



MINISTRY OF HEALTH



NATIONAL DRUG AUTHORITY



Pharmaceutical
Society of Uganda



Management Sciences for Health

Accredited Drug Shops Training

Uganda

Module 3: Patient Management

Module Outline

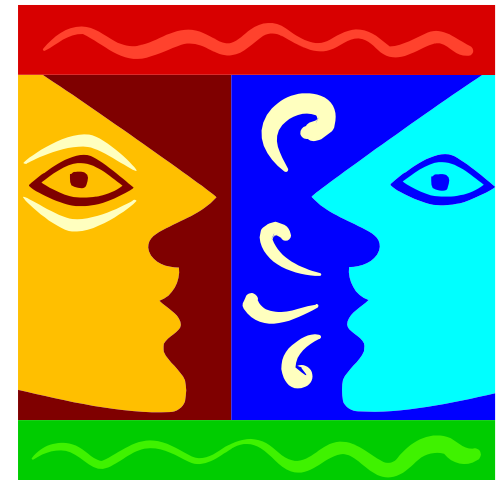


- Communicating with patients about their health
- Pharmaceutical dosage forms
- First aid for emergency conditions
- Knowing when to refer patients

Overall Aim



To empower dispensers with the knowledge and skills required for managing the patient-care process with regard to medicines



Objectives



- Discuss the different health seeking behaviours
- Understand principles of patient assessment
- Define health, disease and some pharmacological terminologies used in patient management
- Identify the different dosage forms and routes of administration
- Recognize common drug reactions
- Identify patients for immediate referral or otherwise
- Understand the ethical issues surrounding patient management
- Discuss the necessity and extent of treatment education

Common Definitions



Dose: the amount of medicine administered (swallowed, injected, applied on the skin, etc.) to the patient at a time

Dosage: the total amount of medicine given to the patient over a period of time to treat a particular condition

Minimum dose: The smallest amount of a given medicine that can give the desired effect

Maximum dose: The largest amount of a given medicine that can be used without causing toxic side effects

More Definitions



Therapeutic dose: A dose between the minimum and the maximum doses which produces the desired effect without toxic effects

Toxic dose: An amount of a given medicine that causes serious unwanted effects

Formulation: Refers to how the medicine is presented by the manufacturer for use (e.g., tablet, capsule, ointment, syrup)

Side effects: These are the effects of a medicine other than those the medicine is intended for in that patient

Common Side Effects of Medicines



- Allergic reactions to medicine
- Anaphylaxis (acute hypersensitivity)
- Abdominal discomfort (nausea, vomiting, diarrhoea)
- Mental effects (drowsiness, confusion, convulsions)
- Other common side effects
 - Headache
 - Photosensitivity

Administration of Medicines



- Medicines must be administered to the **site** that will produce the desired effects.
- Medicines must be administered to the patient through the appropriate **route**, from where it will be absorbed, distributed, metabolized and eliminated from the body.
 - Some medicines are available in more than one route (e.g., injection or tablet).
 - Some patients (mistakenly) believe that injectable medicines are more powerful than tablets; ADS should advise patients this is incorrect.
 - In general, ADS should not stock injectable formulations.

Activity



- List factors that an ADS should consider before administering medicines.

- Give the ages in months/years for the following categories of patients:
 - Neonate
 - Infant
 - Child
 - Adults
 - Elderly person

Factors to Consider for Dosing and Administering Medicines



- Age
- Weight
- Time of administration
- Formulation of the medicine (e.g., tablet, capsule)
- Route of administration (e.g., orally, through the skin)
- Special conditions of administration (e.g., presence or absence of food in the stomach)
- Other factors
 - Genetics of patient (e.g., family history of allergy)
 - Biological factors (e.g., sex)

Routes of Administration



- Oral
 - Topical
 - Parenteral/Injectable
 - Rectal
 - Inhalation
-
- Can you name an example in each category?





