

commission, which decides whether an individual university should be allowed to organize this type of education.

This national control is extremely strict and each university is entitled to teach only a limited number of specialties. Only in Paris, where there are 11 schools of medicine, are all the specialties taught. In addition, the final examinations are supervised by a national jury, so that standards are uniform throughout France.

Nevertheless, there are exceptions, the most important one being that full-time training is compulsory for certain specialties. Thus surgery requires full-time training, and includes five years of practice as an intern—or resident—in teaching hospitals. In the same way, in specialties other than surgery, the specialist's title can be obtained after four years' full-time internship in teaching hospitals, without any of the examinations needed for the official degrees. Apart from the surgeons, between one-third and one-half of all specialists have received full-time training.

From the point of view of professional legislation and of the regulations of the social security system part-time and full-time training produce specialists with exactly the same rights. Even so, part-time training is often considered inferior, and many Frenchmen believe that, without removing specialist training from the universities, we should resume an almost exclusive system of full-time training. Probably most doctors favour this but they have been unable to solve certain practical problems. However, full-time training is developing, and will soon become compulsory in psychiatry and internal medicine.

Must we assume that full-time training is the only solution? Surely certain specialist qualifications, such as radiology, could be acquired through part-time training—particularly since the profession in France still favours leaving the gate of professional promotion open to general practitioners. And it is practically impossible for a general practitioner who has been practising medicine for several years to give up his practice and become a full-time student for four years.

Besides the specialist there are other types of postgraduate medical education.

None of them is regulated on a national level or an official training leading to a degree. Doctors can acquire certificates of competency in such fields as allergology, phlebology, and proctology. The certificates, which are recognized by the social security service, are granted by the National Medical Order—which roughly corresponds to the British General Medical Council. They are given by special commissions of the order to candidates who can give evidence of their proficiency in the specialty. Many general practitioners obtain certificates of "competence." Their acquisition enhances the role of the general practitioner among the hospital medical teams; it stimulates interest in the profession; it provides the graduate with professional advantages; and it gives a continuing stimulus to the general practitioner who wishes to improve his practice.

Continuing Medical Education

The role of professional magazines has always been important in continuing medical education, and we discussed this topic yesterday. Residential meetings are organized to deal with various subjects, the most important one being called "Entretiens de Bichat," held every year in Paris for ten days. Every day lectures are given on a wide range of topics. During "les assises nationales de médecine" a different method has developed. Every year a special topic is dealt with, first in the various regions of France, then at national meetings. General practitioners are asked to contribute by giving personal observations and reports. Many hospitals also offer general practitioners an opportunity of spending a few days in hospital practice combined with clinical and therapeutic seminars.

Even so, probably the introduction of help and new techniques will not greatly transform the present situation. It is the same doctors who receive medical magazines, attend meetings and seminars, and undergo periods of training practice in hospitals. They are aware of the importance of a continuing training and use all the techniques that are offered to them. It

is difficult to know what the solution is to the problem of reaching the others.

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Italy

ALBERTO ZANCHETTI

Medical education in Italy is provided by 27 university medical schools, 26 of which are government institutions. The government supplies funds for little more than staff salaries, so that money for research has to come from elsewhere. Italian medical schools have been declining in standard over the last 50 years owing to rigid curricula, a faulty recruiting system for professors, and, above all, 20 years of intellectual segregation during the Fascist period, followed by too much concern for economic reconstruction after the war.

By the late '60s the need for radical reforms had been emphasized for years by all responsible teachers, students, and politicians.

They aimed to bring medical education closer to the standards in, for instance, England, Sweden, the United States, as more younger professors and lecturers had been trained abroad, particularly in America and Great Britain, and had research contacts through international meetings and societies. Unfortunately, because of student pressure, the only change was to open medical schools to any student graduating from secondary schools. This has meant an increase from about 3,000 a year between 1953 and 1963 to a present student intake of nearly 30,000. This explosion has not been accompanied by any appreciable improvement in the student/teacher ratio; several lecturers have been promoted to the rank of professor, but no new lecturers appointed. In fact, this latter post has diminished in status. There has been no increase in lecture rooms, laboratory space, or university hospitals. Lack of public money has been blamed, but a huge amount of money is spent on providing small salaries for almost every student, and—though a yearly sum of £150 is not a great deal—£18 m would have been a great help for hospital building.

The consequences for medical teaching have been drastic. The traditional tendency for theoretical rather than practical teaching has been strengthened by the physical impossibility of holding practical classes in the laboratory and in the hospital wards. Only 30% of students attend courses. Dropouts during the six-year courses are rare, because it is hard to impose stringent criteria for examinations. A six-month period of hospital internship is required after graduation before registering for practice, and a recent attempt to increase it to a year has failed because of student and political protest.

In 1969 there were nearly 90,000 active doctors. It is estimated that in 1980 there will be 130,000, but in that year the number of medical students alone will be almost 200,000.

Postgraduate education in Italy is given by the same medical school departments which are already overburdened by crowds of undergraduate students. There are about 400 specialty schools attached to medical school departments, staffed by teachers whose main job is teaching undergraduate students. Each school (for example, in cardiology, surgery, dermatology, public health) confers a specialist diploma, after a course which lasts for two to five years. This is a higher qualification for jobs in general practice, hospitals, and public health.

The restriction in the last five or six years in intake to these schools (because of lack of facilities) has improved the quality of teaching. Nevertheless, apart from the fact that facilities are shared between postgraduate and graduate students, postgraduate students receive no salary. Many of them have to find part-time jobs. The restriction in intake is not popular, only one in four applicants are accepted, and it has been suggested that postgraduate teaching should be extended to several non-university hospitals.

