



# MINOR ILLNESS AND MINOR INJURIES FOR REMOTE MEDICS

## MODULE ONE INTRODUCTION AND CORE SKILLS

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### **About the Author**

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## 1.1.1 Introduction to Minor Illness Management

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### What is a minor illness/injury?

Providing a definition of what constitutes a minor illness or injury is more difficult than it would seem at first glance. Experienced medics typically make the decision that something is 'minor' very quickly based on an intuitive assessment, and such decisions are usually correct.

#### TASK 1.1

*Decide if you think each of the following presentations should be considered as a major or a minor problem.*

*Chest discomfort*

*Shoulder pain*

*Nausea and vomiting*

*Headache*

*A red and swollen knee*

*Abdominal pain*

Minor acute illnesses include some of the most common problems presenting in the primary care setting, such as upper respiratory tract infections and skin rashes. For medics working in the remote and expedition setting it is also the case that minor illness and injury accounts for the majority of our workload. Most of the patients we encounter on a daily basis have sprains and strains or respiratory, gastrointestinal, ENT or skin problems. Most of the training we do as an offshore, remote or expedition medic, however, emphasises rare but potentially catastrophic emergencies such as major trauma, altitude related illness such as cerebral oedema and frostbite, diving emergencies such as gas embolism and pulmonary barotrauma, tropical diseases such as haemorrhagic fevers and envenomation by reptiles and arachnids. But, if you stop and think of all the mountain expeditions you have done, how many cases of high altitude pulmonary or cerebral oedema have you seen; of all the divers you have assessed, how many actually had decompression sickness; and of all the nights you have spent in a hammock under a jungle canopy, how many snake bites have you encountered? For the majority of medics working in these settings, the number of such cases will be counted on the fingers of one hand. By comparison, recall the number of cases of acute diarrhoea, earache, conjunctivitis, athlete's foot and sunburn you have encountered on your travels and we can begin to gain some perspective on the nature of the work of the remote area medical provider. Yet, still a clear definition of minor illness eludes us.

We generally think of minor illnesses and injuries as those that are self-limiting; i.e. need no specific treatment, or can be managed easily in the out-of-hospital setting with minimal medical intervention. Indeed, it is probably easier to say what is not a minor illness/injury (box 1.1). We must also bear in mind that the definition will vary between patient groups and what may be trivial to the healthy adult may represent a more significant problem to a child or elderly person or to those with chronic conditions. The definition may also vary depending on the skill and experience of the individual medic. Finally, it is worth remembering that in remote environments, something that would usually represent only a trivial inconvenience to the sufferer can cause a far greater problem if the patient is unable to continue with the expedition or contribute effectively to day-to-day operations.

Diagnostically too, minor illnesses and injuries often present a far greater challenge to the medic working remote from advanced medical care. Identifying a mid-shaft fracture of the femur is usually straight forward based on the mechanism of injury, obvious deformity and excruciating pain; as is its management – oxygen, pain relief, traction splinting, IV fluids if shocked and early evacuation to hospital. Aside from the logistics of evacuation, the recognition and management of critical illness and injury is usually well within the comfort zone of the medic. We arrest major haemorrhage, maintain a patent airway, ensure adequate ventilation and oxygenation, manage shock, stabilise fractures, prevent worsening hypothermia and arrange for removal to a higher level of care. Conceptually, this approach is the same whether you are a basic grade EMT or a Consultant in Emergency Medicine; you do ABC and move the patient on to the next level of care. Far more complex, however, is the management of those patients that you will deal with entirely yourself without passing them on to anyone else. Deciding if the walker with a ‘sprained’ ankle can continue on the expedition or needs urgent X-ray, or the patient with abdominal pain that you are called to see in the middle of the night requires an emergency surgical review or just a simple laxative, presents a far greater challenge.

### **BOX 1.1 Defining Minor Illness and Injury**

1. There is no threat to the patient’s life, no requirement for resuscitation, no circulatory collapse and no damage to internal organs.
2. There is no significant neurological deficit and the patient is alert and able to give a clear history.
3. There is no immediate threat to airway, breathing, circulation or neurological function.
4. There is no severe pain; i.e. that requiring intravenous opioid analgesics or similar drugs to relieve pain.
5. There is no threat to limb or risk of disability and no elements of nerve or major blood vessel disruption.
6. There is no displacement or instability of bone and no tendon instability.
7. There is no potential for large, troublesome or cosmetically significant scars.
8. There are no underlying medical conditions likely to complicate or be complicated by the current problem.
9. There is no systemic illness likely to cause long-term complications or requiring immediate advanced intervention.
10. Management of the condition is within the competence of the practitioner and the resources available.

The skilled management of minor illness and injury requires a much greater level of diagnostic and therapeutic acumen than does the management of obviously life-threatening emergencies. Hence the need for specific training in the recognition and treatment of ‘minor’ ailments. Obviously, a course like this cannot hope to cover every eventuality or to cover each topic in every possible detail but we aim to explore the most common problems that you will encounter and to enhance your knowledge and confidence in managing these conditions. No theory-based course can give you all of the skills or experience you may need to make accurate diagnoses and initiate appropriate treatment plans and you are encouraged to seek further practical training and to gain experience under the supervision of a skilled clinician.

