications. (ii) A study of the drugs doctors prescribe, of the Food and Drug Administration, and of the drug industry. (iii) A study of federal investment in biomedical research in an attempt to determine whether there is an optimum funding level and, indeed, an optimum size for that research community. The list goes on and on. None of the questions raised is simple. None is likely to yield to a solution that would please everyone affected.

The immediate question is one of criteria for selecting questions. A number of members, including Victor Fuchs, of the City University of New York and Mt. Sinai School of Medicine, urged that the institute choose only a few problems to handle in its formative years

## Higher Education Bill in House

The Senate last week gave final passage to the Higher Education Amendments of 1972, a legislative portmanteau full of education programs, school desegregation aid, and controversial antibusing provisions (*Science*, 26 May). The surprisingly ample 63 to 15 margin in the Senate appeared to give the bill momentum for the vote in the House of Representatives, where it faces a much sterner test.

A decision by House leadership to delay a vote at least until next week indicates that the bill's proponents feel they lack the votes to ensure passage. The thorniest issue in the House centers on school busing, since antibusing provisions in the compromise bill produced by a House-Senate conference were milder than the House had demanded. Supporters of the bill took heart because such strongly antibusing senators as Harry Byrd (I-Va.) and John Stennis (D-Miss.) voted for the bill. However, opposition to the bill remains strong on both flanks in the House. Civil rights groups are demanding that liberals vote to defeat the measure, and antibusing congressmen are insisting that the bill be rejected and original House busing strictures be reimposed. Under the rules, the bill cannot be amended or recommitted to committee, but must be voted up or down.

An ambiguous note is the attitude of the higher education community. The associations of universities and colleges which form the higher education lobby in Washington have given an uncharacteristically slow and uncoordinated reaction to the bill, offering either halfhearted endorsement for the bill or engaging in extended consultations with their constituents. Advocates of the bill have been counting on support from university and college officials to counterbalance the busing issue. There is considerable reluctance in the higher education community to accept even the modified antibusing features added to the bill, and there are also objections to several of the educational provisions of the bill. The bill's institutional aid formula, in particular, is viewed unenthusiastically by academia's policy-makers, who would have preferred a program of direct grants to institutions to the bill's complicated formula stressing aid based on federal funds received by an institution's students.

There appears to be some acceptance of the view associated with Representative Edith Green (D-Ore.) that it would be better if the bill were defeated, a simple extension of existing legislation enacted this year without new educational programs or the desegregation or busing amendments attached. A more attractive institutional aid format could then be fashioned in a coming session. Proponents of the bill argue that such a course involves high risks, including the likely loss of any institutional aid program in the near future. In the Senate debate, Senator Claiborne Pell (D-R.I.), chief sponsor of the bill in the Senate, offered the following assessment:

I would remind my colleagues that if the bill is to be attacked, from the right and from the left, those efforts can result in the defeat of the bill. If that should happen and the conference report is not approved, I can see that with the mood of the country and the intensity of feeling on these subjects, that there would be no higher education bill through this and perhaps next year. Even a continuing resolution would become subject to this same problem. If this were the case with the expiration of the higher education programs on June 30—the Federal support of higher education would end. Is this the result we want?

While it is hard to believe that Congress would actually allow the whole corpus of higher education legislation to die, it seems likely that defeat of the present bill would entail serious consequences. There could well be some losses among existing programs in the process, and it is probable that any extension bill would have antibusing provisions attached to it, probably stiffer ones than those in the current measure.

—J.W.

and advised that they be chosen for their manageability. "We'd do well to pick a few early winners," he said, adding in line with that the feeling that the IOM "should not become a center for policy research. Rather, it should be a place where the knowledge of its members and their colleagues is distilled [for use in formulating health policy]."

In an address opening the meeting, William Schwartz, of Tufts University School of Medicine, took virtually the opposite tack, declaring that what this country needs most is a body of men and women whose full-time occupation is health policy research and whose purpose is to be in close contact with congressional offices and government agencies. In Schwartz's opinion, there are many issues that cannot be resolved through what has been facetiously called the system of "problem solving through the casual assembly of great men." Schwartz's point is that, in the case of many major policy questions, we lack the data base from which to make decisions and need, therefore, to engage in some initial policy research. "The Institute of Medicine, because of the composition of its membership and its primary commitment to problems of health, would appear to offer a particularly felicitous setting in which to establish a center for health policy research."

There was no resolution of these differences of opinion; nor, as Hogness points out, was there intended to be. "This meeting," he says, "was a chance for us to talk, to try out various ideas. We neither sought nor expected decisions."

When the institute does get to the issue of whether to engage in primary research, and if so, to what extent, it will have experience from within its own walls to use as a guide.

