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MEDICAL TRAINING AND RESEARCH IN INDIA TO-DAY

BY

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Among the centenary anniversaries of Indian events taking place this year one which has received but little prominence but which nevertheless marked a vitally important milestone in the history of the Indian peoples was that of the founding of the Universities of Calcutta, Madras, and Bombay. These with their constituent medical colleges formed the van of a company which has grown steadily during the past century, which has played a fundamental part in the establishment of modern India, and which now has a record of which it may be justly proud. The founding of these universities, and the events leading up to their founding, may have been one of the factors causing the mutiny, which current historical investigators generally regard as being the result of stresses engendered by the impact of westernizing influences on Indian culture and social structure of the time. Though in 1857 the development of the universities was resented by some, all welcomed one of the results which it made possible 68 years later, when, in 1925, responsibility for India's health and education was handed over entirely to Indian Cabinet Ministers and Members of Council.

The next major step in the establishment of Indian Medical Services as they exist to-day was the setting up by the then Viceroy of a committee under the chairmanship of Sir Joseph Bhore. This committee carried out a great labour during the two years of its existence and in 1945 issued a report which has been as far-reaching in its consequences as it was wise in its recommendations and which envisaged the development of a State medical service upon a gigantic scale. This service was to be built up over a period of forty years, and in spite of much preoccupation with constitutional changes a vast amount of work has been done towards carrying out the recommendations.

To run the health service as envisaged by this committee will require many more doctors, nurses, and ancillary medical staff than India now has and still more than she had in 1947, when there were approximately three for every 20,000 of the population. The distribution of these doctors in the country also presents a problem in that approximately 75% of them are practising in urban areas, whereas the population of the rural portion of India is approximately eight to nine times that of the urban. It was apparent therefore that if the recommendations of the Bhore Committee were to be carried out increased facilities for undergraduate and postgraduate medical training would have to be created.

These facilities are now being provided in a four-point programme: (1) by building new medical schools; (2) by expanding, improving, and upgrading older ones; (3) by the establishment of the All-India Institute of Medical Sciences to provide teaching and research facilities in all the major branches of medicine; and (4) by establishing special teaching and research centres for medical problems of particular importance in India.

New Medical Colleges

In 1947 there were 17 medical colleges in India and now there are 42. Admissions of students to medical colleges increased from 2,500 in 1950 to 3,500 in 1955, and it is anticipated that during each of the next five years approximately 2,500 doctors will qualify. There are at present approximately 70,000 qualified medical practitioners in India, which is almost the same as in Great Britain, whereas the population of India is approximately seven times that of Great Britain. The sum of Rs.6.5 crores (£50m.) has been earmarked by the Indian Ministry of Health for the establishment of new medical colleges during the next five years, but expansion of existing colleges and their associated teaching hospitals has been given priority over the establishment of new ones and £150m. has been allotted for this purpose together with the provision in these institutions of departments of preventive medicine and psychiatry. This sum is also to provide funds for the completion of the All-India Institute of Medical Sciences and the upgrading of some departments for postgraduate training and research within existing medical colleges. It is proposed that every department within medical colleges will maintain a whole-time research unit.

Among India's new medical colleges that at Nagpur must rank among the finest; both in conception and in execution it is outstanding. The spacious, three-story building rises over a plinth area of 84,000 square feet (7,800 square metres) and possesses a fine colonnaded front, while the proportions are pleasing and the light stonework makes a brilliant spectacle in the Indian sun. The building was put up at the very economical price of £315,000. The college together with the new teaching hospital stand adjacent to one another on a site of 189 acres (75.5 hectares) which was chosen because of its proximity to that area of the town in which the poorer class of the population lives. Within the site there are bungalows for some of the senior members of the staff, students' hostels, a nurses' home, and recreation grounds.

Construction of the college was begun on January 2, 1948, and completed in December, 1952. There are at present 500 students, of whom approximately 15% are women and 25% are in receipt of grants.

The associated Medical College Hospital is of 800 beds and has cost £1,750,000, a price which is less than half that being spent on individual teaching hospitals elsewhere in the Commonwealth. Yet the accommodation, though without luxury, is fully adequate for its purpose. Students at Nagpur spend nine months after qualification as residents in the College Hospital and a further period of nine months is spent in charge of a village dispensary. Three months of the latter period are allotted to rural public health work. A centre for training in tuberculous disease is to be attached to the College Hospital, as a joint enterprise sponsored by the Government of India, the Madhya Pradesh State Government, and by the World Health Organization. This co-operation appears to apply throughout to the medical organizations in Nagpur.

At Indore, Madhya Bharat, another new medical school and hospital have been erected. Both are very well built, and are equipped with the object of combining utmost utility with economy. A special feature of the hospital is an excellent haematological laboratory, beautifully equipped with the most modern apparatus.