Aims of Education

What are the aims of postgraduate medical education in Italy—or, indeed, elsewhere in Europe? Previously a private specialist could ask a higher fee, and a general practitioner enhance the status of his practice by having a specialty diploma. Now a diploma is chiefly used for obtaining a hospital job. Also because of the poor training provided by medical schools, more conscientious graduates feel that they should acquire a better training by further study. Of course, it would be better to improve undergraduate teaching rather than extend postgraduate education. And this system leads to a steadily increasing number of specialists every year—for example, an annual increase of 300 anaesthetists, 200 cardiologists, 400 neurologists and psychiatrists, 250 gynaecologists, and over 600 paediatricians. But this has not prevented Italy from having the highest child mortality rate in the Common Market.

My account may seem an excessively gloomy picture of medical education in Italy. But we feel that if the right steps are taken standards will stop falling precipitously and will improve. Firstly, medical school facilities should be expanded to cope with the increase in students. The best city hospitals could be used for teaching, augmenting the hospital staff with some university professors and lecturers. Secondly, we should continue to restrict the number of applicants for postgraduate education. There is no greater need for specialists in Italy than anywhere else in Europe. The different specialty schools should be grouped in a single postgraduate school for each university, and be kept separate from undergraduate teaching. In addition, postgraduate students should be paid and they should be resident in the postgraduate hospital throughout their training.

None of these measures are beyond Italy's professional or economic capabilities. We must look at what is being done by our E.E.C. partners to cope with their systems of medical education, and if we want to remain an equal partner improvements must be made. Otherwise, like the Red Queen, we will continue to run so fast in order to remain, at best, dead still.

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Denmark

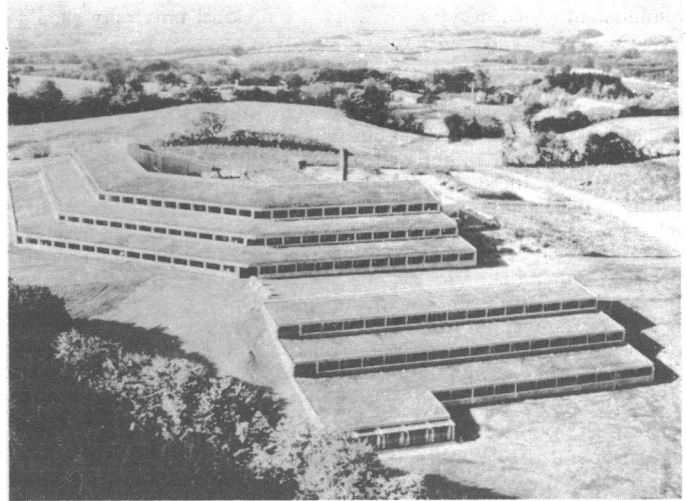
E. GOLDSCHMIDT

There are three medical schools in Denmark, at the universities of Copenhagen, Aarhus, and Odense. Under an Act of Parliament the universities are open to all who have attended the gymnasium, or the equivalent, and so the medical schools have no power to limit or select their students. About 10% of students from the gymnasium (1,100-1,200) choose to study medicine each year; only about 60% complete the course, illustrating the considerable selection made by the universities through the initial examinations. The curriculum consists of three preclinical and three and a half clinical years.

Medical training aims to produce a "basic doctor"; it does not endow professional competence, and presupposes further training, irrespective of the branch of medicine the doctor wishes to enter. He is allowed to take hospital jobs, but does not have the right to work independently. If he wishes to become a general practitioner or a specialist he must undertake postgraduate training within a state-approved educational pattern.

Education for General Practice

Normally if Danish doctors wish to become general practitioners they seek hospital jobs with a stress on topics relevant to general practice for a total of four to five years. The com-



Postgraduate Medical Centre "Scanticon".

pulsory minimum requirement is a two-year clinical training in hospital, comprising medicine, surgery, gynaecology, and psychiatry. Many undergo this training in a large provincial hospital with special rotating posts reserved for doctors whose ultimate aim is general practice. Apart from this obligatory clinical training, the doctor has to take four courses, each lasting one week, and totalling 120 hours.

This training course system is a new idea. The broad and thorough training of a "basic doctor" can be achieved only by transferring several subjects which are usually included in the undergraduate curriculum, to postgraduate training. Much emphasis is placed on dermato-venereology, ophthalmology, otology, paediatrics, and clinical pharmacology. The remainder of the teaching consists of social medicine and topics relevant mainly to general practice, such as legislation and public health.

Specialist Training

The Ministry of Home Affairs issues regulations specifying the requirements for specialist training, and stating the specialties in which authorization may be obtained.

Denmark has 32 recognized specialties and the training in each varies from six to eight years from graduation, and is divided into: general training (two years); secondary training (varying from one to two years); and main training for at least three years.

During the first two years the "basic doctor" is introduced to the daily hospital environment; he learns to deal with patients and obtains experience in the principles of treatment. There is also the option for a one-year appointment in a scientific institute, which counts towards specialist training. General training includes compulsory six-month appointments in a surgical department and in a medical department. Secondary training usually entails one year in a department where the work is closely related to the chosen specialty. Finally, the main training takes place in a department which embraces the actual specialty and is classified and monitored by the Danish board of health.

Several requirements have been laid down for the individual parts of the main specialist training programme, and as a result, it is often prolonged. One year of the appointment should be in a department which alone, or in collaboration with other departments, carries out a programme of training approved by the specialist board. One year of the three should be spent in another department of a suitable size and patient turnover. Finally, for one year, the specialist-trainee must be appointed to a so-called "senior registrar" post. The combined "specialist-trainee and house officer" post is something new in Danish specialist training; it is a one-year post, in which the specialist-trainee can continue his clinical training, and also obtain theoretical knowledge of more advanced methods of investigation and treatment.