- Medicines that are taken through the mouth.
 - The safest and most convenient method
 - Includes tablets, capsules, syrups, etc
- Advantages:
 - Convenience
 - Acceptability
 - Direct route (e.g., if the GI tract is being treated, the drug is placed at the site of action)
 - Can be very quick (e.g., sublingual, buccal)
 - Uncomplicated (does not need much technical supervision)





- Disadvantages:
 - Not suitable for patients who are vomiting or unconscious
 - Potential for gastric irritation
 - Erratic absorption (depends on the status of the GI tract, e.g., with or without food, age)
 - Some medicines can be destroyed in the GI tract before they are fully absorbed in the body
 - Not all drugs can be taking by mouth



Parenteral/Injectable



- Medicines administered by injection.
- The medicine can be injected into a variety of sites:
 - SC (under the skin)
 - IM (into the muscle)
 - IV (into the vein)
 - Others
- Advantages:
 - Gives rapid absorption which yields rapid effects
 - Useful in emergencies; when patient is vomiting or unconscious
 - Preferred when the condition is severe and there is a need to get a fast therapeutic effect to save life

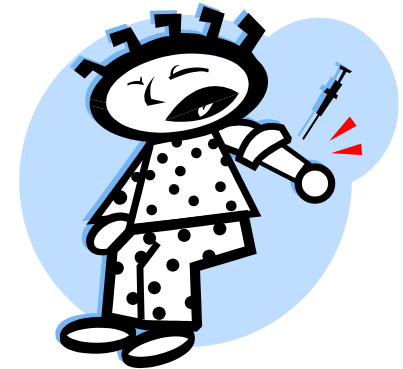


Parenteral/Injectable (2)



Disadvantages:

- Route needs technical expert to administer
 - Some injections can only be given into the muscle, others must only be given into the vein
- It is painful
 - “Sticking” hurts
 - Some medicines burn when administered
- Not acceptable by children and some adults
- Risk of infection/abcess at the injection site
- More costly to patients
- If not properly done, injection may cause serious damage to tissues or even paralysis
 - ADS are not protected by the public health system





- Medicines are inserted into the rectum to either get systemic or local effect.
- Suppository or special solutions
- Advantages:
 - Useful for drugs that are irritant to the stomach (e.g., diclofenac, indomethacin)
 - Suitable in vomiting, motion sickness (travel sickness)
 - For patient with difficulty swallowing, in unconscious status or convulsing (e.g., use of rectal diazepam in a convulsing patient)
 - Useful for non-cooperative patient (e.g., the mentally sick, children)



- Disadvantages:
 - It may be embarrassing to the patient
 - Rectal inflammation may occur, if the patient uses the route routinely
 - Absorption can be unreliable, especially if rectum is full
 - Incorrect insertion may lead to poor absorption

Topical



- Medicines are applied directly to the skin, eyes or ear to get either local or systemic effect.
 - Ointments, creams, lotions
 - Eye drops
 - Ear drops
- Medicines which are meant for topical treatment should not be applied on open wounds, because it may be absorbed internally and cause serious problems.
- Steroid creams/ointments may be absorbed through the skin (especially in children); caution is advised.



Topical (2)



- Advantages:
 - Provision of high local concentration
 - Easy to apply (self treatment)

- Disadvantages:
 - Skin irritation, eye irritation, ear irritation
 - Medicines for topical use only may be absorbed internally (undesired) and lead to side effects or interactions
 - Uncertainty of absorption of medicines meant to produce systemic effect

Inhalation



- Medicines meant to be inhaled or breathed into the respiratory system.
- This route is very fast and effective for lung symptoms.
- It is mostly used to control asthmatic attacks or other serious problems that need immediate effect.
- Drugs mostly administered through this method are bronchodilators, such as salbutamol.
- There are no inhaled medicines on the ADS expanded list.



Background to Patient Management

What is health?



- The World Health Organization (WHO) defines **health** as a state of complete physical, mental, and social well-being; not merely the absence of infirmity or disease.
- **Disease** is any bodily abnormality or failure to function properly except that resulting directly from physical injury.



