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 rashes 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 ventriciles), and auscultate the apex, left sternal edge, pulmonary and aortic areas and carotids and over the back.
- Cardiovascular 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 ventriciles), 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 cryptorchidism, 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).

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### 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 ‘tirer’ (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.
TABLE 1.10.1 A possible triage scale (adapted from the Advanced Life Support Group)

<table>
<thead>
<tr>
<th>Triage number</th>
<th>Type of action</th>
<th>Colour</th>
<th>Maximum target time to action (minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 1</td>
<td>Immediate</td>
<td>Red</td>
<td>0</td>
</tr>
<tr>
<td>Category 2</td>
<td>Urgent</td>
<td>Orange</td>
<td>15</td>
</tr>
<tr>
<td>Category 3</td>
<td>Non-urgent</td>
<td>Green</td>
<td>60 (1 hour)</td>
</tr>
</tbody>
</table>

From the moment of arrival at the health facility (some information may be given before arrival, by contact between the ambulance crew and the facility), a decision on those who need resuscitation must be made. The decision making is based on the clinical signs listed in the second column of Tables 1.10.2 and 1.10.3.

Once a triage category has been identified, the patient should have observations of respiration rate and characteristics (e.g. wheeze, stridor, recession), pulse rate, blood pressure, temperature and a rapid measure of conscious level, such as AVPU score (Alert, responds to Voice, responds to Pain, Unconscious; see Sections 1.11 and 1.12), measured and recorded.

Table 1.10.2 (for pregnant women) and Table 1.10.3 (for infants and children) show those features which, on rapid examination, determine that immediate resuscitation is required.

TABLE 1.10.2 Clinical signs on simple observation or from the history which indicate the need for immediate resuscitation in pregnant mothers

<table>
<thead>
<tr>
<th>Underlying mechanism</th>
<th>What does the healthcare worker undertaking triage see in the patient or hear from the relatives?</th>
</tr>
</thead>
</table>
| A problem that is obstructing, or might obstruct, the upper airway | The patient is unconscious  
The patient is fitting or has been fitting  
There is major trauma to the face or head, including burns  
There is severe stridor or gurgling in the throat |
| Any problem producing apnoea, severe respiratory distress or cyanosis | The patient is not breathing  
The patient is gasping  
The patient is cyanosed  
The patient is having so much difficulty breathing that they cannot speak |
| Any problem producing cardiac arrest, shock or heart failure | The patient has heavy vaginal bleeding  
The patient has suffered major trauma  
The patient appears shocked (very pale/white, cannot sit up, has a reduced conscious level) |

TABLE 1.10.3 Clinical signs on simple observation or from the history which indicate the need for immediate resuscitation in infancy and childhood

<table>
<thead>
<tr>
<th>Underlying mechanism</th>
<th>What does the healthcare worker undertaking triage see in the patient or hear from the parents?</th>
</tr>
</thead>
</table>
| A problem that is obstructing, or might obstruct, the upper airway | The patient is unconscious  
The patient is fitting or has been fitting  
There is major trauma to the face or head, including burns  
There is severe stridor or gurgling in the throat  
The child has inhaled a foreign body which is still in the throat |
| Any problem producing apnoea, severe respiratory distress or cyanosis | The patient is not breathing  
The patient is gasping  
The patient is cyanosed  
The patient is having so much difficulty breathing that they cannot speak or vocalise (cry) |
| Any problem producing cardiac arrest, shock or heart failure | The patient has suffered major trauma  
The patient appears shocked (very pale/white, cannot sit up, weak, very rapid or absent pulse, and has a reduced conscious level) |

Tables 1.10.4 and 1.10.5 list those features which indicate the need for urgent management (orange) within 15 minutes.
### TABLE 1.10.4 Clinical signs on simple observation or from the history in a pregnant mother which indicate the need for urgent management but not resuscitation