All over India new colleges are springing into being, many of them—as at Nagpur—in places where there had previously been training schools for medical licentiates: at Patiala in the west, at Dibrugarh, Assam, in the east, and at Jabalpur near the centre of the subcontinent. The Government Medical College, Patiala, was opened in October, 1953, and is affiliated to the Punjab University. The new college building consists of an administration block and self-contained blocks for the departments of anatomy, physiology, pathology, and pharmacology; there is also a spacious library. A 500-bedded teaching hospital associated with the college was opened in 1954 and it is intended that by the end of 1958 a further 250 beds will have been added. Hostels for 200 male and 50 female undergraduates have been provided, and the average cost of board and lodging amounts to 40–45 rupees (£3–£3 7s. 6d.) a month. Societies and sports have not been neglected, and there is provision for cricket, hockey, tennis, and badminton. The medical colleges at Dibrugarh and Jabalpur were opened in 1952 and 1956 respectively.

Older Medical Schools and Colleges

Along with these and other new colleges and hospitals, older members of their company continue to do very good work. In Calcutta the British-Museum-like Medical College Hospital is testimony of its earlier foundation and stands impressive and solid in dignified grey stone weathered by 100 summers and monsoons through which it has served alike the needs of the sick and of its medical students. At Hyderabad, Deccan, and at Madras, long-established hospitals and medical colleges combine modern teaching and outlook with balance and stability springing from a tradition founded upon sound principles. For the British visitor to Madras it is pleasant to enter the office of the Dean of the Medical College, and see the photographs, which have been carefully preserved, of previous administrators and medical superintendents.

The All-India Institute of Medical Sciences

In the four-point programme for the extension of medical facilities in India, the establishment of the All-India Institute of Medical Sciences occupies a very important place and is

designed to be a pivot on which many other medical activities will centre. The Institute was founded in 1956 under an Act of Parliament of the Indian Government, and its stated aims and objects are: (a) to develop patterns of teaching in undergraduate and postgraduate medical education in all its branches so as to demonstrate a high standard of medical education in all medical colleges and other allied institutions in India; (b) to bring together in one place educational facilities of the highest order for the training of personnel in all important branches of health activity; and (c) to attain for India self-sufficiency in postgraduate medical education.

The Institute opened in 1956 with an undergraduate medical course accommodated in the already existing Safdar Jang Hospital, New Delhi. There are also to be nursing and dental colleges, and it is planned later to add others for pharmacy and the training of public health engineers. It is proposed that in both the undergraduate and postgraduate fields high standards should be established not only as a stimulus and demonstration to the rest of the country but also to promote the output of medical graduates who will develop into leaders of the profession and who will take their places in the different medical colleges throughout India. It is also proposed to establish rural and health organizations as integral parts of the Institute, with the aim that they should provide training for medical men and nurses, and facilitate research into community health problems. Although a postgraduate course in orthopaedics has been started with a limited number of students, it is probable that other postgraduate courses will not begin until two years hence. Of the 50 undergraduate places at present available in the Institute, five are reserved for students of the scheduled castes and tribes.

At Calcutta a regional postgraduate medical college is being formed on the pattern of the British Postgraduate Medical School, London.

Special Research Institutes

Research institutes devoted to the study of particular diseases or subjects have also been created. In association with the long-established University of Delhi there is the Vallabhai Patel Chest Institute in which research on chest diseases is allied to training for a Diploma in Tuberculous Diseases. Under the Colombo Plan, the British Government has donated a sum of approximately £11,850 to the Institute and to this the United States Government under their technical co-operation programme has added approximately £2,800. Indeed under the Colombo Plan much has been done to aid in the developments here being discussed.

Medical visitors to India are very quickly confronted with appreciations of the legacy of knowledge, research, and training in medicine left by the British. One of the fields, however, which has remained relatively more difficult to approach in research is that concerning psychological disease in Indian people. The complex system of religious beliefs and social customs which form the background to their upbringing can be understood only with difficulty by those who have not been so brought up, and as is to be expected they play an important part in the genesis of psychiatric disturbances. Problems of mental health in India are being tackled at the All-India Institute of Mental Health, Bangalore, where it is aimed to train psychiatrists, psychiatric nurses, and other personnel required in India; it is also aimed to educate the public in measures calculated to promote mental health. Of special interest is the plan to train workers to deal with problems in social pathology, including crime, delinquency, prostitution, alcoholism, vagrancy, and beggary.

The Institute is composed of 15 departments grouped around the central department of clinical psychiatry which includes mental deficiency and psychosomatic medicine. Among ancillary departments are those for child and adolescent psychiatry, psychotherapy, mental health education, neurophysiology, and statistics and sociometry. Students may study for the postgraduate Diploma in Psycho-

logical Medicine of the University of Mysore, and in 1956 13 were admitted to the two-year course. This Institute is broad in its concept and ambitious in its aims, which cover not only negative aspects of mental health but as Rajkumari Amrit Kaur, formerly Minister of Health in India, has stated: "The positive aspect, namely, that of training the normal man of average mental calibre to gain control over his emotional equipment and intellectual power so as to promote the growth of an integrated personality." The task is large but is being tackled with so much enthusiasm that it is inconceivable that what is accomplished can be less than important.