Patient Assessment



- The process by which the health worker **obtains** information related to the patient and **evaluates** the information for the purpose of deciding how to manage the patient's problem

- Patient information may be attained from:
 - Patients themselves
 - Family members
 - Caregivers



Patient Assessment (2)



- Information needed during patient assessment:
 - Complaints/symptoms from the patient in his or her own words
 - Recent history that pertains to those symptoms
 - Past medical history
 - Medication history, including compliance and adverse effects
 - Allergies
 - Social and family history, etc.

- Factors that can influence patient assessment include:
 - Health beliefs and practices
 - Family relationships
 - Communication

Health Beliefs and Practices



- Patients usually come for health care with predetermined beliefs and preferences.
- These are influenced by their culture; a pattern of shared meanings, beliefs, and behaviours that are learned and acquired by a group of people during the course of history.
- Culture reflects human behaviour including values, attitudes, and ways of relating to and communicating with each other.
- Culture encompasses an individual's concepts of self, universe, time and space as well as health, disease, and illness.
- ADS must keep in mind that patients will have various views of health, illness, disease, and cure that are shaped by their particular cultural and beliefs, especially what the patient believes causes disease and illness.

Family Relationships



- A family remains the basic social unit for most people.
- Because the family is an integral part of most people's lives, it affects how they view and, ultimately, how they utilize health care services.
- While attending to patients...
 - Try to understand how the family can help him/her to make recovery quick.
 - For example, in some cases, patients may require bed rest or special diet which the family must provide.



Communication



- Be aware of the way people in a particular locality **express** their feelings, both verbally and in body language .
- This will make both the health worker and the patient **understand** each other better.



Step 1: Patient Assessment



- Receive the patient courteously and respectfully.
- This creates foundation for an honest and open interaction between ADS and patient.



Step 2: Patient Assessment



- Take history about the patient's condition.
- Ask (in order) about:
 1. The patient's main complaint/illness
 2. How long it has been there
 3. Any treatment received for this condition; if medicines have been given, ask how they were taken/swallowed
 4. Ask about any history of drug allergy
 5. Depending on the condition, establish the family and social history
 6. Other useful information related to specific conditions; use of mosquito nets for malaria patients, general sanitation and hygiene for diarrheal diseases, etc.

Step 3: Patient Assessment



- Evaluate the acquired information and decide what to do for the patient:
 - Treat the patient
 - Give initial treatment and refer
 - Refer the patient right away



Step 4: Patient Assessment



- Explain to the patient about their condition and the action taken.
- If you are treating the patient, educate the patient about the treatment given.



Skills Needed for Patient Assessment



- Active listening
- Empathy
- Nonjudgmental attitude
- Kindness
- Language of communication

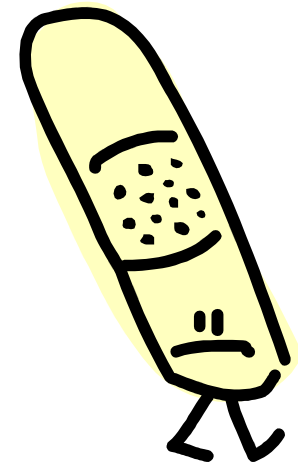


First Aid

Objectives



- Understand the basic principles of first aid
- Identify minor injuries and common poisoning
- Provide first aid to minor injuries and common poisoning



Activity



1. What do you understand by first aid?
2. Why may an ADS need first aid skills?
3. List emergency situations in your community that may require first aid.
4. What do you do when faced with such emergencies?

Definitions



First aid: The emergency help given to an injured or a suddenly ill person using readily available materials.

First aider: Anyone who takes charge of an emergency situation and gives first aid. A first aider also:

- Comforts and/or reassures the casualty, family and friends
- Ensures that the emergency scene is cleaned up, and unsafe conditions that may have caused the injury are corrected

Emergency situation: A serious health situation or occurrence that happens unexpectedly and demands immediate medical action.

More Definitions



Casualty: The person who is injured or ill.

Good Samaritan: A good Samaritan is a person who helps a person in need when they have no legal duty to do so.



Why first aid?