<table>
<thead>
<tr>
<th>Underlying mechanism</th>
<th>What does the healthcare worker undertaking triage see or hear from the patient or the relatives?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A problem that might obstruct the upper airway in the future</td>
<td>There is trauma to the face or head, or burns to this area, but the patient is conscious and able to speak. Ingestion or accidental overdose of drugs which may alter the conscious level?</td>
</tr>
<tr>
<td>A problem producing respiratory distress</td>
<td>The patient has difficulty breathing but can speak, and there is no cyanosis</td>
</tr>
<tr>
<td>Any problem that might, unless rapidly treated, lead to shock or heart failure</td>
<td>The patient has vaginal bleeding which is heavy*, but is not yet shocked (they are able to stand or sit up and speak normally). The patient has suffered major trauma and is not yet shocked, but may have internal bleeding (they are able to stand or sit up and speak normally). Any burns covering more than 10% of the body. The patient has fainted and has abdominal pain (this includes possible ruptured ectopic pregnancy) but they are now able to stand or sit up and speak normally. The patient has passed products of conception and is still bleeding, but is not shocked (they are able to stand or sit up and speak normally). The patient has severe abdominal pain, but is not shocked (they are able to stand or sit up and speak normally). The patient is extremely pale, but is not shocked (severe anaemia) (they are able to stand or sit up and speak normally).</td>
</tr>
<tr>
<td>Possible severe pre-eclampsia and impending eclampsia</td>
<td>The patient is complaining of a headache and/or visual disturbance</td>
</tr>
<tr>
<td>Severe dehydration</td>
<td>The patient is complaining of severe diarrhoea/vomiting and is feeling very weak, but is not shocked (they are able to stand or sit up and speak normally).</td>
</tr>
<tr>
<td>Possible complication of pregnancy</td>
<td>The patient has abdominal pain not due to uterine contractions of normal labour</td>
</tr>
<tr>
<td>Possible premature labour</td>
<td>The patient is not yet due to deliver, but has had ruptured membranes (with or without contractions).</td>
</tr>
<tr>
<td>Infection that might become dangerous</td>
<td>The patient has a high fever &gt; 38°C (they are hot to touch or shivering, but are able to stand or sit up and speak normally).</td>
</tr>
<tr>
<td>Possible intrauterine death</td>
<td>After 24 weeks of pregnancy the patient has not felt fetal movements for 24 hours or more.</td>
</tr>
<tr>
<td>Prolapsed cord</td>
<td>The patient says that her membranes have ruptured and she can feel the umbilical cord</td>
</tr>
</tbody>
</table>

*Heavy bleeding is defined as a clean pad or cloth becoming soaked within less than 5 minutes.

Note that a low blood pressure in a pregnant woman or a child is a late and ominous sign.

### Helping to ensure that triage works well
The following actions will help to prevent life-threatening delays:

1. Train all staff (including clerks, guards, door keepers and switchboard operators) to recognise those who need resuscitation.
2. Practise triage and the structured approach to emergencies with all staff in the facility.
3. Ensure that access to care is never blocked. Emergency equipment must always be available (not locked away) and in working order. This requires daily checks and the keeping of logbooks. Essential emergency drugs must be constantly available.
4. Give proper training of appropriate staff in the use of the equipment and drugs required.
5. A special trolley containing equipment and drugs for emergencies must be available at all times.
6. Protocols on the structured approach to emergencies (see below) must be available. Pathways of emergency care should be prominently displayed on the walls in areas where emergencies are managed.
7. Implement systems by which patients with emergencies can be exempted from payment, at least temporarily. These include local insurance schemes and health committee emergency funds. This exemption must be made known to all gatekeepers and security staff.

