Acute Medicine

A Handbook for Nurse Practitioners

LISA CARROLL

John Wiley & Sons, Ltd

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This book is printed on acid-free paper responsibly manufactured from sustainable forestry in which at least two trees are planted for each one used for paper production.

To my husband Will, for his endless patience and for enabling me to fulfil my dreams. I must also thank my children, Daniel, Steven, Natasha and Belinda who have never once complained about the hours Mummy has spent working. Finally, to Jim for giving me the opportunity.

Contents

Preface

This book is written with the intention of providing nurse practitioners working in the field of acute medicine with an up-to-date, practical and comprehensive guide to the management of acute medical patients.

It is hoped that it will serve as a text from which the busy, highly skilled nurse can obtain information on the assessment, investigation, diagnosis and management of acute medical conditions.

In my role as Consultant Nurse in Acute Medicine I appreciate the diversity this speciality brings and the challenges faced by working at an advanced level in this acute environment.

This book aims to provide the reader with an evidence-based approach to the management of the most common medical conditions.

Introduction

> No man not even a Doctor expects a nurse to be anything other than this – devoted and obedient.
>
> *Florence Nightingale, 1887*

Nursing has changed dramatically since the days of Florence Nightingale. Traditional doctor/nurse boundaries are being eroded and nurses are expanding their sphere of practice to encompass assessment skills and to enable them to manage total episodes of patient care with true autonomy (DOH 2000). More recently we have seen the emergence of nurse practitioners undertaking this advanced level of health assessment in the acute medical arena. This book is intended to support the decision-making process and treatment that can be offered by these individuals.

The book takes the reader through the assessment, investigation, diagnosis and management of the most common acute medical conditions. It identifies priorities for treatment and guides the reader through the management of the patient. Wherever possible the latest published guidelines have been included.

The final chapter of the book considers the legal, professional and ethical issues faced by nurses working at an advanced level. The issues of role development, the development of protocols and prescribing are considered.

At the back of the book are examples of Clinical Management Plans for the supplementary prescriber and Patient Group Directions to support practice. There is also a glossary to explain terms and to serve as a useful reference guide.

This book will provide invaluable information and advice to the established and aspiring practitioner working in the field of acute medicine.

1 Patient Assessment

The general public have an expectation that when they are unwell they will be assessed by a competent practitioner who will be able to tell them what is wrong and treat the problem. As a nurse practitioner working in an acute medical environment such as a medical assessment unit this expectation becomes your remit.

In order to provide a patient with a diagnosis and treatment it is necessary to undertake a detailed history and physical assessment. Therefore the importance of the history cannot be overestimated. Patients need to feel at ease and able to discuss their health concerns and problems with the practitioner, and therefore a good 'bedside manner' is vital. With this in mind this chapter will discuss communication skills and general hints on preparing a patient for assessment. The medical model of history-taking and assessment, along with the more nursing-orientated SOAPIE model of assessment, will be discussed. Towards the end of this chapter, hints can be found on a systems approach to physical assessment.

COMMUNICATION

Good communication with a patient enables a relationship of trust to develop. Patients need to know that they can trust the practitioner delivering their care. Good communication improves health outcomes. This can lead to the resolution of symptoms, fewer adverse psychological effects and a reduction in pain levels. Poor communication leads to a patient feeling devalued and vulnerable (Longmore et al. 2001). Most complaints in healthcare do not arise as a result of poor clinical care or omission but as a result of poor communication. In other words, the patient did not know what was happening to them. Perhaps a good motto to remember is: 'How would I feel if this was me or a relative of mine?' If you were not satisfied with the answers or explanations that you have just given, why should the patient be? Following some straightforward general rules during any consultation with patients will help improve communication.

- *Always introduce yourself*. Patients like to know who is asking them questions and examining them. Remember to introduce yourself as a nurse, especially if you don't wear uniform. The public still make an assumption that anyone wearing normal clothes and carrying a stethoscope must be a doctor. Medico-legally it is important that they know you are a nurse. Experience will tell you that the patient may still call you 'doctor' despite your efforts to explain differently. Take it as a compliment!