Finally, whilst the treatment and dosage recommendations made throughout this course are based on current best evidence and are accurate at the time of publication, evidence and practice is constantly evolving and treatment recommendations change periodically and may also differ between countries. The authors, therefore, accept no liability for any errors or omissions for the use or misuse of any information contained within this course material or any related communications.

## General Principles of Managing Minor Ailments

Unlike the majority of major illness conditions, and despite the recommendations of the Medical Research Council in 1997 that funding was needed for research into the management of minor illness, very little research has been conducted into minor illness and funding for research into the relief of self-limiting symptoms remains very small.

Wherever possible, this course will draw upon evidence-based guidelines and recommendations but high quality research evidence is not always available. Additionally, guidelines should be used to support, rather than replace, clinical judgement and cannot substitute for the experience and intuition of a competent clinician.

The following are some general principles for the management of minor illness and injury.

1. **Rapidly exclude life-threatening problems** with a 'foot-of-the-bed' assessment and by the use of the ABCDE approach to primary survey, recording such vital signs as are appropriate to the clinical presentation.
2. **Record a thorough history**, taking account of the mechanism of injury/manner of onset of symptoms. Listen carefully to the patient's account and try to understand their agenda. The patient's story, together with your experience and your knowledge of normal anatomy and physiology, will often reveal the diagnosis. In the case of less obvious pathologies, the history should reveal a shortlist of differential diagnoses that can be refined by further questioning and clinical examination  $\pm$  other appropriate tests.
3. **Perform a focussed examination** to reveal or exclude important signs and to help confirm your diagnosis. An examination that reveals no serious structural or physiological abnormality will also go a long way to reassure the patient.
4. Only perform or request additional tests or investigations; e.g. imaging, blood tests, etc. if they are necessary to the diagnosis and/or their result will influence management.
5. **Discuss the treatment options and agree a management plan**, including any ongoing referral, with the patient. Remember that there is always the option to do nothing (or wait and see). The patient should be made aware of alternative treatment options and any attendant risks or discomforts associated with both treatment and watchful waiting.
6. **Always 'safety net' episodes of care** by advising the patient on what to do and where to seek further help if things worsen or do not improve within an expected time frame. Wherever

appropriate, provide both verbal and written advice and always document the fact that such advice has been provided.

7. **Make concise but accurate records** of all episodes of care using standardised formats and, where available, pre-printed clinical report forms.

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## 1.1.4 Differential Diagnosis and Clinical Reasoning

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Differential diagnoses (d $\Delta$ ) are a list of possible conditions that may be causing the patient's problem(s). Clinical reasoning is essentially the way that we move from a list of differentials to a diagnosis ( $\Delta$ ) so that we can embark on an appropriate course of treatment.

Clinical reasoning is a thinking process that enables the clinician to take appropriate action in a given set of circumstances. It requires clinical knowledge and skills to be applied to the individual patient in a logical and deductive manner.

The first step in the clinical reasoning process is to formulate a list of possibilities (differential diagnoses) based on the patient's presenting complaint. These may be narrowed down early in the consultation based on demographic and epidemiological data and whether the patient looks well or ill.

### What is the presenting complaint?

Some conditions are much more common, and therefore much more likely to be the cause of the patient's problem, than others. For example, the most common cause of headache is tension-type headache followed by migraine and then sinusitis. Other causes are rare but will need to be excluded to both rule out serious pathology and reassure the patient.

### How old is the patient?

Epidemiological evidence indicates that certain conditions are more or less likely in certain age groups. For example, it is very unlikely that a child with cough has chronic bronchitis but the likelihood of an elderly person having chronic bronchitis is much greater.

### What sex is the patient?

As with age, sex can dramatically alter the probability of suffering from certain conditions. For example, migraine is five times more likely to occur in women than men but cluster headache is nine times more common in men.

Let's look at a scenario to see clinical reasoning in action.

A 28 year-old woman presents because of headache . . .

#### Initial thoughts . . .

1. The patient is female and in her late twenties.
2. The patient looks and sounds well.
3. Epidemiological evidence suggests that tension-type headache is most likely but women are more prone to migraine than men.

Reasoning	Questioning	Patient's Response	Clinician's Thoughts
Tension-type headache usually produces a dull ache whilst migraine produces a throbbing headache.	'What type of pain is it?'	'Dull ache'	Suggests tension-type headache.

*continued . . .*

Reasoning	Questioning	Patient's Response	Clinician's Thoughts
Tension-type headache is generally bilateral; migraine is usually unilateral.	'Where is the pain?'	'All over'	Suggests tension-type headache.

Reasoning	Questioning	Patient's Response	Clinician's Thoughts
Tension-type headache is not usually severe whilst migraine can be disabling.	'How severe is the pain?'	'Bothersome rather than stopping her doing things'	Suggests tension-type headache.

