INTERNATIONAL CO-OPERATION IN POSTGRADUATE EDUCATION*

BY

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Higher education in the science and practice of medicine to-day become an endeavour which can hope to succeed only if it can stretch and reach across national or regional boundaries. Since the last great war many areas in the world have emerged as newly independent political units. The invigorating breath of real freedom has aroused these people, and has triggered a chain reaction of unprecedented vigorous activity in these new nations. Their task, however, is colossal in its extent. Expert planning and very careful decisions on priority are needed. Problems threatening the mere continuance of living existence must always take priority over the urge for better standards of education or of better amenities in life. In the circumstances it is inevitable that all underdeveloped countries face a severe shortage of trained men and efficient tools in all fields. Before they can raise their level to self-sufficiency, even in minor things, they cannot but depend on help and co-operation from the better-placed members of the free world. Medical education in general, and postgraduate medical education in particular, is one such field which in spite of its recognized importance for world health, cannot get top priority in an area which suffers staggeringly low levels of food, clothing, and shelter.

As a member of one such nation, struggling to avoid being coerced into wasteful violent pursuits so as to be allowed to raise its standards of life, I must bring to your attention these realities of life, and I must voice our great hope and faith in the free world for international co-operation in the matter of postgraduate medical education. I cannot begin this presentation, therefore, without a sincere compliment to the vision of those international agencies like the Rockefeller Foundation, which has sponsored this my visit, the W.H.O., T.C.M., Colombo Plan, etc., which have already contributed so much towards medical research and education in underdeveloped countries. We have gained through this experience a much better and clearer understanding of the problems which face us in postgraduate medical education. It shall be my effort here to record some of these problems and to explore the ways to meet them.

While I shall strive to highlight only those problems which have a clear international bearing, you will pardon me if the examples I cite are from areas where I work. After all, India is what I know best.

A Persistent Demand

A major problem in postgraduate medical education† in India stems from the rapid increase in the number of medical schools. In 1926 we had ten medical schools in India. In 1947 our country was partitioned, and by 1949 Free India had created 13 new medical schools towards meeting the demand for more doctors. This demand persists; to-day we have 50 medical schools,

*An address given to the Second World Conference on Medical Education, Chicago, 1959.

†Let me parenthetically add here that by "postgraduate" education I refer to that training period which comes after the qualifying examination for registration as a doctor.

and by 1965 this number is planned to be raised to 67. The drug industry has also awakened to much greater activity, and a number of co-operative international combines have started their plants in India, creating a significant demand for persons qualified for medical and scientific work.

The consequent increase in our educational requirements presents many important facets. A number of these call for international help and co-operation. A major one concerns teacher training. We have an acute lack of medical teachers, so that our departments, especially the preclinical ones, are headed on the one hand by men long beyond their age of superannuation or on the other by young teachers before they are sufficiently mature for the task, while many teaching posts remain vacant. In clinical subjects the problem is further complicated by the enormous amount of out-patient and in-patient hospital work which has to be tackled by the personnel before they can attend to any teaching or research. Moreover, in many schools there are only part-time or visiting clinicians, and the situation is still worse. Great efforts are being made to establish full-time clinical departments, but with only indifferent success. There is a general shortage of doctors, and, as everywhere, teaching careers are not financially attractive. For example, at my school in Bombay, before the Rockefeller Foundation extended its help, we could not plan our full-time medicine and surgery departments. Thus there are many schools and not enough teachers.

This situation has created a peculiar demand on our postgraduate training programmes. Particularly in preclinical subjects, it is expected that every postgraduate student will automatically be able to head a new department a few years after his training. In our postgraduate educational need, therefore, apart from the accepted dictum that a candidate should be encouraged to work on a problem of his own interest, it also becomes necessary to interest him further in the methodology and the techniques of the subject as a whole.

For any effective fulfilment of these requirements we must for the most part invoke international co-operation. For only those departments which already maintain a broad interest in research and follow a virile educational policy can fairly be charged with this task if adequate standards are to be attained. Most of our postgraduate students therefore aim, and hope, to be sent abroad in order that they may obtain intensive first-hand experience of working with a dynamic team of teachers, and also broaden their outlook by travel abroad. Recognition and comprehension of this by our teacher colleagues abroad is vital. I shall return to this point later.

In the matter of adequacy of research equipment international co-operation has been our mainstay, and it will continue to be so for some years to come. Let me therefore not labour this point. Rather would I stress the great need of institutional workshop facilities and technician-training programmes on a nation-wide basis. It will astonish some of you, that workshop facilities are not available to every medical institute in India. The effects of this want are too obvious to need discussion.