- *Make sure your patient is comfortable*. An uncomfortable patient is not going to answer questions in any detail. Help them into a position that is most comfortable for them.
- *Ensure privacy*. This is often difficult in an acute environment such as a medical assessment unit. Always close the curtains and remember that they are not a barrier to what is being said. Other patients will be able to hear both the questions asked and the answers given. There is no easy solution to this. The demands of an acute environment are such that it is not always possible to move a patient into an area where they are alone with you. Be sensitive to this. If you need to ask extremely personal questions – for example, questioning about sexual activity and sexual partners – it may be pertinent to arrange to move the patient to a more private area, or make a decision as to whether or not you need the answer to that particular question immediately or if it can wait until a later stage. Privacy can be difficult in situations where your patient is extremely deaf, resulting in the need to raise your voice, almost to shouting on occasions. This does not ensure confidentiality or privacy for the patient. Discuss with management the purchase of patient handheld amplifiers which can resolve this problem.
- *Ensure dignity is maintained and be culturally aware*. Always maintain your patient's dignity. During physical examination the patient does not need to be naked and fully exposed. Expose the parts you wish to examine in turn. Remember, what would you want if it was you or your relative? Ask the question, do you need a chaperone? This is not just relevant for men examining women but equally as important to consider when you are a woman examining a man. Considerations should include the age of the patient, the vulnerability of the patient (old, young, learning disabilities, mental health problems) and the patient's wishes. Be culturally aware. It may, for example, be unacceptable for a young woman from certain cultures to be examined by a man. Ask the patient if it is alright for you to examine them. If they wish to be examined by someone of the same sex as themselves you must ensure that this happens.
- *Explain to the patient what is going to happen*. This may sound obvious but it is an important part of putting the patient at ease. Start by explaining that you are going to ask them some questions about what has been happening recently and led up to their admission, and that you will then need to know about their past medical history. Explain that you will then examine them and after this they will have some tests which will help decide on treatment. Let the patient know that you will keep them informed of what is happening throughout this process. Make sure you tell the patient that while all this is happening you will be making notes. Unless it is an emergency situation, always write things down as you go along. Leaving it until the end inevitably results in having to return to the patient to ask a question again as you have forgotten what they said the first time. This is frustrating for all involved and does not inspire confidence.
- *Avoid jargon.* As practitioners we are used to medical terminology but it is a foreign language for most patients. Keep it simple. This may sound like common sense but we have all witnessed the scenario where the consultant sees a patient on the ward

round, leaves the bedside and the patient then asks the nurse what the consultant has just said. Using simple terminology is more likely to result in getting the answers to your questions. If a patient answers a question using medical jargon, clarify what they mean. Patients often use medical terms incorrectly. Be specific and never assume that your patient can read.

- *Listen to your patient.* If you ask the right questions in the right way you will get the answers. The days of the patient doing exactly what they were told by the team looking after them simply because they must know best are long gone. In this day and age we aim for concordance not compliance. *Compliance* implies a medical-led approach to care. The practitioner says 'Take this' and the patient does so. *Concordance* means developing a partnership with patients. The patient has the options explained and has some understanding of treatments and how they work and why they need to take them. The healthcare professional and the patient devise a treatment plan that suits the patient and treats the problem appropriately. If you do not listen to your patient you will not achieve concordance.

HISTORY TAKING

THE SOAPIE MODEL

As a nurse practitioner it is vital that you can take a history in a structured format. Many nurses in expanded roles have adopted the traditional medical model of history taking. The medical model is an established, structured approach that all health care disciplines are used to reading. It may be that you are already using or may decide to follow the medical model, and this is perfectly acceptable. It is important that any decision made is an informed one, hence the inclusion of the SOAPIE model in this section.

As nurses we are used to the assess, plan, implement, evaluate approach to health care. The SOAPIE model maintains this approach while incorporating elements of the medical model (Welsby 2002). SOAPIE stands for:

Subjective data
Objective data
Assessment
Plan
Implementation
Evaluation

- *Subjective data* – obtaining information on the presenting problem. The focus of this enquiry is to ascertain what the patient states the problem is. What are their symptoms?
- *Objective data* – what you the practitioner find as a result of observation, direct questioning and physical examination. The line of direct questioning may follow that of a medical model.

- *Assessment* – your physical assessment. This may follow a medical model structure.
- *Plan* – your proposed plan of care. This will include both the medical and nursing plan of care.
- *Implementation* – what you have done for the patient and what you require others to do.
- *Evaluation* – how effective has the treatment/care been? At this stage it may be necessary to return to the objective data and assessment and revise the plan.

