Middle Articles

AROUND EUROPE

A Look at Swedish Medicine and Neurology

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Any consideration of Swedish education must take account of the geographical and social setting as well as the historical background. Sweden is almost one and a half times as large as Great Britain, but the population is only 7.5 million. About two million live in the major cities of Stockholm, Gothenburg, and Malmö. More than half of the country is forest. Social services have been developed extensively in the past 20 years and taxation is heavy. The standard of living is high and the health service and medical research are high priorities in the national budget. Sweden has not engaged in war for 150 years but still maintains a large defence force and compulsory military service. The universities are owned by the State.

Education

The system of State schools has a closer resemblance to the Scottish than to the English system. Boarding-schools are not a feature of Swedish education. Compulsory and free schooling begin at the age of 7 and continue to about 18. The "student-examen" at the end of this time is used as the sole criterion for selection for entry to a medical school. Demand for places is such that the successful are usually in the upper third in the examination. Subjects of scientific and biological importance are not essential in this examination and equal weight is given to the humanities. English is taught as the second language and German is often taken as well. Those who have not studied the premedical subjects at school are required to reach a minimum standard in them before entering the medical school at the age of 19 or 20. About a third of those accepted are women.

Medical Schools

Medical training in Sweden is concentrated in five centres. The University of Uppsala (1477) is the oldest, followed by the University of Lund. In Stockholm the Royal Caroline Institute (Karolinska Institutet) is an independent medical school. In the past 20 years new medical schools have been established at Gothenburg in the South and Umeå in the north.

The undergraduate medical course takes seven years, but this includes clinical experience of the type usually obtained in the preregistration appointments in England. The general plan of the course resembles the British system. The first three years are spent in premedical and preclinical subjects, including genetics and statistics. The curriculum includes radiology and war medicine as well as the conventional subjects. The special clinical subjects are covered; for example, three months are devoted to neurology and psychiatry. During this time a comprehensive series of lecture-demonstrations are given and a month is spent on the neurological wards. At the end of this time a qualifying examination in clinical neurology is held.

At the time of qualification the Swedish doctor is about three years older than his British counterpart. There is a general

shortage of doctors in Sweden, and the trained man has no difficulty in finding employment. Trainee specialists are relatively well paid from the beginning of postgraduate training and the married man is able to live without hardship. Full-time academic appointments are relatively less well paid but private practice is often allowed. Postgraduate training in general fields such as internal medicine can be obtained in the university hospitals or in the larger provincial hospitals. In this way a man can progress to a clinical consultant appointment in the health service. In the specialties training can sometimes be obtained only in the university departments.

Hospitals

Most Swedish hospitals are built and maintained by county or municipal councils. In the past mental hospitals have been under State control. There are very few private hospitals. The hospital staff of physicians is full-time, but some private practice is allowed. Other physicians are in private practice outside the hospital. Hospitals in Sweden tend to be larger than in England, and many new buildings have been erected in recent years. Health insurance was made compulsory in 1955. The contributions paid and the sick benefit received are directly related to the income of the individual. These contributions pay for about half the cost of the health scheme and the remainder is recovered from taxes.

Neurological Training

In Stockholm the University Department of Neurology has recently moved from the Seraphima Hospital adjacent to the town hall, on the bank of Lake Mälär, to a new building which forms part of the Royal Caroline Hospital. This nine-floor structure accommodates the university departments of neurology, neurosurgery, clinical neurophysiology, and neuroradiology. The polyclinic is adjacent. About 100 beds are set aside for neurology, and this includes an intensive-care unit. Clinical and experimental laboratories are in the same building. The staff consists of one professor, four associate professors (docent), two other senior specialists, and 10 trainee neurologists. In this department three or four students are attached to each ward of 25 beds.

The students are closely integrated into the clinical work and are responsible for seeing new patients on admission. Each ward is managed by an associate professor with one or two trainee neurologists. In this way the trainee does the work of a house-physician and registrar. He continues in this way until promoted from the trainee ranks, so that there is no hierarchy among the trainees. Ward rounds tend to be less formal than in an English university hospital, and it is usual for the students to take coffee with the chief at the end of the round.

