Indian Medical Research Reviewed

EVER since independence in 1947, the Indian Council for Medical Research has been the chief initiator and coordinator of medical research in India. Now it has been subjected to an independent review by what is called the First Reviewing Committee; the seven-man committee, under the chairmanship of Colonel A. Chand, included Professor T. R. Seshadri, Dr A. Ram, Dr T. Das and Dr S. Sriramachari. The committee's report, now published, is fully appreciative of the many achievements of the council, but its recommendations reveal the difficulties of organizing medical research in a country faced with problems like those which beset India.

To begin with, the committee says that there is no administrative structure for planning broad and long-term programmes. The report says that policy decisions have too often "been left to the exigencies of the situation and the enthusiasm of interested workers" and it recommends that the Scientific Advisory Board of the council, nominally responsible for setting policy, should actually play a more active part and not just act as a rubber stamp for ideas put forward by other bodies. The board, expert groups and the council's directorate should "outline practical research programmes, prune over-enthusiastic schemes, curb unnecessarily repetitive research and ensure a balanced allocation of funds and resources".

The committee believes that the real reason why medical research is lagging behind comparable fields of science and technology—atomic energy and agricultural research, for example—is that the Council for Medical Research is not truly autonomous. Instead, it has to live from hand to mouth because it occupies a subordinate position in the Ministry of Health and is fettered with all the red tape of government procedure. The committee says that three things will have to be done to make the council really effective. It will have to be freed from having to seek government approval of each and every stage of any programme. There will have to be a shake-out of officials from the council's executive committee and a greater representation for scientists. Finally, the director-general of the council will have to be given financial and executive powers comparable to those enjoyed in other Indian agencies.

The report also says that India should be spending a great deal more on medical research if it hopes even to touch the fringes of the medical problems which face the country. During the past twenty years, the council's budget has doubled roughly every five years to reach 13,845,660 rupees (about £0·75 million) in 1967–68 compared with 925,206 rupees (about £50,000) in 1947–48. But although 88 per cent of the current budget goes on research and 12 per cent on administrative and other costs, the committee considers that the funds available are hopelessly inadequate. Moreover, because of hand to mouth financing, the council cannot spend what little it has to the best advantage because it cannot plan ahead. The council also needs a fund of foreign currency with which to buy apparatus and materials and an automatic freedom from import duty.

The Reviewing Committee also implies that foreign aid, especially the American PL-480 funds, is not being used to the best advantage. It says, "Large scale PL-480 funds should be utilized for the study of composite country-wide problems of national importance. There are pitfalls in placing unlimited funds in the hands of individual investigators for comparatively small or insignificant or unimportant schemes" and "Even with the existing financial limitations, it should be possible for the ICMR to utilize opportunities of carrying out medical research in the country with the aid of PL-480 funds in a more purposeful manner. Such funds should be used for specific developmental programmes of national importance."

At the present phase of development in India, the committee sees no advantage in establishing a large multi-disciplinary Central Institute of Medical Research—a Bethesda or Mill Hill in the suburbs of New Delhi. Instead, it argues that a number of small institutes or units, free from teaching and clinical responsibilities, would provide better value for money. The committee says that ICMR should devote 40 to 50 per cent of its funds to such places, and ensure that they have specific goals and executive councils to act as watchdogs. At the same time, the directors of units and institutes should be allowed a greater say in deciding the policy of the council as a whole.

Research units supported by the council but staffed by scientists paid by universities or other institutions will find it increasingly hard to get money from the council if the committee's recommendations are implemented. It believes the ICMR has evolved beyond the stage of being a grant-giving body and that research is now recognized as an integral part of the activities of Indian universities and medical schools, whether or not they are host to ICMR research units. The committee therefore recommends that such units should be closed down or transferred to the host institutions and that new research of this sort should be started only where absolutely necessary and only then on the understanding that, after three or five years, the research units concerned will become the responsibility of the host institutions.

