**Ulcers and exudates**
- For suspected bacterial (and fungal) infections, a smear of the pus or exudate should be stained with Gram stain.

**Meningitis**
- A Gram-stained CSF deposit may be useful in cases of suspected meningitis.
- The India ink stain is used for cryptococcal meningitis.

**References**
1. World Health Organization (1995) *Production of Basic Diagnostic Laboratory Reagents*. Can be obtained from WHO Regional Office, PO Box 1517, Alexandria.

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**1.9 Records, history taking and examination**

**Records**
- Records can be held by patients or parents, or by the hospital, or both.
- If they are patient or parent held, they can be developed into health booklets containing advice on how to manage illnesses (possibly in the form of pictures for illiterate parents). Immunisation information, if included, should comply with national immunisation programmes.
- Hospital records need to be kept confidentially in a logical system for audit purposes, with easy access to previous notes.
- Discharge information and advice should be entered in the patient- or parent-held booklet.
- If possible, diagnoses should be coded and entered according to the International Classification of Diseases (ICD) or in accordance with local policy and coding.

**History taking**
- The medical history should, when age appropriate, include the child’s own input. The source of the information may be the mother, the father or the child himself or herself, and the source should be documented.
- It is important to listen, especially to the mother’s worries about her child, taking into account her general frame of mind, her experience with previous children and her ability to communicate.
- Time can be a restricting factor due to the workload, but it is important to ask about the following:
  - pregnancy and previous deliveries (including stillbirths)
  - infant or young child feeding history
  - the immunisation record (best kept by the parents)
  - previous admissions or visits to hospital
  - existing medical problems
  - social circumstances at home, and the family history
  - the family’s cultural beliefs and their religion and/or tribe
  - medication taken by the patient, and any allergies
  - the patient’s presenting complaints and current treatment, if any.
- Most patients and their families are anxious. They need reassurance, kindness and understanding.

**Examination**
- The following basic equipment is required:
  - stethoscope
  - otoscope (if available)
  - ophthalmoscope (if available)
  - tendon hammer
  - bright torch light (or mobile phone light)
  - thermometer
  - Pinard’s stethoscope or Sonicaid (a hand-held Doppler)
  - microscope (if available).

**Conducting the examination**
- A triage nurse (see Section 1.10) can be helpful for making a preliminary assessment of patients. They can assess each patient and use the recorded body temperature, weight, general condition and pain score of the patient to decide how urgently he or she should be seen by the doctor.
- Do not rush the examination. A thorough examination is often needed, and taking time can help to gain the confidence of the patient and their family.
- If the patient is critically ill, quick action is required and questions can be asked later.
- Try to be gentle and avoid palpating a painful body part before everything else has been done. You want to avoid having a crying patient whom you cannot examine or auscultate.
- Small children and infants are best examined on the parent’s lap; older ones can be asked to lie down.
- In general, the examination of a child will follow the same systematic approach as in adults. However, you may need to be more opportunistic.

**Essential emergency examination checklist**
Always check the following in the order shown:
- Airway
- Breathing
- Circulation
- Disability
- Exposure.
In the case of a critically ill patient, proceed to basic and/or advanced life support using the structured approach (see Section 1.11).

**Patients who are not in need of immediate resuscitation**
- Introduce yourself to the patient and parent, if present.
- Interact with any child throughout the examination.
- General inspection: document dysmorphism, skin rash or bruises, nutritional status, weight and height for age, jaundice, pallor, clubbing, (for child) relationship with parent, and state of consciousness.
- Respiratory system: remember to feel all of the pulses, particularly the femoral pulses. Measure the blood pressure (the cuff must cover two-thirds of the upper arm circumference), examine the jugular venous pressure, palpate the cardiac impulses (i.e. for left and right ventricles), and auscultate the apex, left sternal edge, pulmonary and aortic areas and carotids and over the back.
- Cardiovacular system: remember to feel all of the pulses, particularly the femoral pulses. Measure the blood pressure (the cuff must cover two-thirds of the upper arm circumference), examine the jugular venous pressure, palpate the cardiac impulses (i.e. for left and right ventricles), and auscultate the apex, left sternal edge, pulmonary and aortic areas and carotids and over the back.
- Abdominal system: if the patient is pregnant, assess the size of the uterus, the presentation of the fetus and listen for the fetal heart. In an infant check the genitals for cryptoorchidism, hernias and gender. Rectal examinations are occasionally necessary but need to be explained to the patient, parent and child (where appropriate). Inspect the mouth and teeth.
- Neurological system: use the AVPU or Glasgow Coma Scale score (see Section 1.11). Observe infants for their degree of responsiveness and rapport appropriate for age, social and motor skills, and look for neurocutaneous stigmata. Test for age-appropriate reflexes and saving reactions when assessing developmental delay. Leave sensation testing until last. Ideally, fundoscopy needs mydriatics, a dark room and (occasionally) sedation.
- Motor system: Always examine infants for dislocated/dislocatable hips. Check the gait.
- Urine: Test for protein, glucose and blood, and ideally for infection using a microscope or appropriate stick tests.

Patients and parents have the right to be told any abnormal findings, and the actual process of the examination should be explained to the patient in age-appropriate language.

The history and examination findings, including the patient’s weight and height, should be recorded, with daily entries on management and progress. (Be aware of the local guidelines on nutritional assessments, especially in settings where malnutrition is common.) When the patient is discharged they should be given discharge information about the admission and any further treatment and advice that needs to be shared with their primary care healthcare workers.

See Section 9 (Appendix) for examples of various charts, including those for vital signs, fluid balance, growth and body mass index (BMI).

**1.10 Triage: seeing the sickest first**

Triage involves determining the priority of a patient’s treatment based on the severity of their condition, not on when they arrived or their place in a queue.

**Introduction**

The word ‘triage’ comes from the French word ‘trier’ (meaning “to sort”). It is the process by which patients presenting to a health facility with an illness or injury are assigned a clinical priority. It is an essential step in clinical risk management, as it means that, if done correctly, those patients who are most in need of care receive it first. Triage should have a robust mechanism to ensure that patients at imminent risk of death or who are seriously ill or injured, requiring immediate resuscitation or emergency management, are provided with treatment before patients with conditions that are less critical, who can wait for further assessment and treatment.

Triage divides patients into the following three categories:

1. those who are at imminent risk of death, and require immediate resuscitation
2. those who are seriously ill or injured, and who need timely emergency management
3. those who have conditions which can wait before further assessment and possible treatment.

Of course, it is not always immediately apparent which category a patient is in, so most methodologies are based on a rapid physiological assessment of vital functions (airway and breathing, circulatory status and conscious level).

The models of decision making, of which there are many, require three steps:

1. rapid initial assessment
2. determination of the appropriate categories
3. selection of the most appropriate category.

**Triage scheme for children and pregnant women**

**Rapid initial assessment**

When a woman or girl who is or might be pregnant presents to a health facility she is of immediate concern and should be given priority through triage without disadvantaging seriously affected men or older women. Infants and children can also become dangerously ill quickly, and therefore need urgent triage.

This process requires the ability to recognise, first, those patients who need resuscitation (immediate management, group 1, ‘red’), and, second, those who need urgent treatment (group 2, ‘orange’) (see Table 1.10.1). This process must take only a few seconds, as any delay can be fatal.