However fragmentary their impressions, few people can resist the temptation to compare patterns of general practice in countries they visit with those in Britain, and to draw up some sort of balance sheet. From a recent visit to a variety of general practices in all four Scandinavian countries (and three centres in particular), I formed the impression that the average family doctor there works in better premises with more advanced equipment than he does here. A small part of this difference between British and Scandinavian practice may be due to national characteristics, in much the same way as there is less litter in the streets of Stockholm than in London. Some may be due to the general concern in Scandinavia to have the best and most modern equipment for the job—a factor that explains the electric typewriters, intercoms, tape-recorders, and car radiotelephones. Part also may be due to the item-of-service method of payment, which encourages the general practitioner to take his own X-RAY films and to set fractures himself. But most of the difference, I suggest, comes from the fact that even outside Sweden (where patients have open access to outpatient departments) the Scandinavian family doctor is still hospital-orientated rather than community-orientated. Thus in the most advanced Scandinavian medical schools tuition and experience in general practice still forms a tiny proportion of the undergraduate curriculum; doctors often deliberately spend a long period of training in hospital before going into general practice; and they admit to feeling lost without the results of radiography and simple laboratory tests being available more or less immediately.

Some of the family doctors' orientation may arise because no general practitioner has his own "list" of patients; theoretically, therefore, a patient can do a tour of all the local family doctors, though in practice the facts of geography often restrict his choice. The low proportion of home visits to surgery consultations also perpetuates this attitude, as does the absence of health visitors and social workers, who in Britain are recognized as an integral part of any future general practice team. Nevertheless, though many family doctors in Scandinavia spoke of recent developments in Britain with envy, general practice there is flourishing, and doctors on both sides of the North Sea have much to learn from one another.

Three Current Developments

My visit gave me the opportunity of seeing three notable current Scandinavian developments in the field of general practice. Though features in all three—a university department, a purpose-built group-practice centre, and a research centre—mirror those in similar set-ups in Britain, naturally all are conditioned by the present-day pattern of general practice in Scandinavia. Sweden and Norway, in particular, are short of general practitioners, especially in the north, where the district medical officer usually combines family doctoring with public health work. Not only is medical practice in these parts of the world arduous, but also for most of the year the doctor and his family have to live in a severe climate with long periods of darkness. Hence it is often difficult to find doctors to take these posts, and Sweden now has 1,000 foreign doctors (particularly from the other Scandinavian countries and Germany) working as district medical officers in the north. Generally in Norway and Sweden group practice is uncommon and purpose-built premises the exception.

To try to reverse this situation a university department of general medicine has recently been created in Oslo. In some areas of Norway also doctors have now begun to form themselves into groups, and one of the first purpose-built group-practice centres was opened in April 1968.

In Sweden any patient can refer himself to the outpatient polyclinic of a hospital without having to see a general practitioner first, and this has discouraged developments in general practice, particularly in the towns. Because of the inherent disadvantages of this system—particularly with the cost of building new district hospitals with large outpatient departments and facilities—many people are now trying to promote the idea of the general practitioner as the doctor of first contact. The Swedish Medical Association has sponsored the so-called Läkarhusen, which have been built in some of the large towns; these provide central offices and diagnostic facilities for several general practitioners, as well as for specialists. Another development has been the creation of a group practice centre at Dalby. Not only does this provide a full family-doctor service for the neighbourhood, but the centre is also carrying out research into the content of general practice, while it plans to start courses of vocational and continuing education as well.

Institute of General Medicine

At the University Institute of General Medicine in Oslo, which opened in November 1968, there is a heavy emphasis on undergraduate teaching. The staff includes a professor of general medicine, a group practice of three doctors, two secretary-receptionists, a nurse, and a laboratory technician. The Institute, which is situated on the ground floor of the former home of a Norwegian Prime Minister, contains six consulting-rooms (three for doctors and three for students); rooms for the professor and a research fellow; a laboratory; a waiting-room; and a library/seminar room. The practice will treat any patient living in the neighbourhood, providing all general medical services except domiciliary midwifery; there is an appointments system and good provision for emergency and holiday cover.
Each of the three general practitioners takes one student for three or four sessions; the student sits in with the doctor on one or two sessions, goes with him on home visits, and may eventually see patients by himself before discussing them with his tutor. In addition the professor of general medicine does two teaching periods a week, and regular seminars are held in which both students and doctors take part. In future the general practitioners should be able to take part in teaching rounds in the medical school. Not only would the details of the patient’s home background and past illnesses give a more rounded picture of him as a whole, but participation by family doctors in hospital teaching should do much to brighten the “image” of general practice. Another plan is to create six teaching group-practices in and around Oslo, so that the teaching can be more evenly spread. Once a regular programme of undergraduate teaching in general practice has been started courses of vocational training and continuing training will be introduced as soon as possible.

The cost of the Institute, 500,000 Norwegian Kroner (£30,000), was met by the Norwegian Medical Association out of money paid by the Government when it last adjusted the national insurance benefits. Some of this money was due to every family doctor retrospectively, but the doctors agreed that instead it should go to finance developments in general practice. No difficulty was found in recruiting three family doctors to work in the Institute, and, though it was guaranteed that their income would not fall, so far they have not had to be subsidized.

Both doctors and students are enthusiastic about the new institute. Perhaps the best testimony to its success is that the medical school at Bergen is planning to start a similar institute very shortly. Moreover, the new school which is to be built at Tromsö in the far North of Norway will have similar facilities for teaching general practice from the outset. The Oslo Institute also plans to do research in general practice, and has already started investigating the use of the electrocardiogram.

Single electrocardiograms have been assessed by general practitioners, general consultant physicians, and cardiologists. So far no appreciable difference has been found among any of the interpretations.