THE MEDICAL MODEL

The medical model is, as already stated, a tried and tested method of assessment and in many ways is very similar to the SOAPIE model as subjective and objective data are collated, the physical assessment follows and a treatment plan is devised (Bates 1995; Longmore et al. 2001). As a nurse practitioner whichever model you decide to utilise it is important that you ensure assessment and plans of care cover both the nursing and medical aspects.

The medical model follows a very logical approach:

Presenting complaint – what has brought the patient to seek help.

- What do they say is wrong with them?
- What are the patient's symptoms?

History of presenting complaint – use direct questioning to find out:

- When the problem started.
- How it has progressed.
- If they have ever had anything like it before.

Whichever model you decide to use, if the patient has pain it may be useful to use the acronym SOCRATES to aid assessment.

Site – if possible get the patient to show you where it hurts.
Onset – when did it start? Was it gradual or sudden?
Character – is the pain sharp, stabbing, a heaviness?
Radiation – does the pain go anywhere else?
Associated features – e.g. shortness of breath, nausea, vomiting, sweating.
Timing – when did it come on? How long have they had it for?
Exacerbating/relieving factors – what makes it worse/better, have they taken anything?
Severity – on a scale of 1–10 (10 being the worst).

Past medical history – do they have any other illnesses?

- List illnesses in a language the patient can understand such as diabetes, heart attack, asthma, emphysema, epilepsy, high blood pressure, angina, jaundice, anaemia, tuberculosis.
- Ask if they have ever been in hospital before.
- Have they had any operations?

Medications and allergies – ask if they take any medications.

- Don't forget to ask about over the counter drugs and complementary therapies.
- Make a list of the medications, dosage and frequency if the patient has the tablets with them or a list from their GP. If this is not available, make it your responsibility to contact the GP when you have finished seeing the patient or ensure it is handed over for someone to obtain this information at the earliest opportunity.
- Ask about allergies. If the patient states they have an allergy to a drug or substance, ask them what happens when they take the drug or come into contact with the substance. Many people state they have an allergy when in fact it was a side effect of the treatment.

Severe allergic reactions can be classified in three stages of severity:

A – an allergy causing an airway problem
B – an allergy causing a breathing problem
C – an allergy causing a circulatory problem

Allergic reactions that cause symptoms such as rash, running nose, diarrhoea and vomiting are classified as mild reactions.

Ascertain whether the patient has ever been tested by a doctor for allergies and whether they carry an EpiPen. If they carry an EpiPen have they ever had to use it?

Social and family history

- Who do they live with?
- Do they have help with shopping, cleaning etc?
- Is a care package in place?
- Have there been any recent trips abroad? If so, where did they go and did they receive any vaccinations?
- At this stage it is important to know if they smoke. If so, how many do they smoke a day and for how many years have they smoked? Work out the pack years (NICE 2004):

$$\text{Total pack years} = \frac{\text{number smoked per day}}{20} \times \text{number of years smoked}$$

- It is important to ascertain what the patient does or did for a living. Certain jobs may increase an individual's risk of certain diseases. For example, a pottery worker or miner may have industrial lung disease.
- If they have been a miner, do they get a pension and if so what percentage? The higher percentage pension they receive the more severe their lung disease as a result of working in the mines. Other industries that may have an occupational health hazard associated with them include: the armed forces, agriculture, stone masons and arc welders.
- Ask if they have ever knowingly been exposed to asbestos.
- When taking a social history, do not forget to ask about alcohol consumption, both past and present.

- Ask about pets at home, particularly bird-keeping which can precipitate lung disease.
- It is important to ascertain if there is a history of drug abuse and in some circumstances obtain a sexual history. However, be sensitive and use your clinical judgement to decide whether or not you believe these questions are pertinent at this particular time.

Once this has been ascertained it is important to recap on anything which you remain unclear about. It is then time to move on to the functional enquiry and the physical assessment.

THE FUNCTIONAL ENQUIRY

The functional enquiry is the time when you ask questions about each of the body systems before you begin the physical examination. Start with some general questions before going on to each system in turn (Bates 1995; Longmore et al. 2001; Welsby 2002).