- To preserve life
- To prevent the illness or injury from becoming worse
- To promote recovery



First Aid and the Law



There are two legal situations under which one can give first aid:

1. Giving first aid as part of your job (e.g., health workers, a person trained as a first aider, police, fire brigade, Red Cross workers)
 - You have a legal duty to respond to an emergency situation at your work place
 - You have a duty to use reasonable skill and care based on your level of training
 - If you are a designated first aider at work, make sure your certification is always up to date
2. Giving first aid as a passerby who sees an emergency situation and wishes to help an injured or ill person.
 - You should use reasonable skill and care based on your level of training

Safety and First Aid



- *Giving first aid **safely** is the number one rule.*
- The first aider must ensure that his/her actions don't put him/her or anyone else in danger.
- The first aider takes time to look for any danger and assess the risks of any actions he takes.
- Minimize the risk of cross-infection:
 - The first aider and casualty are always in close contact, thus infection can pass from one person to the other.
 - The first aider should be cautious of diseases caused by viruses and bacteria that can be spread through the blood or in the air through coughing or sneezing (Tuberculosis, HIV/AIDS, Hepatitis B, etc.)

Universal Precautions



Always use universal precautions to minimise the risk of transmission of infection.

Universal precautions include:

- **Gloves:** use gloves to prevent direct hand contact between the first aider and the casualty, especially if there is blood, body fluids, open wounds or sores.
- **Face masks/shields:** use face mask/shield when doing Cardio Pulmonary Resuscitation (CPR).
 - Follow manufacturer's instructions on their use, care and disposal.
 - Face masks should be readily available if you suspect the patient has an airborne condition, such as tuberculosis, common cold, etc.
- **Hand washing:** wash hands with soap and running water immediately after any contact with a casualty.

Steps of Incident Management



1. Look for dangers to yourself, then to casualty.
2. Assess the situation.
3. Find out what happened, and take precautions to avoid a similar occurrence.
4. If you are at the incident scene, make the situation safe by removing or reducing the cause.
5. Assess the casualties and decide on what action to take as soon as possible.
6. Give initial treatment; if the patient requires further attention, refer to other health facility or call in more specialised assistance if the patient can't be moved.
7. After the incident: tidy up the treatment site, restock your first aid kit.



- Recorded video scripts of casualty management
- Demonstration of techniques (DRABC)

Casualty Management and Initial Assessment



Actions:

- Don't forget to check for dangers to yourself and the casualty
- Remove the dangers, or move the casualty if you can't remove the danger

Response:

- Check to see if casualty is conscious
- Ask questions such as: "Are you all right?"
- Give a command like: "Please open your eyes."
- Give a gentle shake

Casualty Management and Initial Assessment (2)



Airway:

- Quickly check for any obvious obstruction; the tongue may slip back and block the airway
- Open the airway by lifting the chin while carefully tilting the head back



Breathing:

- Check for breathing by opening the airway and placing your cheek just above the casualty's mouth and nose
- Look at the chest and watch for movement
- Listen for breathing
- Feel for breath against your cheek
- Check for ten seconds

Casualty Management and Initial Assessment (3)



- Decide what action you must take:
 - Send for help if there is somebody with you
 - If casualty is unconscious and is breathing, put them in recovery position immediately (requires demonstration)
 - If casualty is unconscious and is not breathing, start resuscitation immediately (requires demonstration)



Casualty Management and Initial Assessment (4)



- **Circulation:** There are two ways in which circulation affects the way oxygen moves around the body:

1. The heart may stop

- Check for the heartbeat by taking the pulse in the neck (carotid pulse) for ten seconds
- To find the pulse, place two fingers in the groove between the voice box and the large muscle in the neck and press down gently

2. There may be bleeding

Casualty Management and Initial Assessment (5)



- The initial assessment and priorities can be remembered by the letters **DRABC**
 - **D**anger
 - **R**esponse
 - **A**irway
 - **B**reathing
 - **C**irculation

- Consider your actions immediately!