In addition to these institutes, there is one for leprosy, and there are the Indian Cancer Research Centre, a Virus Research Centre at Poona, an Institute for Drug Research at Lucknow, and it is proposed to set up institutes of biology and for research into occupational health. Mention of the Institute for Drug Research brings to mind the demands which have been voiced by many sections of the Indian people for a revival of the indigenous systems of medicine—the Ayurvedic and the Unani—and of homoeopathy. The Government of India has appointed committees to study and report on these systems, and research aimed at assessing their various merits is in progress. Current opinion and pronouncements from leading Indian politicians indicate that it is unlikely that India will reject modern scientific medicine on any significant scale to return to the older systems and the whole pattern of recent medical developments supports such a view. Nevertheless, investigations are proceeding to determine to what extent indigenous systems can be developed and regulated for medical relief in the country, and in the interests of humanity it is to be hoped that in this as in all medical matters politicians and administrators can be constrained to accept facts instead of expressing and attempting to legislate on the basis of their personal opinions.

Among the institutes, as in the case of the medical colleges, those which have been long established continue to serve, and to serve well, the people of India and medical science generally. At Conoor, South India, the Nutrition Research Institute, originally founded by Sir Robert McCarrison, continues with an output of first-class work which will compare favourably with that from any similar institute in the world. The All-India Institute of Hygiene and Public Health, Calcutta, was established in 1933 and aims at the provision of first-class advanced instruction in the methods of preventive and social medicine, suited to India's peculiar problems. Its large staff includes eight professors. The Institute is affiliated to the University of Calcutta, from which its students may obtain Diplomas in Public Health, Maternity and Child Welfare, Dietetics, Industrial Health, Nutrition, the degree of Doctor of Science (Public Health), and the Mastership in Engineering (Public Health). Near Calcutta the Institute runs two rural community controlled practice units which are used both for teaching and for research. Long-established Indian research institutes which have gained international recognition in the field of preventive health include the Central Research Institute, Kasauli, the Haffkine Institute, Bombay, and the King Institute, Guindy.

Indian Council for Medical Research

No mention of medical institutions in India would be complete without paying tribute to the Indian Council for Medical Research. It would be presumptuous to attempt to review its achievements within an article of this kind, but it would only be just to say that through its conferences, publications, and the active support it gives to innumerable workers its stimulating influence permeates the whole of the Indian subcontinent.

Special tribute must also be paid to the work of the World Health Organization in India. It is everywhere active, supporting investigations into the causes of ill-health and providing measures to prevent it. Its special concern is with tuberculosis, nutrition, and maternity and child wel-

fare, and for the latter it has given its support in staff, in funds, and in kind to centres throughout the country. It is currently engaged in tackling the important problem of preventing anaemia, which causes so much ill-health, particularly among pregnant women in India and throughout the tropics.

The impression gained by visiting a large number of Indian medical establishments is one of tremendous and enthusiastic development, of confidence in the future and in the value of continuing co-operation between India and Britain in medical training and research, and of genuine appreciation of the medical legacy of the past era. Mistakes have been made, but there appears to be a very general feeling that the past is the past and that to err is human. Between British and Indian great mutual respect and good will have grown up, and this fund of good will is everywhere apparent in acts of kindness and hospitality which are continually being shown to the British visitor to India.

The experience on which this paper is based was obtained during a recent visit to India as a consultant to W.H.O., to whom I wish to express my gratitude for the facilities provided and for permission to publish. I wish also to thank Colonel M. L. Ahuja, Medical Adviser to the Indian High Commission, for much helpful advice and information.

THE PATTERN OF HEALTH ORGANIZATION IN CANADA

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The problems besetting young medical graduates in Great Britain to-day are well known. It has become increasingly difficult for them to enter general practice. Hospital registrars remain dissatisfied and unhappy, while the profession itself is involved in yet another of its recurring crises, in which it would appear that financial readjustments to inflationary trends can only be achieved by prolonged and acrimonious debate with politicians, and, what is perhaps more deplorable, by a further loss of public esteem. It is indeed a sad day when the affairs of the medical and dental professions become the subject of a Royal Commission (*Manchester Guardian*, February 21, 1957). Moreover, the appointment of the Willink Committee (*British Medical Journal*, 1955) "to estimate, on a long-term basis and with due regard to all relevant considerations, the number of medical practitioners likely to be engaged in all branches of the profession in the future, and the consequential intake of medical students required" would seem to add still further to the feeling of uncertainty with regard to the future of the profession in this country.

During a visit by one of us (A. M.) to Canada a few years ago, it was thought that a brief outline of the medical services and opportunities of that country would be of particular interest to colleagues at home. In the prevailing circumstances, and the renewed interest in emigration, particularly to Canada, it would seem appropriate to tell this story now. We certainly do not wish to underestimate the many difficulties confronting the medical practitioner in establishing himself in Canada. Nor, as modern Jeremiahs, do we seek to lament, "Is