GENERAL QUESTIONS

- Ask the patient if they are concerned about anything in particular.
- Have they lost weight recently? If the answer is yes it is important to ascertain if this has been intentional. If the answer is no proceed to ask if they have gained weight; if so, how much, over what period of time?
- Ascertain what their appetite is like. If they have lost their appetite, do they not feel hungry, does food cause them to feel sick, be sick, or give them pain?
- Have they noticed any unusual lumps anywhere in their body recently? If so, where are they and when did they first notice them? You can examine them later.
- Have they noticed any night sweats? If yes, when did they start, how regularly do they occur, do they have to change their night clothes and bed sheets?
- Have they noticed any unusual rashes? Have they felt particularly itchy recently?

CARDIORESPIRATORY SYMPTOMS

- If you have not already asked about chest pain, now is the time to do so. Remember SOCRATES.
- Have they experienced any palpitations? If yes, are they regular or irregular? If possible get the patient to tap them out to you.
- Ask about shortness of breath. If they get short of breath, how far can they walk now before getting short of breath? It is quite useful to give them examples such as 'Could you walk from here to the door?' It may be helpful to ask the patient to cast their mind back six months. What was their breathing like six months ago? How far could they walk then? What is their breathing like going up stairs / up hills? Do they need to stop?

- Do they wake up in the night short of breath (paroxysmal nocturnal dyspnoea)? Does it feel as if they can't get air into the lungs? Do they need to get to the window and open it?
- How many pillows do they sleep with? Has this number increased? Do they get short of breath if they lie flat (orthopnoea)?
- Have they noticed any swelling of their legs? Is it both legs or only one leg that swells? Is this something new or an ongoing problem?
- Have they got a cough? Are they expectorating any sputum? If yes, what colour is it? Is it associated with a foul taste or smell? How long have they had it? Have they been given any treatment by their GP?
- Have they noticed a wheeze when breathing? If yes, when did it start? Is it worse at any particular time of day? Is it made worse by exercise?

GASTROINTESTINAL SYMPTOMS

You will have already asked some general questions about weight loss and appetite in general questions. Now is the time to get more detail.

- Ask about abdominal pain. If the patient has abdominal pain you can use the SOCRATES model to assess the pain in detail. When utilising this model remember abdominal pain can be described as colicky, sharp, stabbing and dull. When asking about associated features discuss in particular nausea, vomiting and bowel movements. The same applies to exacerbating and relieving factors.
- Ask about indigestion, nausea and vomiting. If the patient complains of indigestion is this worse before or after eating and does anything help to relieve the discomfort?
- Is there any difficulty in swallowing? Does it feel as if food gets stuck? If so, ask the patient to show you where the food seems to get stuck. Is the problem with liquids and solids or with just one of these?
- Ask if there are any problems with bowel movements. If the patient states they have diarrhoea or constipation, clarify what they mean by this. Many patients will state they have diarrhoea when in fact this is not the case. Remember, diarrhoea is defined as the passage of frequent watery stools. It is also important to ascertain if there has been any altered bowel habit.
- It is important to ascertain what the stool is like. What is the colour and consistency? Does the stool contain any blood? If yes, is it fresh blood, or is the stool black? Ask yourself, is the patient taking any iron preparations? Does the patient complain of tenesmus – a feeling that there is something in the rectum which cannot be passed?

GENITO-URINARY SYMPTOMS

You may already have been given some hint as to whether or not your patient has any GU symptoms from previous questions. Below are some thoughts to guide your questioning further.

- Does the patient have any GU symptoms? Are they suffering from incontinence? If they are incontinent, is this stress or urge incontinence?
- Stress incontinence is due to an incompetent sphincter. Urge incontinence occurs when the urge to pass urine is quickly followed by the uncontrollable complete emptying of the bladder as the detrousor muscle contracts. The main cause of incontinence in men is enlargement of the prostate gland causing urge incontinence.

NEUROLOGICAL SYMPTOMS

As with all the other systems enquiries, you may already have some answers to these questions.

