General-practice teaching in Australia

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SUMMARY. There have been several important changes in the aims and organization of general-practice teaching in Australia in recent years. During a visit to Australia I had the opportunity to see many of these and to discuss others. This report describes the features I found of most interest.

Indices of health in Australia

A YOUNG country with a wealth of resources and a vigorous population, Australia is often presented as a land of healthy, tanned athletes. This popular myth has been exploded by Hetzel (1974) who showed that by generally accepted health standards Australians are among the least healthy groups living in Western society. The Australians have a higher mortality rate than the people of England and Wales for all ages between 1 and 65 years, with a rise in recent years of deaths from road traffic accidents, coronary heart disease, and lung cancer. Even the sunshine brings its own problems with a high incidence of skin cancer.

Many of these medical problems are related to lifestyle and behaviour. What is the role of the family doctor in the management of these problems? What training is being given to students and young doctors to meet these challenges in general practice? It was with these questions in mind that I was fortunate to be able to visit six university departments concerned with community medicine and general practice while on a one-month visit to Australia.

All these departments are new, having been created within the last few years, and they deal with general practice as well as community medicine. The community health programmes established in 1973 have two main objectives: to provide community health services in areas where there is considerable, unmet health service need, and to promote disease prevention, health maintenance, and rehabilitation. These objectives have been achieved in many areas by the use of multi-disciplinary teams of health professionals working in close co-operation to improve total and continuing patient care.

It is important to appreciate the differences in concept of the health care team and the health centre in any comparisons with the UK. These often reflect local enthusiasm, and often the health centre team has harnessed several voluntary agencies which had previously been concerned with a particular problem.

Health centre near Adelaide

The most interesting health centre that I visited was ten miles north of Adelaide, where the population has grown from 6,000 to 50,000 in the last ten years. This health centre was started in 1968 and was the first of its kind in Australia. The ground floor of the centre has consulting rooms for five full-time and two part-time family practitioners, and specialists consult on a weekly or fortnightly sessional basis in general medicine, general surgery, orthopaedic surgery, ENT, ophthalmology, obstetrics, gynaecology, and paediatrics. The upper-floor houses the community services, which have now been expanded to include counselling, family planning, birth education, weight reduction, social work, community nursing, and physiotherapy. These support services are not used only by the general practitioners in the centre. A recent survey showed that 40 per cent of referrals came from the centre, 40 per cent from general practitioners in other parts of the town, and 20 per cent were through direct contact by clients. The successful integration of general practice, sessional specialists, and allied health workers under the same roof provides a good example of one of the present trends in primary health care in Australia.

Against this background of new initiatives to meet the Australian health problems one may consider the training for future general practitioners. The broad goal of undergraduate education in each of the university departments I visited is to enable students to acquire an understanding of whole person medicine and an epidemiological view of health and health services, to counterbalance the specialist approach inherent in an otherwise hospital-based teaching programme.

New universities in Australia

Two of the Australian universities are new—Flinders University, and the University of Newcastle which I did not visit but was able to discuss with Professor Stephen Leeder, of the Department of Community Medicine.

At Flinders University the philosophy of the curriculum is that three quarters of the subjects are core subjects and compulsory (these include the biological sciences, physics and chemistry, and social and behavioural sciences), and the other quarter of the curriculum is made up of electives that may be taken in any subject. The aim is to produce a more broadly based medical graduate than that of traditional medical education in Australia. Students are attached to a general practitioner for one week at the beginning of their first year simply to watch the process of consultation, which is held to be the key to all medical practice. Family medicine as a subject is a four-week component of the fifth year, with a further option as an elective in the sixth year.

At the University of Newcastle the undergraduate curriculum is based on problem solving in relation to those problems in contemporary practice which the newly-qualified doctor is expected to manage. The problem conditions included in the curriculum relate to three questions: Is it serious? Is it common? Is it preventable? The levels of competence expected in the management of each condition will vary with the stage in undergraduate training. It remains to be seen how the radical innovations in these two new universities will be influenced by the more traditional requirements for accreditation by the State.

Psychosocial component of general practice

The increasing realization of the importance of the psychosocial component in problems presented by patients in general practice naturally results in an increasing involvement of the departments visited in the teaching of behavioural sciences in the pre-clinical years. This ranges from a non-examinable introductory course in the first year at the University of New South Wales to association with psychologists in running a behavioural science course at the University of Sydney which extends over five terms in the first and second years.