### Special priority signs

**Haemorrhage**
Haemorrhage is a feature of many presentations, particularly in pregnancy and following trauma.

*Category 1 patients (red) are those who are exsanguinating. Death will occur quickly if the bleeding is not arrested.*

A haemorrhage that is not rapidly controlled by the application of sustained direct pressure, and which continues to bleed heavily or soak through large dressings quickly, should also be treated immediately (Category 1, red).
**Conscious level**
Category 1 or immediate priority (red) includes all unconscious patients (U or P on the AVPU scale).
In patients with a history of unconsciousness or fitting, further dangerous events are possible. Those who respond to voice are categorised as Category 2 urgent (orange).

**Pain**
Patients with severe pain should be allocated to Category 1 immediate (red), and those with any lesser degree of pain should be allocated to Category 2 urgent (orange).
For patients who have sustained significant trauma or other surgical problems, anaesthetic and surgical help is required urgently.
If there is an urgent referral from another healthcare facility or organisation, the patient must be seen immediately or urgently, depending on the circumstances.

**Importance of regular reassessment**
Triage categories may change as the patient deteriorates or gets better. It is important, therefore, that the process of triage (clinical prioritisation) is dynamic rather than static.
To achieve this, all clinicians involved in the pathway of care should rapidly assess priority whenever they encounter the patient. Changes in priority must be noted, and the appropriate actions taken.
All patients with symptoms or signs in the immediate (red) or urgent (orange) categories represent emergencies or potential emergencies, and need to undergo the structured approach to emergencies as outlined in Section 1.11.

**Non-urgent cases**
Proceed with assessment and further treatment according to the patient’s needs once the immediate and urgent patients have been stabilised.

---

**TABLE 1.10.5 Clinical signs on simple observation or from the history in an infant or child which indicate the need for urgent management but not resuscitation**

<table>
<thead>
<tr>
<th>Underlying mechanism</th>
<th>What does the healthcare worker undertaking triage see or hear from the patient or relatives?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A problem that might obstruct the upper airway in the future</td>
<td>There is trauma to the face or head, or burns to this area, but the patient is conscious and able to speak/cry</td>
</tr>
<tr>
<td>A problem producing respiratory distress</td>
<td>An overdose of a respiratory depressant substance has or may have been taken</td>
</tr>
<tr>
<td>A problem that might, unless rapidly treated, lead to shock or heart failure</td>
<td>The patient has difficulty in breathing but can speak/cry and there is no cyanosis</td>
</tr>
<tr>
<td>C: CIRCULATION</td>
<td>The patient has suffered major trauma and is not yet shocked, but may have internal bleeding (they are able to stand or sit up and speak/cry normally)</td>
</tr>
<tr>
<td></td>
<td>Any burns covering more than 10% of the body</td>
</tr>
<tr>
<td></td>
<td>The patient has fainted and has abdominal pain (a post-pubertal girl might have a ruptured ectopic pregnancy) but they are able to stand or sit up and speak/cry normally</td>
</tr>
<tr>
<td></td>
<td>The patient has severe abdominal pain but is not shocked (they are able to stand or sit up and speak/cry normally)</td>
</tr>
<tr>
<td></td>
<td>The patient is extremely pale but not shocked (severe anaemia) (they are able to stand or sit up and speak/cry normally)</td>
</tr>
<tr>
<td>Severe dehydration</td>
<td>The patient has severe diarrhoea/vomiting and is feeling very weak, but is not shocked (they are able to stand or sit up and speak/cry normally); the eyes may be sunken and a prolonged skin retraction time will be present</td>
</tr>
<tr>
<td>Infection that might become dangerous</td>
<td>The patient has a high fever &gt; 38°C (they are hot to touch or shivering, but are able to stand or sit up and speak/cry normally)</td>
</tr>
<tr>
<td>The child shows evidence of severe malnutrition</td>
<td>Any child with visible severe wasting (especially of the buttocks), and swelling (oedema) of both feet, who is unwell or considered unwell by their parents, but is able to stand or sit up</td>
</tr>
<tr>
<td>Any neonate or young infant (less than 2 months old) who is unwell</td>
<td>This indicates a possibility of dangerous sepsis</td>
</tr>
</tbody>
</table>