practitioners have the management skills to operate at a strategic level? If not, how can they acquire them? Training courses in management for general practitioners have been run by the King's Fund and the Royal College of General Practitioners, and by other institutions. Places are few but, while awaiting a place, doctors might benefit from a series of essays recently published by the King's Fund in memory of the late Tom Evans.[3] His own essay on the strategic response to environmental turbulence places the emphasis of planning on learning rather than producing definitive solutions to problems. Coates and Evans[4] in their essay on the 'learning organization' develop Argyris and Schon's[5] original concept of 'double-loop learning', whereby both individuals and the organizations they work in should be involved in learning and 'learning about learning'. That is to say they should be conscious of the learning process and be working to improve it all the time.

These essays might be a guide for general practitioners, staff and patients so that they can assess what learning is taking place, and develop programmes to improve learning. Each practice could develop this learning 'in-house', initially for doctors and staff, and then explore ways of involving patients, for whom achieving better health inevitably involves a learning process.

The National Health Service Training Authority, which (with its predecessor) has long supported the management training of general practitioners, held a successful joint conference with the British Medical Association in June 1988 on the topic 'Doctors and management development: the way forward'. This cooperation augurs well for the future of general practice management. But managing general practice in isolation is not enough — the management of primary and secondary care must be coordinated with each other. Management across the boundaries of health care provision tends to be neglected, though of crucial importance in ensuring the quality, equity and cost-effectiveness of health services.

General practitioners in the UK are fortunate in having the freedom to plan their future within wide limits. But do we have the capability to do so? Staff management is now a key part of general practice. Let us hope that general practitioners will make the most of the new opportunities to develop effective patient-oriented management rather than wait for someone else to do it for them.

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International travel medicine

INTERNATIONAL travel is expanding rapidly: every year there are over 20 million overseas visits by United Kingdom residents to an ever widening variety of destinations. Morbidity owing to travelling is high: about half of short-term travellers experience some illness.[1] Furthermore, the high speed of travel means that people may return while still incubating a potentially fatal infection.

Travel medicine has its own British journal — *Travel Medicine International (Journal of Emporiatrics)* — and association — International Association of Physicians for Overseas Service, and it is emerging as a specialty in its own right, albeit with only a small number of full-time doctors. Some general practitioners have a particular interest and expertise in this area and are medical advisers to commerce and industry, the armed forces, the travel industry, and voluntary bodies such as relief organizations and missionary societies, but all general practitioners are consulted about travel by their patients. The general practitioner has three roles in this field: preparing patients for travel, care during travel, and post-travel diagnosis and treatment of diseases.

In advising people before travelling general practitioners need to bear in mind that the people who have an increased risk of illness include: package holiday-makers, smokers, inexperienced travellers, those travelling to the tropics and those under 30 years old.[1]

One of the first questions to be asked is whether the patient is fit to fly;[2] patients who have recently had a myocardial infarct or laparotomy, for instance, should be advised to delay travel.[3] It is best to discuss any potential problems with the airline concerned.

The main area where the general practitioner will be involved in pre-travel preparations is immunization. This can be divided into three groups. First, boosters may be needed for immunizations given routinely to all UK citizens, including routine childhood immunizations, not forgetting bacille Calmette-Guérin (BCG), measles, mumps and rubella. Serological studies have shown, for instance, that over 20% of the population have incomplete immunity to poliomyelitis[4] and 35% are susceptible to diphtheria.[5] The traveller to developing countries will be exposed to diseases now rare in Europe. The second group includes immunizations commonly given to travellers, such as typhoid and normal immunoglobulin, and cholera and yellow fever (the only two which are compulsory for certain countries). The most problematic are immunizations which are given only in specific situations, and these include anthrax, hepatitis B, Japanese B encephalitis, meningococcus, plague, pneumococcus, rabies and tick-borne encephalitis.

Advice about malaria is rapidly changing as the plasmodium is becoming more resistant: chloroquine resistant strains have spread to most malarial parts of the tropics. The value of prophylactic drugs is constantly being reviewed and resistance renders some old drugs used a single agents, such as pyrimethamine, nearly useless. Adverse reactions severely limit the use of others, such as Fansidar (Roche), and the place of

new drugs such as mefloquine and halofantrine has still to be evaluated. Several contributors to the discussion on malaria prophylaxis at the recent conference on international travel medicine[6] emphasized the importance of giving advice on the avoidance of mosquito bites, as there is no totally safe and effective drug regimen.