Teamwork

The emphasis on the team in primary health care during recent years has led logically in the University of Adelaide to the establishment of the Foundation for Multidisciplinary Education in Community Health (Moss and Pigott, 1977). The aim is to provide a method for the development of skills in teamwork, counselling, and health education jointly for students from medicine, nursing, occupational therapy, physiotherapy, and social work. This is achieved by project work in small groups which deals with clinical and community problems, and thereby helps to develop the attitudes and skills that are important for effective professional practice in the community.

Timing of general-practice teaching

In all the departments which I visited the main general-practice teaching component is in the fourth or fifth year, and extends over two to four weeks. As many of the departments combine the teaching of general practice and community medicine this leads to a combination of these subjects on the curriculum, as at the University of New South Wales. Attachment to a general practitioner is a common feature, though usually this is on the basis of one session daily so as not to overburden the general practitioner. At Monash University there is a positive emphasis on the needs of rural and isolated areas, and in Adelaide students also divide their time between a country and a city general practitioner. Seminars are a prominent feature, and at the University of Melbourne afternoon seminars on a variety of topics follow each morning session in general practice.

Evaluation

Evaluation of the general-practice component is carried out by a variety of different methods. In Sydney there is a formal examination, with the results being given on the following day when the students are also asked to give their assessments of the general practitioner to whom they have been attached and an assessment of the staff of the department. At Monash University students carry out a data collection project for presentation at a seminar, the choice of subject being a study of a socially and medically disadvantaged child, a study of an approach used in the management of alcoholics, a study with a clinical bias, or a comparative study of one or more aspects of practice management. Each student also assesses one patient or family posing complex problems which may be medical, psychological, or social, and this case is presented to the health team members at one of the health centres.

Family medicine programme

Australia faces a crisis in community health care as there are not enough general practitioners to provide the necessary services required by the community, particularly in the rural areas. To meet this need the Family Medicine Programme was established in 1973 by the Royal Australian College of General Practitioners and it provides young doctors with a wide variety of training experience in general and hospital practice. Normally, training under the programme involves a four-year course which starts after the intern (pre-registration) year, but provision can be made for shorter courses to suit the needs of individual trainees.

The hospital component of training is similar to the British vocational training, except that more time is

spent on surgery and anaesthetics by trainees who are contemplating practice in isolated areas. During the last two years of the course the trainee works in an accredited family practice.

Selection of trainers is based on the same principles as those laid down by the Royal College of General Practitioners (Joint Committee on Postgraduate Training for General Practice, 1977) and a trainee may rotate through several training practices during this period to receive the widest possible clinical experience. In order to meet the educational needs of trainees in remote areas an extensive library of books, journals, tape-slide cassettes, and video-cassettes is available on loan from the national headquarters in Melbourne, where Dr Wes Fabb, the Director of Education of the Family Medicine Programme, also provides self-assessment material for continuing education in general practice.

Conclusion

It is informative to see how training is developing in other countries, but what is more important is the awareness it generates of different ways in which we can meet our own training requirements and the needs of the community.

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Abnormal regulation of ventilation in infants at risk of sudden infant death syndrome

To test whether alveolar hypoventilation and an abnormal ventilatory response to inhaled carbon dioxide explains some episodes of sudden infant death syndrome, we assessed ventilatory control during quiet sleep in 12 normal infants and 11 infants who had required at least two resuscitations because of prolonged apnoea (>20 seconds) during sleep (aborted form of the syndrome).

Infants with the aborted syndrome hypoventilated during quiet sleep (alveolar partial pressure of carbon dioxide, 38·9±3·5 mm Hg) as compared to normal infants (35·1±1·9, $P<0·01$). In addition, the ventilatory response to carbon dioxide breathing during quiet sleep was impaired (mean change in minute ventilation per change in partial pressure of carbon dioxide 22·1±8·9, as compared to 63·1±19·1 ml per Kg per minute mm Hg in controls [$P<0·001$]). Three infants with the 'aborted syndrome' subsequently died during sleep at home; autopsy, done in two, revealed no apparent cause of death. We conclude that infants who have had an episode consistent with sudden infant death syndrome have a defect in the regulation of alveolar ventilation.

Reference

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