**New Premises at Hokksund**

The new group practice centre in Hokksund, some 40 miles (64 km.) west of Oslo, one of the first purpose-built group practice centres in Norway, is certainly one of the most elegant, lavishly built centres I have seen. The practice comprises four young doctors, all contemporaries at medical school, who have extensive hospital and general practice experience. Though there are four of them in the practice, at any one time only

![FIG. 1.—Institute of General Medicine, Oslo.](image1)

![FIG. 2.—Centre at Hokksund. Looking into the patients’ waiting-room from a garden of the group practice centre.](image2)
three doctors are working, each one taking about three months off every year, either as holiday or in postgraduate courses.

The centre is a long low building built in brick and stone; internally both wood and colour are used with the sureness of touch that one comes naturally to expect in Scandinavia—the effect being simultaneously one of order and homeliness, efficiency and serenity. Its design owes something to the recently built group practice centres in Jutland, several of which were visited by the architect before drawing up the plans for

FIG. 3.—Centre at Hokksund. Library and conference room.

Hokksund. In its turn Hokksund has already been much visited by other architects and doctors, and a similar centre is already being built in a neighbouring town. A loan to build the centre was raised privately, its cost amounting to £70,000. The doctors make about £3,000 net each year; this is roughly only half of what the average family doctor in Norway earns, but, because of the advantages inherent in the group-practice set-up, they are quite content with this. As in group practices in Britain, they share their income rigorously among them. Besides consulting and examination rooms for each doctor, the centre contains a large waiting-room, a laboratory and x-ray department, and a well-equipped casualty department; there is also a library and common room. It is staffed by two laboratory technicians, one nurse, one receptionist, and two part-time secretaries. The doctors meet every morning and there is a general meeting of all the staff at midday. There is no appointments system, but each doctor has his own list of patients, though in emergencies or when he is off duty these are seen by one of his partners. A moderate number of house visits are made, and each doctor's car is equipped with a radio-telephone, which is in contact with the receptionist at the centre. The laboratory can undertake most of the simple routine investigations, more complex ones being done at the local district hospital, to which there is a daily delivery service of specimens. The x-ray department is used mainly for chest films and suspected fractures; both laboratory and radiological investigations are covered by fees for item-of-service (paid initially by the patient and then recovered from the State insurance scheme) in addition to that for the routine consultation.

Dalby

Though all the students at Oslo visit the Hokksund centre at least once during their course, so far there have been no plans to use it more directly in undergraduate teaching. Nevertheless, despite its distance from Oslo, it is obviously well set up to do this as well as to undertake research. At the Health Service Research Centre at Dalby, a small town near Malmö in Southern Sweden, on the other hand, there is a heavy emphasis on research. This centre, which opened on 1 February 1968, is partly financed by the Government and partly by the county council. It is divided into two parts, the first a general practice centre with three family doctors and ancillary staff serving the 8,500 people in the neighbourhood; adjoining a suite or rooms in a hotel, the centre is open to the public for use by the 8,500 people in the neighbourhood; adjoining a suite or rooms in a hotel, the centre is open to the public for use by the public health staff, it contains the usual equipment and is part of an x-ray department. The second part is a research section, which is particularly well sited in Dalby since it was in this township that a survey of the prevalence of mental disease in the community started 22 years ago and is still continuing. The family doctors at the Dalby centre also take part in the work of the emergency centre at Lund, the universising town some 10 miles away. Every night one doctor is continuously available at the centre itself, while another is on call for home visits. Nevertheless, the ratio of home visits to surgery consultations here is even lower than the low proportion usual for Scandinavia, as it is official policy to discourage visits owing to the way they waste doctors' time.

One of the programmes which links both sections at Dalby is research into how much can be done by a specially trained technician (called a “specialist” nurse). So far the understanding of the supervision of diabetics—both in the health centre and in the patients' homes—and there are plans to expand her work to include the care of patients with urinary tract infections, hyper tension, recent myocardial infarction, heart failure, and pernicious anaemia. The research programme itself is continuing the investigation into the mental health of the community. It has already been found that recently new mental illnesses during adolescence have increased sharply. The peak incidence of mental illness in this community is at the age of 40, and it also rises again steeply in persons over 70. Alcoholism was diagnosed in no fewer than 8.2% of the men in this community, but in only 0.1% of the women.

A new facet of the research programme is the introduction of screening programmes—for significant bacteriuria and abnormalities of vision and hearing in the community. The proportion of girls between 10 and 14 with significant bacteriuria has already been found to be 1.6%, and in women between 50 and 54 this rose to 10%. Intravenous pyelography showed that one-third of females with significant bacteriuria had changes in the kidney, and a study is planned of the relation of these changes to other conditions such as hypertension and refractory anaemia. An investigation into the health of 4-year-old children has also shown an unexpected high incidence of minor abnormalities: 8.7% and 4.8% had impaired vision and hearing, respectively, while no fewer than 25.9% needed urgent dental care (only 9% being free of caries). Routine full medical examinations, including psychiatric testing and an investigation of the social conditions, will be undertaken on all the 67-year-olds in the community, and eventually vision and hearing will be tested in the whole population.

Such a research programme inevitably creates a lot of data. Besides the services of laboratory technicians, nurses widely engaged in research, and a consultant physician from Lund who works at the Centre part-time, the research section also has access to a computer in the University, and there a whole time specialist statistician should be appointed very soon. Far there are no plans for teaching general practice to undergraduate students at the centre, but already three successful seminars for urban and rural district medical officers have been held, with hospital doctors from Lund and Malmö taking part. Clearly Dalby sees its present role primarily in defining the content of general practice in a Swedish context; only once it has done this will it know what should be taught and hope this should be done.