The working day begins at 9 a.m. in the radiology department, where films taken on the previous day are shown and

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discussed. This is followed by ward rounds. Outpatients are seen in the polyclinic, which is in the charge of an associate professor helped by two trainees. The polyclinic is held on five days each week and the medical staff rota is arranged so that duties on the wards and in the polyclinic are clearly separated. The patients are referred by general practitioners to the clinic and not to any specific person. Private patients may be seen by special arrangement by other members of the staff in the same building. One hour is set aside at midday for telephone calls, and during this time the polyclinic staff is available to answer calls from other doctors, patients, or relatives. In this way interruption of the clinic by telephone calls is largely avoided and members of the staff are accessible. Afternoons are set aside for research.

The trainee in a specialty may enter the appropriate department within a few months of qualification. More often he will have one year's experience in medicine, surgery, or occasionally psychiatry. Having been selected he may remain, subject to satisfactory progress, in this training post for up to seven years. During this time he will work in the wards under supervision, in the polyclinic, and deal with emergency cases according to a rota. For emergency duty each trainee lives in for 24 hours, and he is in fact the only resident member of the department. He is expected to take some part in research, the facilities for which are very good. His progress in the specialty will depend on his ability to produce a thesis. Several years are usually spent over this, and the work is often published in a series of papers as it is done. When presented the thesis must be publicly defended.

Defence of Thesis

For this ceremony the candidate appears in formal dress before an audience, which may include anyone interested as well as the relatives, friends, and associates of the candidate. The candidate faces two opponents. The first opponent is appointed by the university, and he begins by asking questions on the subject of the thesis and discussing the work presented. His approach is dominated by his aim to present to the examining board the essential content of the thesis in relation to previous work. This may last for several hours. The second opponent, chosen by the candidate, then continues and may clear up some of the points raised earlier. After this the discussion becomes open. The thesis is graded, and a high grade is necessary for appointment to the staff as assistant professor. On the evening of the defence the candidate provides a dinner party to entertain the first opponent and his own colleagues and associates.

A few weeks later the graduation is held in the town hall in Stockholm. This resembles a similar function in England for the presentation of higher degrees. The symbols of graduation are not a gown and hood but a top-hat and ring. The ring is embossed according to faculty, the M.D. carrying the snake. As each degree is conferred a cannon is fired.

The M.D. is the only necessary higher qualification; there are no specialist diplomas and nothing comparable to the British royal colleges. The country is small enough for each specialist to know others working in the same field. In November a large group of doctors assembles in Stockholm for specialist meetings of many kinds held for several days. The Swedish Neurological Association holds several meetings through the year, and every three years there is a joint meeting of Scandinavian neurologists.

Private Practice

General practitioners in Sweden work independently and charge fees for their services. A patient is free to consult the doctor he chooses; there are no lists. In fact it is not unusual for one patient to consult several doctors in the course of an illness. Three-quarters of the fee paid can be recovered by the patient from State funds. Hospital services are available free to taxpayers and their dependants and to visitors from other countries that have a reciprocal national health scheme. Drugs are paid for by the patient, but those needed for long-term use are subsidized by the State. Trainee specialists may treat as private patients those whom they have previously dealt with in the wards. Senior members of the staff use the facilities of the hospital to see private patients, but those needing in-patient investigation are usually admitted to the hospital ward rather than a private nursing-home.

The development of laboratory diagnostic services in Sweden is regarded as important. Radiology has been recognized as a university subject for many years, and chairs in this subject are to be found in all Swedish universities. Neuroradiology is highly developed. Swedish patients seem to tolerate investigation well and have a deep respect for technological achievement.

Conclusion

Having described the working arrangements of a university hospital in Sweden it is of some interest to compare the methods with those of a British teaching hospital. Medical education is paid for by the State. There are no fees. The arrangements for undergraduate teaching are similar to those in Britain, but in Sweden it seems to be easier for a man to deviate from the course to study a basic science subject, do some research, work in a special department, or earn his living for a few months by working as a "junior doctor" in a peripheral hospital.

The postgraduate training differs in important respects. There are no higher clinical examinations and therefore fewer hurdles at the start of the postgraduate phase. A man intending to specialize in a branch of clinical medicine such as neurology is expected to work in internal medicine for a year, but he seldom spends much longer than this before entering the special department. Sometimes this general training is deferred until later. After entering the special department it is possible to complete the training there, and facilities for research are good.

The trainee is not faced with a ladder that has to be climbed step by step within fixed time limits. On the contrary, he is encouraged to pursue research, not in his spare time and in distant centres, but systematically every working afternoon. The polyclinic provides a service to patients but not in the name of any particular consultant; it is inevitably less personal but not less efficient. The quality of special investigation is high and more use tends to be made of radiological techniques and electrophysiological measurements.

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