All of the answers so far support a diagnosis of tension-type headache but some further questions about lifestyle, family and past medical history will help to confirm the diagnosis . . .

Reasoning	Questioning	Patient's Response	Clinician's Thoughts
Tension-type headache often has a trigger factor such as stress or fatigue.	'What have you been doing recently?'	'I've had several late nights because I'm behind with a project at work'	Supports a diagnosis of tension-type headache.

Reasoning	Questioning	Patient's Response	Clinician's Thoughts
People tend to have recurrence of tension-type headache in similar circumstances.	'Have you had headaches like this before?'	'Yes, once or twice, when I've been a bit stressed'	Supports a diagnosis of tension-type headache.

Reasoning	Questioning	Patient's Response	Clinician's Thoughts
Tension-type headaches would be unlikely to have any family history but migraine does seem to.	'Does anyone in your family suffer from migraine?'	No	Decreases likelihood of migraine as the cause.

At this stage, you can be confident of the diagnosis of tension-type headache but you may still ask a few questions, and/or perform an examination, to rule out serious pathology; e.g. 'any recent head injury', 'any focal neurology (problems with balance, vision, speech, hearing or any weakness, numbness, faints or funny turns)?'

### TASK 1.2

*From the clinical reasoning process above, think about and list the knowledge you would need in order to make this diagnosis of tension-type headache.*

Hopefully, you can see from the above that we have moved from a short-list of differentials to a confident diagnosis by asking six well considered questions. It is worth remembering that the clinical reasoning process may need more or less questions than this and may also include examination findings as well as the results of other tests as appropriate.

Before making a final recommendation to the patient it is helpful to recap on the information elicited during the interview. Paraphrasing what the patient has said will help you to formulate your final diagnosis, confirms to the patient that you have understood what they have told you and allows them an opportunity to add to or correct any facts that you may have failed to recall correctly.

Finally, of course, clinical experience also plays a big part in the process. With experience comes the ability to quickly recognise the pattern of characteristics of common conditions and thus make a diagnosis on the basis that you have seen the same condition many times before. Pattern recognition is an important skill in clinical medicine but even the most experienced clinicians will ask some confirmatory questions rather than risk misdiagnosis by jumping to conclusions too quickly.

### **TASK 1.3**

*Produce a clinical reasoning ladder, like the one shown above, for a 37 year old man who is limping on an injured ankle following a fall. He looks and sounds well but his ankle is painful and swollen.*

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## 1.1.6 Documentation

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Making a written contemporaneous record of the episode of care is as important as the care itself. The written clinical report form is usually the only record that you have seen the patient and the only evidence of the examination findings, treatment provided and advice given. Specific points on what to record for a given presentation will be included in the subsequent modules of the course. Below are some general pointers about recording a clinical record.

1. **Write legibly in black ink.** Black is the only colour that provides for an acceptable photocopy should this be required later.
2. **Ensure that the patient details are recorded accurately** and spelt correctly; e.g. name, address, age, date of birth and the name and address of the patient's own doctor (GP/family physician).
3. As a general rule, **if there is a box on the form fill it in.** I tend not to recommend clinical report forms with too many boxes, preferring a free-flow approach to recording most patient episodes, but if boxes are provided for a minimum patient data set, then it is usually wise to complete them.
4. **Record times only in 24 hour clock.** The correct way to write the time in 24 hour clock is without a full-stop or a colon; e.g. 9:07 pm should be written 2107 NOT 21:07 or 21.07, etc. Strictly speaking, there is no such time as 0000, so midnight should be recorded as 2359 or 0001 depending on which side of midnight the second hand falls.
5. **Record whether consent was obtained** from the patient for the examination/treatment performed. If the patient was unable to give consent, then record the reason for this.
6. **Make a prominent note, e.g. in CAPITALS, if the patient has any drug allergies.** The fact that a patient has no known drug allergies (NKDA) should also be noted.
7. **Record any advice that you obtain from another clinician.** Ensure you record that person's name and grade or designation as well as the time the advice was provided and any specific instructions that the clinician gave regarding the patient's care. The Remote Medic UK clinical report form (see page 8) has a section specifically for recording such advice.
8. **Negative findings from the history and examination may be just as important as positive findings;** e.g. no loss of consciousness (°LOC) or no bony pain to palpation, etc.
9. **Record the discharge destination;** e.g. home, referred to GP, etc. **and any discharge instructions** provided to the patient such as what to do if things do not resolve or get worse, how to use medication, etc.
10. **If referring or transferring the patient to the care of another clinician, a copy of your clinical report form or a suitable summary of care to date, should accompany the patient.** If carbon

copy forms are used for this purpose, ensure that the copy is legible. The top copy (original) should usually remain with the initial attending clinician.

11. **Ensure that patient records are kept securely** and not at risk of damage or destruction. Secure, waterproof document wallets are available and these may be the preferred option for the storage of completed patient record forms during expeditions or trips.
12. **Remember that patient's may request to see their records** so do ensure that they are accurate and unambiguous. Avoid using language or statements that may be considered judgemental or irrelevant.

See page 24 for an example of a completed clinical report form.

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