The other research groups—the very small so-called research cells—with which the ICMR has been experimenting have apparently been a failure. In general they have never reached critical size and inter-departmental cooperation is apparently as difficult to achieve in India as it is in more developed countries. On the other hand, research fellowship programmes have greatly expanded over the past five years, and the committee recommends that this trend should be maintained until India is well supplied with research scientists. But scientists are not used efficiently unless they are supported by technicians, and the committee has sharp words to say about technician training fellowships as they are at present organized. "The programme is highly unsatisfactory", for apparently

the choice of trainees, the training they are given and the way they are eventually used are all inadequate. Between 1947 and 1967 the number of scientists employed by the council has risen from 62 to 706 and the total scientific manpower, including honorary scientists, has risen from 452 to 2,483, but the number of technicians has only doubled, from 207 to 496, in the twenty years. As a result, many of the scientists are now obliged to waste their time doing routine and trivial jobs. The ICMR should set about recruiting many more technicians and demanding that promotion depends on gaining qualifications, not length of service.

The committee's review of the sixteen ICMR units is a sorry catalogue; the trachoma research centre at Aligarh failed to gather the expected momentum, the polio unit in Bombay has been reduced to doing routine work that could be done by a local hospital, the blood group reference centre in Bombay has ceased to function effectively, the tissue culture unit in Bombay "is at a loss to know whether it is worth while producing a large number of cell lines" and so on. But there are a few successes to report as well. The liver diseases unit at Agra, for example, is one. But if the far-reaching recommendations in the report are acted on, the picture could be much brighter by the beginning of the next five-year plan.

Training for Storage and Retrieval

THERE seems to have been a considerable increase in the number of librarians and information scientists working in British industry during the past ten years. This at least is one of the more cheerful of the conclusions reached by a piece of research commissioned by the Department of Education and Science from Mr H. Schur and Mr W. L. Saunders of the University of Sheffield (*Education and Training for Scientific and Technological Library and Information Work*, HMSO, 7*s* 6*d*). The report is plainly intended by the ministry to be a stimulus to public and professional discussion of the problems of the information services in the scientific fields, and as such it represents a modest part of the British Government's new (and still tentative) procedure of provoking public discussion before it has committed itself to a final policy.

The improvement of staffing on the information services seems to have been really remarkable. In British industry, there are now five information scientists for every hundred scientists working on research and development compared with two per hundred in 1958. This statistic is one of the few which show Britain in a stronger position than the United States where, according to the report, industrial establishments have been able to set their hands on only 48 per cent of the information scientists in the United States, compared with 43 per cent in Britain.

This cheerful comparison does not, however, allow the authors of the report to hide from the need to recruit more people into the somewhat specialized profession of caring for the scientific literature. The report has its own alarming way of illustrating the pace at which the bulk of the published literature is growing—it took thirty years to 1938 for the first million chemical titles to be abstracted, but chemical abstracts are now accumulating at the rate of a million every five years and there is every prospect that, by 1975, the rate of accumulation will be a million every year. The question is that of recruiting people to manage this explosion.

Perhaps predictably, the report urges that those entering the profession should more frequently than at present equip themselves with a professional qualification. The authors have estimated that well over half of those at present engaged on information work with a scientific slant have no professional qualification, either in librarianship or in information science. The figures suggest that 46·8 per cent of those working on scientific information in the United Kingdom are simply graduates in science or engineering. Arts graduates make up 11·3 per cent of the total. In the United States, the corresponding proportions are 33·3 per cent and 19·4 per cent. The authors of the report would see these proportions much diminished, for they say that "learning on the job in general leads to inbreeding and a narrowness of outlook which inhibits imagination and initiative".

Most of the report's recommendations concern matters of content and level of courses for qualification. It stresses throughout the "unity and interdependence of library and information work and the artificiality of any attempt at rigid separation". It calls for the maximum collaboration between the Library Association, the Institute of Information Scientists, Aslib and all the other organizations concerned with education and training.

One way to produce more professionally qualified science and technology graduates is to enlarge the present university schools rather than create new ones, and the report recommends that there should be an increased availability of SRC studentships to attract good graduates. The report points to the increasing interest being taken by universities in techniques such as the dissemination of information and information bulletins, normally associated with more specialized libraries and information departments. On the other hand, the investigators found that literature analysis and the preparation of evaluative reviews are not necessary in a university library. The availability of large computers in university libraries increases the value of scientific information skills and offers important possibilities for new developments, the report says. Some industries and universities are doing research in science information, but the report urges that this should be increased if science information work is "to progress from the craft to the automation level". Public technical libraries, it suggests, should be given more money and better qualified staff to increase the services of these libraries to small firms and industry.