Forms of Co-operation

International help and co-operation has evidently an important role to-day in our efforts to meet the varied

requirements of postgraduate medical education. Fortunately, the existing international agencies already have well-laid-out channels for international co-operation, and a variety of forms of this co-operation are also well known. Visiting professorships, teacher exchanges, fellowships, and travel grants are some of them. I have already referred to equipment gifts. These may be made available through: (a) private funds—for example, Rockefeller Foundation, Ford Foundation, etc.; (b) business corporations; (c) universities establishing co-operative relations with universities of other countries, with mutual benefit; and (d) international organizations like W.H.O., F.A.O., Unesco, etc.

I would like to quote certain advantages attached to help available from private foundations, such as: “(1) flexibility of programme; (2) capacity to make commitments over a considerable period of time; (3) comparative freedom from political complications; and (4) ability to support search for knowledge without undue regard to short-time practical results.” International co-operation, keeping in mind the above considerations, will help a long way to solve this enormous problem.

Experience regarding visiting professorships to countries like India deserves study. The impressive work done by visiting professors in India, Burma, Malaya, Egypt, etc., has gone a long way towards stimulating medical research activities among the younger staff of the institutions visited. While this general awakening is of great importance, it is nevertheless true that if our objective is to develop institutions, department by department, so as to equip each for postgraduate educational responsibilities, it has to be admitted that much remains to be desired. Now, it must be agreed that full professors from the United States, Canada, U.K., etc., cannot be blamed if they are not eager to spend as much as a year or two in India. Yet, if it is the full growth of a department which we desire, nothing less than a full professor with maturity as an academician and experience as a head of the department and postgraduate teacher is needed to organize and develop the required spectrum of activity in a department so that it can undertake postgraduate training in a variety of aspects of the particular discipline. This, however, is not easy.

The idea, therefore, of exchanging teachers is more practicable and perhaps more profitable. It has to be a true exchange of teachers, however, each man giving his place to the other so that the experiences from the same department are discussed and exchanged over the entire period on a person-to-person basis. In fact, I would even suggest that the Indian counterpart should continue in his exchange department for two to three months after his exchange teacher has returned.

Fellowships of short and long duration have been in vogue for some time. In view of the probability that Fellows trained under these programmes are liable on their return to be charged with postgraduate education, a revision of their training programme abroad seems indicated. There is much in favour of the current practice of encouraging Fellows to desist from routine course-work towards degrees, and to concentrate on some good research activity. It is also necessary, however, that the Fellow does not confine himself exclusively to one kind of work, but, in addition, obtains experience of all the current activities—teaching and research—in the department where he works.

May I at this stage make another suggestion which concerns the biological aspect of medical sciences? In India postgraduate students in physiology and pharmacology are as a rule medical men, so that postgraduate education in these disciplines is almost exclusively medical in motivation. Little is easily appreciated, therefore, of the broad biological spread of these disciplines. The inclusion of non-medical biochemists as teachers in medical schools has not helped this situation much. It should prove interesting to place some medical postgraduates in exclusively non-medical laboratories and institutions for a portion of their fellowship. The work problems would, of course, be the same or similar, but a different or broader perspective is likely to be obtained from such environmental changes. The Institute of Biology at Cambridge under Professor Gaddum, the Chelsea Polytechnic Institute, London, and the Marine Biological Laboratory at Woods Hole, Massachusetts, are the kind of places in my mind in this connexion.

A Crucial Phase

All fellowships, travel grants, etc., are most effective when they are so timed as to meet a crucial phase in a person's professional career—when he needs an extra stimulus or assistance to move him beyond the limits of his formal training or the confines of departmental circumstances. It is a common experience that a young man works sincerely for some years after his return from a fellowship abroad, only to find himself slowed down, if not “spent out,” in the organizational base work of his new department. And yet it is at this stage that he best appreciates the little gaps between the foreign training he has received as a young man and the local requirements he has appreciated anew from active experience, and it is also at this stage that he can really comprehend his professional needs for the future. A return visit abroad, even if for a short period, at this stage pays rich dividends. I would urge, therefore, that our fellowship programmes should from the very beginning of the project be regarded as a two-stage operation. I have seen such repeat visits being used to great advantage by some progressive drug industrialists of India, and I know of specific cases where much is being lost for want of such a renewed stimulus to an otherwise promising and capable worker.

One very important aspect of postgraduate education on the clinical side is the setting up of a well-planned residency training programme. This has not been possible, even though its importance is well realized, owing to lack of funds to pay and house the trainees: help from international co-operation is urgently needed in this direction.

The equipment of the increasing number of our medical institutions with adequate library facilities is another task which can be undertaken only with international help and co-operation.