- Ask about the five senses – sight, hearing, taste, smell and touch.
- Has vision deteriorated? If yes, over what period of time? Is there any double vision? Any blurred vision?
- Is hearing affected? Has there been a loss of hearing? If yes, is it in both ears or one? Any tinitus?
- Have taste and smell altered? Again, you want to know when this started and how it has altered. Have they noticed any altered sensation in any part of their body? Any limb weakness, loss of power?
- Ask about headache – if the patient has a headache use SOCRATES to guide your questioning.
- Ask about speech difficulties – dysphasia and dysarthria.
  - ➢ *Dysphasia* – impairment of language caused by damage to the brain. The patient will have difficulty in producing fluent speech, words may be malformed. The patient does not have any difficulty comprehending what is being said to them, but reading and writing are impaired and this frequently leads to frustration. Dysphasia manifests itself in varying degrees of severity from those with very mild symptoms to those that are very severe.
  - ➢ *Dysarthria* – this is difficulty with articulation and is due to a lack of co-ordination or weakness of the muscle used in speech. Language is perfectly normal. This may manifest itself as slurring of speech, slow or indistinct speech.
- Ask about seizures – frequency, diurnal variation, anything that provokes a seizure? A witness account of seizure activity is always helpful.

MUSCULOSKELETAL SYMPTOMS

- Are joints painful? You can use SOCRATES.
- Is there any stiffness or swelling of joints?
- Is there any diurnal variation in symptoms?
- How does all this affect activities of daily living?

THE PHYSICAL ASSESSMENT

It is important to continue to utilise a structured approach to the physical assessment. Once you have found a system that works for you, stick to it. This ensures that you will not miss anything (Longmore et al. 2001).

This is an ideal opportunity to clarify anything that you are still not clear about following the functional enquiry. You can continue to talk to the patient about their symptoms while you are examining them.

Physical assessment utilises four basic techniques:

1. inspection
2. palpation
3. percussion
4. auscultation

- Always assess in this order except when examining the abdomen.
- Use each technique to compare symmetrical sides of the body and organs.
- Assess both structure and function.

1. INSPECTION

This is the observation of various body parts using the senses of sight, hearing and smell to detect normal functioning or any deviations from normal.

Technique

- Exposure of appropriate body part.
- Always look before you touch.
- Use good lighting.
- Ensure warm environment.
- Observe for colour, size, location, texture, symmetry, odours and sounds.

2. PALPATION

This is the touching and feeling of various body parts with the hands to determine certain characteristics:

- texture
- temperature
- moisture
- movement
- consistency of structures

Technique

- Short fingernails are important.
- Use appropriate part of hand to detect different sensations:

  - ➢ fingertips – fine discriminations / pulsations.
  - ➢ palmar surface – vibratory sensations.
  - ➢ dorsal surface – temperature.
- Palpate lightly first then deeply.
- Any tender areas should be left until last.
- There are three types of palpation:
  - ➢ light palpation.
  - ➢ deep palpation.
  - ➢ bimanual palpation.

3. PERCUSSION

This is to tap a portion of the body to detect any tenderness or sounds which will vary with the density of underlying structures.

Technique

Direct:

- Tap an area with 1–2 fingertips.

Indirect:

- Place middle finger of non-dominant hand on body.
- Keep other fingers out of the way.
- Tap middle finger with middle finger of dominant hand quickly.
- Listen to sound.

4. AUSCULTATION

The use of a stethoscope to detect various breath, heart and bowel sounds.

Technique

Use a good stethoscope with:

- snug-fitting ear pieces
- tubing no longer than 15 ins (38 cm) with an internal diameter not greater than $^{1}/_{8}$ in (0.3 cm)
- bell and diaphragm

Diaphragm and bell are used for detecting different sounds:

- diaphragm – for high-pitched sounds, i.e. breath sounds, normal heart and bowel sounds
- bell – for low-pitched sounds, i.e. abnormal heart sounds and bruits

Percussion note	Origin	Sound	Example
Tympany	Enclosed air	Drum like	Gas in bowel Puffed out cheek
Resonance	Part air/part solid	Hollow	Normal lung
Hyper-resonance	Increased air in solid tissue	Booming	Lung with emphysema
Dullness	More solid tissue	Thud sound	Internal organs (not lung)
Flatness	Very dense tissue	Flat	Bone, muscle

Figure 1.1. Percussion note table.

GENERAL INSPECTION

DEMEANOUR

- Observe gait.
- Facial expressions.
- Facial responses to your questions.

PHYSIQUE

- Assess build.
- Is their physique balanced.
- Does physique of upper body match that of the lower body.

