

SECTION 2

FIELD MEDICINE

9 THE ROLE OF THE EXPEDITION MEDICAL OFFICER

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The expedition medical officer (MO) is the guardian of an expedition's health. The MO's primary role is to prevent expedition members becoming ill and secondly to treat those who have had an accident or become unwell. This does not necessarily mean that the MOs must treat everything that is presented to them, but rather that they must use their knowledge and authority to advise on the best course of action.

As MO you are unlikely to be very busy with medical problems but if someone is ill or injured you may be the only person who can deal with the situation. These can be stressful times, with no senior cover to turn to for advice and no one to relieve you for a break. Good communication among you, your patient and other expedition members is essential, as is strong decision-making, based on the knowledge and facilities available to you.

To help prepare yourself for the role of expedition MO you will need carefully to research the area to which you are travelling and the likely medical problems that you will encounter, prepare yourself physically and consider attending relevant courses. These might include courses in first aid, advanced life support, basic dental skills or a Diploma in Tropical Medicine and Hygiene (DTM&H).

The roles and responsibilities of the expedition medical officer are best divided into three areas: pre-expedition, during the expedition and post-expedition.

PRE-EXPEDITION

These thirteen pre-expedition responsibilities of the expedition MO should help prevent ill health in the field. Medical screening of all expedition members is essential so that you can provide pre-travel advice to individuals as dictated by their past medical history and expand the expedition first aid kit as necessary. Medical screening can be undertaken by asking each member of the expedition to complete a personal medical questionnaire (see Appendix 1). Three copies of the personal medical questionnaire should be made, one to be left in the UK with a nominated contact and two to be

**TABLE 9.1 ROLE OF THE EXPEDITION MEDICAL OFFICER
PRE-EXPEDITION**

- Advise and brief the team on medical issues
- Undertake medical screening of all expedition members
- Encourage all participants to have a pre-expedition dental check-up
- Provide advice on immunisation requirements (see Chapter 2)
- Provide advice on the need for malaria prophylaxis (see Chapter 19)
- Organise first aid training (see Chapter 4)
- Provide education on health and hygiene issues (see Chapter 10)
- Prepare the expedition medical kits (see Chapter 3)
- Undertake a risk assessment and prepare associated documentation (see Chapter 8)
- Anticipate and plan how a severely ill or injured expedition member might be evacuated
- Prepare a communication network in case of evacuation (see Chapter 16)
- Organise medical insurance with full emergency evacuation cover (see Chapter 6)
- Improve your own knowledge of local medical problems and find out about local medical facilities

taken on the expedition, one of which can be used in an emergency, if evacuation is required. In addition, you should ask each expedition member to document his or her blood group. This can be obtained free by donating blood at a local blood donor centre.

DURING THE EXPEDITION

Once the expedition arrives in the field the need to protect the health of expedition members continues. If the expedition is to be happy and successful this must be done without causing antagonism.

Camp health and hygiene

As the MO you are responsible for base camp health and hygiene. This includes regular checks of latrine and kitchen hygiene, food storage and rubbish disposal. If anything is substandard it should be brought to the attention of all expedition members and steps taken to rectify it. Strict adherence to the rules of camp and personal hygiene is essential to minimise the risks of gastroenteritis, the most common complaint of all expeditions.

TABLE 9.2 ROLE OF THE EXPEDITION MEDICAL OFFICER DURING THE EXPEDITION

- Reiterate the rules of camp and personal hygiene (see Chapter 10)
- Continue to reinforce these at regular intervals during the expedition
- Ensure a safe water supply
- Consider conducting a brief medical review of each expedition member on arrival
- Revise basic first aid and management of minor injuries with all members of the expedition
- Practise a mock evacuation
- Place expedition medical kits and communication network papers in a designated place
- Ensure the safety of expedition members
- Organise a routine for patient consultations
- Reassess the risks posed by the natural environment and alter emergency plans as appropriate
- Write up accident reports as necessary
- Review evacuation plans

Consultations

During the expedition, one of the main roles of the MO is to provide a consultation service for non-urgent problems. How you do this will depend on the size and structure of your expedition. In general, it is sensible to allocate a regular time of day when you are exclusively available for confidential consultation. Before or after meals often works well. It is important to ensure complete privacy; this is not always easy on an expedition but should be your aim. All consultations should be briefly recorded, as should the treatment that you give. Consider conducting a brief medical review of each expedition member on arrival. This will enable you to update participants' records with new problems or drugs and clarify anything in the pre-expedition medical questionnaire.