The predecessor to the Institute of Medicine was the Board on Medicine, a group within the NAS. In 1968, when that now-defunct board was a year old—having since merged with the IOM—it generated a study of the delivery of health services which has operated under the direction of David Kessner, a former Yale University internist. "At the time this study was getting under way," Kessner recalls, "NAS president Handler and the Council had qualms about our becoming involved in field research, but they have backed us all the way. Now, we're part of the IOM, and I consider this the first major study of the Institute." The "Kessner study," which should be complete by the end of the summer and ready for presentation to

the full institute at its second annual meeting in November, is a radical departure from the NAS's usual way of doing business. Kessner and his colleagues did not just "study" health delivery systems from the safe confines of their IOM offices. They went out into the community, examined patients and, in some cases, actually delivered care themselves. Traditionally, the NAS and its various related groups do not do research in any direct way. Decisions and recommendations are based on literature reviews and the collective experience of the members of any given panel or committee. Kessner believes this approach will prove inadequate to health policy issues.

Kessner's attitude toward health policy research is somewhat like Schwartz's. "There are some questions that simply cannot be answered by asking 'what ten wise men think,'" he states. The relative quality of various health care delivery systems is, he says, among those questions. For the last 3½ years, Kessner and a team of physicians and assistants have spent about \$1.4 million

(about 65 percent of it from the Carnegie Corporation of New York) assessing quality. They think they have created a valid model for such studies and demonstrated that it should be widely used.

Kessner and company picked three diseases common to childhood, a series of health delivery systems, and a population of children and then tried to evaluate which system gave the children the best care. The diseases were iron deficiency anemia, middle ear infections, and visual disorders; the delivery systems included solo practitioners, small group practices, prepaid group practices, public clinics, and hospital emergency rooms.

The IOM group established what it considered a floor or baseline of acceptable care (and screening) for the three diseases, identified 1700 families with 2600 children who were using one of these health delivery systems, and then set up a clinic at Children's Hospital in Washington, D.C., where they examined each of the children themselves. "We believed," Kessner says, "that we could not evaluate the

care these kids were getting by merely reviewing medical records. So, we did our own field work."

The data they accumulated in this study are now being analyzed by computer and, as yet, there is no solid basis for declaring one delivery system superior to another. Nevertheless, one member of the study staff speculated that it would show that solo practitioners give better care than many persons like to admit in this time of emerging group practices and large-scale delivery systems. In any case, the results of this study, and of others like it should they be undertaken, will have important implications for the assessment of the quality of health maintenance organizations and other major federal health programs.

"We hope to speak to the critical issue of evaluation so that it can be built into systems for delivering health care," Kessner says. "And we hope to have something to say about whether it is possible to build into health programs a process for accountability."

—BARBARA J. CULLITON

## Astronomy at Cambridge: Reshuffle Not According to Hoyle

*London.* Murder in the dark is a popular English children's game in which the lights are turned off and everyone creeps around expectantly until the victim's screams announce that the murderer has struck. As often as not, there is a chance encounter in the dark and a player may cry murder when none was intended. It is not clear which of these two outcomes has occurred in the adult version of this game now in progress among English astronomers. There the darkness is provided in roughly equal measure by the arcane system of governance of the University of Cambridge and the dogged commitment to secrecy of the Science Research Council (SRC), the English counterpart of the National Science Foundation. The victim is the distinguished theoretical astronomer, Sir Fred Hoyle, who a month ago announced his resignation as Plumian Professor of Astron-

omy and Experimental Philosophy, a chair from which he also presided over the Institute of Theoretical Astronomy (IOTA) at Cambridge. Hoyle's supporters have not concealed their suspicions that Hoyle has been done down by the manipulations of his academic opponents. Cambridge University officials, on the other hand, insist that everything has been aboveboard and that Hoyle resigned unnecessarily because of a misunderstanding that he neglected to correct.

Hoyle is best known to astronomers for his work on cosmological questions such as nucleosynthesis and the steady-state hypothesis, and to the public at large for such professional *jeux d'esprit* as *The Black Cloud*, an excellent foray into science fiction. The institute he has built up at Cambridge since 1967 may not have discovered the secret of the universe, but it has already acquired

a solid reputation, although less, some murmur, than was at one time hoped for. Under Hoyle's leadership, IOTA has also become an international meeting place, its summer schools performing the same function for astronomy that the Woods Hole seminars do for molecular biology. Hoyle's resignation will probably, in due course, bring him to the United States, where he is a frequent and well-known visitor. His impending departure is viewed by some of his colleagues as a heavy blow for British astronomy, and by others as a blow that British astronomy will survive.

The immediate circumstance of Hoyle's resignation was a plane ride last February to Australia, during which he sat next to the director of the SRC's astronomy division, James Hosie. Talking of the plans to amalgamate IOTA with the Cambridge Observatories into a new Institute of Astronomy, Hoyle realized for the first time that the director of the new institute was to be not himself but the recently elected chief of the observatories Donald Lynden-Bell, a theoretical astronomer at Sussex University. Hosie said he understood that Hoyle had turned down the post of director. In fact, Hoyle had never been consulted about it. Arriving in Australia, Hoyle