GENERAL CONDITION

- Note nutritional state.
- Height, weight and BMI (if possible).
- Hydration – skin turgor, orbital pressure (not in glaucoma) and mucous membranes.
- Speech.
- Abnormal sounds – hoarseness of voice.
- Borborygmi (growling bowel sounds).
- Abnormal odours.

GENERAL SIGNS

- Inspect for signs of peripheral and central cyanosis.
- Look for signs of clubbing – an exaggerated longitudinal curvature and loss of the angle between the nail and nail fold. The nail feels ‘boggy’.
- Check capillary refill time. A normal capillary refill time is <2 seconds.
- Inspect for signs of peripheral oedema.
- Check radial pulses bilaterally.

- Record blood pressure.
- Record oxygen saturations.
- Record peak expiratory flow.

RESPIRATORY EXAMINATION

INSPECTION

- Observe the rate, rhythm, depth and effort of breathing.
- Listen for abnormal sounds with breathing such as wheezes.
- Observe for use of accessory muscles.
- Look for signs of asymmetry and deformity.
- Is the trachea central?
- Is there any evidence of tracheal decent?

PALPATION

- Identify any areas of tenderness or deformity by palpating the ribs and sternum.
- Assess expansion and symmetry of the chest by placing your hands on the patient's back, thumbs together at the midline, and asking them to breathe deeply.
- Check for tactile fremitus.
- Palpate for cervical lymphadenopathy.

PERCUSSION

Posterior Chest

- Percuss from side to side and top to bottom.
- Compare one side to the other looking for asymmetry.
- Note the location and quality of the percussion sounds you hear.
- Find the level of the diaphragmatic dullness on both sides.

Diaphragmatic Excursion

- Find the level of the diaphragmatic dullness on both sides.
- Ask the patient to inspire deeply.
- The level of dullness (diaphragmatic excursion) should go down by 3–5 cm symmetrically.

Anterior Chest

- Percuss from side to side and top to bottom. Compare one side to the other, looking for asymmetry.
- Note the location and quality of the percussion sounds you hear.

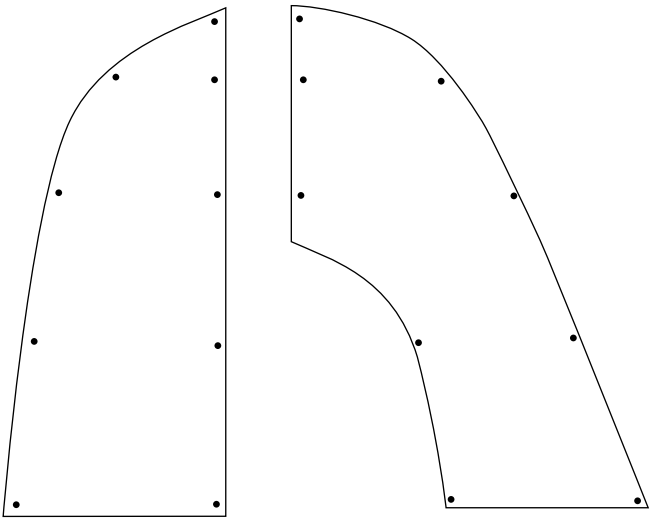

Figure 1.2. Posterior chest examination.

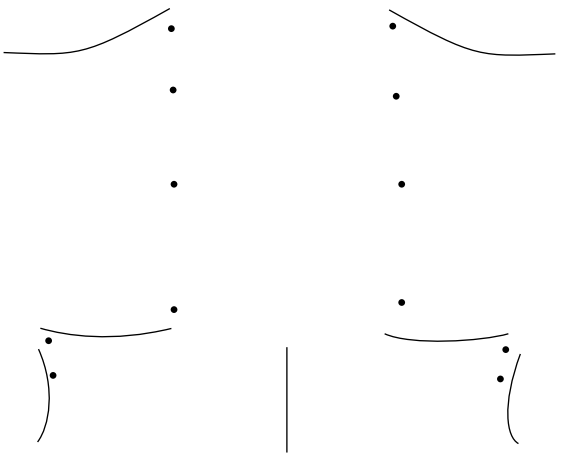

Figure 1.3. Anterior chest examination.

Percussion notes and their meaning	
Flat or dull	Pleural effusion or lobar pneumonia
Normal	Healthy lung or bronchitis
Hyperresonant	Emphysema or pneumothorax

Figure 1.4. Percussion note interpretation table.