I have spoken mainly of our peculiar problems in postgraduate medical education in India. I have avoided discussion of problems common to all, such as (1) selection of and incentives to postgraduate students, (2) training methods and programmes, (3) medical versus non-medical training in basic medical discipline, etc. Let me conclude with a mention of two avenues of medical work in India which may interest postgraduate or postdoctorate persons in this part of the world.

We have in India enormous out-patient attendances every day—perhaps this also is true of Burma and some other Eastern countries. At our hospital in Bombay the out-patient department attendance every morning is 2,400. This out-patient service is almost a specialty, distinct and different from others. The diagnosis and assessment of progress as practised here have to be seen to be believed. It is not clinical medicine alone, although it is the most “clinical” of all medical activities. The full educational potential of this phase of medical service in India has remained unexplored. I invite the clinical teachers amongst you to India for this experience, which will certainly be interesting.

I would also invite public health teachers to come and get acquainted with our rural and public health projects. Perhaps your concepts regarding public health, your impressions about standards of normal health, and therefore your expectations about the practicability of solutions to rural health problems will be subjected to considerable strain, but in your first-hand acquaintance with this problem lies our hope for a more practicable approach towards a healthy world.

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The cessation of hostilities in South-East Asia in 1945 imposed serious problems in the medical rehabilitation of my country. Some of the graver issues involved were the considerable depletion of senior and experienced teachers and medical specialists in the university and Government Medical Services as a direct result of the war.

The enforced closure of the medical school during the period of hostilities and enemy occupation for a period of five years added seriously to the problem of an acute shortage of doctors for the whole country, while damage and destruction of hospitals and other buildings during the war aggravated the problem further.

The gigantic task of rehabilitation was faced with the twin problems of producing more doctors, teachers, specialists, and research workers, and of constructing more hospitals and repairing damaged buildings, both of which were tackled with eagerness and determination. The problem of rehabilitation was greatly complicated by the inevitable changes which wars have always brought about. The changing political pattern from a colonial to an independent self-governing status; the awakening of national and political consciousness of the people recently liberated from enemy occupation and oppression; the natural aspiration of the citizens to get into the top posts in medicine and the other public services of the country, previously barred to them, by the rapid Malayanization of the medical and public services; and the consequent staggering and eventual cessation of recruitment of specialists and senior

consultants into the Medical Service of Malaya by the Colonial Office in London, were some of the complicating factors which added to the difficulties of medical rehabilitation.

Our National Effort

I am sure I am expressing the gratitude of our country for the help and encouragement we have received from international co-operation in our national effort. We have, on our part, doubled the intake of undergraduates into our medical school, so as to produce more doctors for the country. We have also recruited doctors from India, the United Kingdom, and the other Commonwealth countries to meet the shortage of medical personnel. Where no local candidates were available to fill the important posts we have recruited medical specialists and dental specialists from overseas. We have increased the number of scholarships and fellowships a hundredfold to enable our medical and dental graduates and nurses to go to the United Kingdom, to the Commonwealth, to the United States, and to Europe to study and to do research so as to equip them with the knowledge and experience to return as specialists and teachers in the various fields of medicine, dentistry, and nursing.

The University of Malaya, conscious of the importance of postgraduate medical education, instituted, with the assistance from the World Health Organization, who supplied teachers and fellowships, a diploma course in public health for graduates from Malaya and from South-East Asian countries. The course has been in existence now for five years, and its importance in providing men and women trained in the principles of preventive medicine and public health in a rapidly developing rural and industrial area is beyond measure.

International Help and Co-operation

In order to assist in this programme of postgraduate medical education, the Colonial Development and Welfare Fund of the United Kingdom contributed a major share in the cost of the construction of the magnificent building of the Institute of Health, where undergraduates and graduates in medicine and nursing are trained in the principles and practice of public health and social medicine.

Through the assistance of the Colombo Plan and with the co-operation of the Postgraduate Medical Federation of Australia, eminent and experienced teachers from Australia are being sent regularly by the Royal Australasian College of Surgeons to teach and examine graduates specializing in the many fields of surgery at the Faculty of Medicine and the Teaching Hospital at Singapore.

The China Medical Board has made several handsome contributions for the development of a first-class medical library housing 70,000 volumes and 600 international medical journals and for the purchase of much-needed and valuable equipment and apparatus for basic research in the preclinical departments of the medical school.

The Colonial Development and Welfare Fund of the United Kingdom has helped us to build a new and imposing department of pathology and museum to assist in research and teaching. The nursing school, too, has increased its intake of admission for the nursing profession. In this school, the Government and university specialists, assisted by a team of World

*An address given to the Second World Conference on Medical Education, Chicago, 1959.