Treatment

Most expedition MOs are simply equipped due to the size and mobility of their expedition. This can mean that few diagnostic aids are available. MOs should ensure that they have medical supplies sufficient for treating minor illnesses and are able to provide emergency care for more serious conditions until a patient can be evacuated.

Most problems are straightforward and trivial and can be dealt with on the spot. The role of the MO is therefore uncomplicated: to make a diagnosis and treat. Most

doctors develop a sense of when something apparently trivial is actually a manifestation of something more serious. In the usual urban surroundings help is available to confirm intuitive feelings or doubts; however, in the field it is not, and as expedition MO you therefore have to assume the worst possible scenario. This may mean causing a lot of inconvenience and concern, for example, by sending someone with stomach ache to hospital with possible appendicitis, or making someone with a headache descend 1,000m. You will arouse grumbling and hostility if the person recovers without intervention, but you really have no choice other than to take the safest course of action. If you are not reasonably sure that there is no serious disease you cannot gamble and afterwards, even if the patient does get better without intervention, they may still have had the early stages of disease.

MOs are also there to offer reassurance. People come with genuine symptoms, although in most cases it is merely natural concern about symptoms, the minor significance of which may not be apparent to the sufferer. You will not know what the situation is until you have made a serious attempt at a diagnosis, so never fail to take this step. If you think nothing is wrong, friendly reassurance is important. You should endeavour to treat even natural grumblers properly, because indifference or contempt will eventually leave them suffering in silence, and prevent them consulting when they really need to. Remember that psychological or psychiatric problems, fears and tensions may manifest themselves as physical symptoms.

There is always the problem that illness in an expedition member may adversely affect the expedition as a whole. Expedition members, not least the patient, may try to persuade you to allow activities to go on when this would not be in the patient's best interest. It is important not to yield to this persuasion because it may harm the patient and it may also, in some circumstances, jeopardise the whole expedition. The authority of the expedition rests mainly on the reputation, credibility and good personal relationships the MO is able to build up with the other expedition members.

Expeditioners tend to be self-sufficient people, and the circumstances of an expedition often reinforce this. There is a tendency for MOs to overdo the self-sufficiency; this can lead to them attempting to solve all problems single-handedly. Always ask yourself whether extra help and advice are available and if they would be useful.

All patients rightly expect that when they give the MO information, or a diagnosis is made or suspected, it will be confidential. People also have a right to refuse treatment, even if, in the MO's view, this will not be in their best interest. However, the General Medical Council has made it clear that doctors also have a duty to the public at large. On expeditions circumstances could arise where confidentiality might need to be broken and the expedition leader informed that an individual is concealing an illness or refusing treatment, so that the health and safety of other expedition members is not jeopardised.

Consent

Without consent treatment is assault. Consent to emergency life-saving treatment is usually presumed by the law if the patient is unconscious or too ill to consent. The law presumes that a reasonable man would wish his life to be saved. In the case of a doctor or healthcare professional acting within his or her sphere of clinical competence, consent is usually implied, i.e. the patient does not resist the treatment and therefore is presumed to consent. In other situations where treatment carries considerable risk, or is controversial, informed expressed consent should be obtained. For consent to be informed the individual must understand the proposed treatment and the risks involved in accepting or refusing that treatment. This means that the patient should be made aware of material risks and common or serious side-effects, as well as the likely consequences should treatment be withheld. Verbal consent, especially in an expedition setting, is usually adequate. For an individual over 16 years of age, only that individual is able to give consent. Remember, patients have the right to refuse treatment. Children under 16 can consent to medical treatment themselves if, in the opinion of the doctor, they are capable of understanding the nature and consequences of that treatment. However, when taking under-16s on an expedition it is wise to gain written permission from the parent or guardian that medical care can be given, if it is thought to be in the child's best interest. If written parental permission is not available, and a minor needs medical attention, treatment can be given if he or she is judged to be capable of consenting. If the child is not judged capable of consenting then actions taken will be judged against what a prudent and careful parent would consent to in the same situation. The child should, however, be given information that is relevant to his or her age and understanding.