A neglected area of pre-travel preparation is that of advice, whether from the doctor in person or by means of leaflets, such as those recently redesigned by the Department of Health and Social Security.[7,8] *Well away,*[9] the new booklet published by British Medical Journal, is full of useful tips and sources of further advice for the traveller, including those with particular needs such as the diabetic and the pregnant woman. There are a number of useful books for the traveller, particularly those who may be living overseas for some time.[10-12] The traveller should also be advised on how to avoid the risk of the acquired immune deficiency syndrome; as well as advice on sex and the use of condoms, he or she should be told to avoid non-emergency medical or dental treatment, particularly blood transfusions. (Emergency travel kits of sterile medical equipment are available from Medical Advisory Services For Travellers Abroad Limited, Keppel Street, London WC1E 7HT and SAFA Limited, 59 Hill Street, Liverpool L8 5SA.)

What sources of information are available to the general practitioner? Probably the most widely used are the charts published in the weekly newspapers for doctors. These are up-to-date and adequate for routine journeys but more detailed information is needed in order to advise the pregnant, the very young, those going to unusual destinations, and those who will be experiencing difficult conditions, such as the back-packer in Nepal. The *British national formulary* contains useful information about immunizations and drugs but general practitioners may want to have the World Health Organization's annual booklet[13] on which many other sources are based. A vital resource is the new edition of the DHSS book *Immunization against infectious disease.*[14] As well as giving definitive advice about immunizations (but not malaria) it includes addresses and telephone numbers where further information can be obtained. Further advice about malaria prophylaxis can be obtained by telephoning 01-636 7921 (comprehensive message available 24 hours), 01-637 0248 (Egypt, Morocco and Turkey, available 24 hours), 01-636 3924 (personel enquiry line for doctors available 09.30–10.30 and 14.00–15.00 hours) or 01-636 8636 (urgent professional enquiries 09.00–17.00 hours). In addition, the new edition of *ABC of healthy travel* is worth a place on every general practitioner's bookshelf.[2]

There are at least two computer data bases of immunizations, malaria prophylaxis and precautions necessary for travellers. These have the advantage of being up-to-date and include the latest information on epidemics abroad. Medical Advisory Services For Travellers Abroad Limited will provide, by post, instructions for travellers. The Communicable Diseases (Scotland) Unit data base can be accessed by general practitioners via a computer and modem.[15]

The general practitioner can also be required to give care to patients during travel. Foreign travellers may consult British general practitioners as temporary patients; problems may include the stress of travelling and imported disease. When travelling himself the doctor may be called upon to give emergency help to a fellow traveller. In addition, a few doctors offer their services in repatriating the sick or injured. This work demands specific skills and should be undertaken only by those competent to do so.[16]

The other principal role of the general practitioner is in the management of illness in the returned traveller. In the UK in 1986 there were 2309 cases of malaria; this figure has increased by over 50% during the last 10 years. One third of the cases were of the potentially fatal plasmodium type and there were four deaths. Rates of infection are highest among UK immigrants who have visited relatives in Africa or Asia.[17] Other less common causes of fever include tuberculosis, hepatitis A and B, and viral haemorrhagic fevers such as Lassa fever. General practitioners must be vigilant in taking a travel history from any febrile patient. Diarrhoea, the commonest traveller's illness, is more likely to be caused by a non-viral pathogen than diarrhoea contracted in the UK; stool tests are essential to diagnose the causes which include salmonella, campylobacter and giardia. Rabies is worthy of mention because of its high fatality rate although only 17 cases have been treated in the UK in the past 40 years. An immediate course of post-exposure prophylaxis needs to be considered for anyone who has suffered an animal bite overseas; advice can be obtained from the DHSS on 01-200 6868. Patients with post-travel infections can be referred to specialist as well as local infectious diseases units (see list).

Finally, it is important to remember the doctor's duty to inform the medical officer for environmental health of cases of notifiable disease (Department of Health. Ref PL/CMO (88)21. Public health (infectious disease) regulations 1988).

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Specialist units:

Communicable Diseases (Scotland) Unit, Ruchill Hospital, Glasgow G20 9NB (Tel: 041-946 7120).

Department of Communicable and Tropical Diseases, East Birmingham Hospital, Bordesley Green Road, Birmingham B9 5ST (Tel: 021-772 4311).

Hospital for Tropical Diseases, 4 St Pancras Way, London NW1 0PE (Tel: 01-387 4411).

Liverpool School of Tropical Diseases, Pembroke Place, Liverpool L3 5QA (Tel: 051-708 9393).

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