Accident reports

There is the potential for an accident on any expedition; one of the roles of the expedition MO is to write up an accident report if this becomes necessary. Information should be collected on: the site and time of the accident; the people involved; who else was present; what happened; what action was taken; and what the outcome was.

Evidence from the RGS expedition database published in the *Journal of the Royal Society of Medicine* (2000;93:557–562) states that 59% of medical incidents seen on expeditions are preventable; one third (33%) are due to gastrointestinal disorders; 20% are due to “medical” problems including chest, ear and skin infections plus a few tropical infections (malaria and dengue in particular); and 17% are “orthopaedic” problems, including knee and wrist injuries.

Remember that the most likely problems you will have to deal with as an expedition MO are *common* medical problems (skin infections, gastroenteritis, minor lacerations) seen daily in a general practitioner's surgery.

Assessing risk

The assessment of risk is made just as well by people who commonly encounter the hazard, such as climbers, cavers and divers, as by MOs. In these activities participants are usually well informed and are trained to advise beginners. Risks can be minimised by the use of sensible precautions such as safety belts in vehicles and hard hats while climbing. Remember while coping with a possible fracture to use improvised splints.

Once in the field, it is important to reassess the risks posed by the natural environment, particularly local flora and fauna, and the climate – both heat and humidity.

One of the many roles of the MO is to be aware of the risks posed by the physical environment. There are, of course, many of these. Situations may arise in the field where the MO will either have to give an opinion about a proposed activity, or give unsolicited warnings when activities have already started. Once in the field assessment of risk by the MO is essential and a crisis management strategy should be prepared (see Chapter 8). Inexperienced people are likely to underestimate risk, particularly where the hazard is not obvious, for example, the risk of sunburn is well known, although many northern Europeans are not aware of how much more intense sunlight is at tropical latitudes and how heat exhaustion can kill.

Evacuation

One of the essential roles of the MO is the ability to make a decision on evacuation. This may be an unusual position to be in, and consideration should be given to:

- the need to choose the safest option when diagnosis cannot be confirmed by colleagues or tests;
- the often conflicting needs of the other expedition members;
- the lack of privacy and confidentiality, which is part of expedition life.

Treating people not on the expedition

In many parts of the world expeditions are perceived by local people to be rich and endowed with clinical skills and drugs. The apparently universal human desire to take medication may be stimulated by the arrival of the expedition, and the slightest hint that you will treat people in the local community may produce a flood of “ill” people. It is tempting to try to “help” and to establish goodwill by offering medicines to all but, before you do, consider the potential harm:

1. You may not understand local people’s health problems and therefore misdiagnose.
2. You may endanger your own expedition members by using drugs intended for them.

3. You may be blamed unreasonably for adverse outcomes.
4. You may offend local healers.
5. Treatment may be incomplete and thus ineffective or harmful.
6. You might be exploited for your novelty value.
7. You may induce expectations among local people that the local medical services cannot meet.

Nevertheless, you cannot avoid doing what you can for other people. People, particularly children, who are clearly and severely ill, should be treated, but not necessarily by you. Evacuate the patient if possible. Your authority may help to achieve this. As the expedition MO you should not treat serious chronic disease (especially in adults). You will not have the resources or the time, and it would be better for everyone if the patient were treated by the local health service. The stream of people in whom you can see little wrong, and who mainly request medicine rather than presenting a problem, should be referred elsewhere.

POST-EXPEDITION

Once the expedition has returned home, the role of the expedition MO continues (Table 9.3). Expedition members may require support for new or ongoing medical problems. Do not forget that tropical diseases such as malaria and schistosomiasis may present weeks, months or even years after the expedition has ended. A single case in your expedition should alert you to suggesting the screening of all other members since they are likely to have shared the same risk of exposure. In general the role of the MO will be to direct individuals to the best local health provider to treat the problem. An important role of the MO post-expedition is to complete the Royal Geographical Society’s Health and Safety Questionnaire (available on the RGS-EAC website: www.rgs.org/eac). This is essential to help the RGS Expedition Advisory Centre collect statistics on expedition health and safety problems, so that they can bring these to the attention of other expeditions and help them to develop ways to improve the safety of those participating in an expedition.

TABLE 9.3 ROLE OF THE EXPEDITION MEDICAL OFFICER POST-EXPEDITION

- Repeat advice on malaria prophylaxis if appropriate
- Provide health and medical advice and support as necessary
- Complete the RGS Health & Safety Questionnaire and return to the EAC