Practicum



First Aid for Some Common Conditions

Choking



Signs: difficulty in breathing or speaking

- Grasping at the neck
- Pointing in the mouth and throat
- Purple/red colour around the face and neck
- Blueness to lips



Aim: Remove obstruction and allow the casualty to breathe normally

Choking (2)



Actions:

- Step 1: Backslaps
 - Reassure the casualty
 - Bend casualty forward with head lower than the chest
 - Encourage him/her to cough
 - Slap up to five times between the shoulder blades (the force of slap should be moderate so as not to cause further injury)
 - See if you can remove the obstruction

Choking (3)



- Step 2: Abdominal thrusts
 - If backslaps are unsuccessful, try up to five abdominal thrusts
 - Stand behind casualty
 - Link your hands below the their rib cage
 - Pull sharply, inwards and upwards
 - If not successful, call for help
 - Keep repeating the cycle of backslaps and abdominal thrusts until airway is clear or help arrives



Fainting



Signs: Collapse and loss of consciousness

- Pale or grey, cold clammy skin
- Slow pulse (increases as casualty recovers)

Aim: Improve the blood supply to the brain and reassure the casualty



Fainting (2)



Actions:

- Assess DRABC and treat any priority conditions
- Lay the casualty down and gently raise and support the legs
- Provide a source of fresh air if possible
- Reassure the casualty and keep onlookers away
- When casualty recovers, sit him/her up slowly; if they feel faint again lay them down again
- If casualty does not regain consciousness quickly, reassess DRABC, place in recovery position and call for medical help



Signs:

- Pale or grey, cold, clammy skin
- Rapid pulse, becoming weaker
- Fast, shallow breathing
- Feeling weak and dizzy
- Feeling sick, may vomit
- Feeling thirsty
- Restless and anxious, may be aggressive
- Yawning or gasping for air
- Level of consciousness will get lower and may become unconscious
- Breathing may fail and the heart may stop

Shock (2)



Aims:

- Treat any obvious cause
- Increase blood supply to the brain, heart and lungs
- Get urgent medical help

Actions:

- Assess DRABC and treat priorities
- Lay casualty down, raise the legs gently
- Keep casualty still and quiet, reassure
- Loosen tight clothing around the neck, chest and waist
- Keep casualty warm
- Call for medical help
- Keep checking breathing, pulse and level of consciousness, may have to resuscitate and put recovery position
- Make notes for ambulance crew on your findings and actions

Shock (3)



Do **NOT**:

- Move casualty unless it is to escape from danger
- Apply direct heat
- Leave casualty alone
- Allow casualty to eat, drink or smoke

Wounds and Bleeding



Aim: Control blood loss

- Treat for shock
- Prevent infection, e.g., tetanus
- Arrange for transport to nearest health facility
- **Minor bleeding (small cuts):**
 - Encourage the wound to bleed for a few minutes
 - Apply direct pressure for ten minutes
 - If dirty, clean it with antiseptic (e.g., surgical spirit, hydrogen peroxide etc and gently dry area)
 - Cover with sterile dressing (plaster or clean dressing)
 - Refer for further medical attention



Wounds and Bleeding (2)



- **Major bleeding:**
 - Carefully expose wound
 - Apply direct pressure to the wound
 - If there is an embedded object, apply pressure around sides of the wound
 - Raise the limb
 - Lay casualty down
 - Use a clean pad or sterile dressing
 - Treat for shock
 - Keep pressure on the wound for ten minutes
 - When bleeding is controlled, apply a sterile dressing and bandage on top of original pad
 - If blood seeps through the dressing, add more dressing
 - Make a report and refer to the nearest health centre more specialised facilities and health workers

Nose Bleeds



- Sit casualty down and ensure that their head is tipped forward
 - Instruct casualty to breathe through their mouth and to pinch the nose just below the bridge for ten minutes
 - Instruct casualty not to blow their nose or sniff
 - Release nose after ten minutes, if still bleeding pinch again for ten minutes
 - If nose bleed lasts over 30 minutes, then refer the casualty to a health centre for more specialised care
 - Clean area with warm water once bleeding has stopped
 - Advise casualty to rest for a few hours, avoid blowing the nose or picking any clots



Burns and Scalds



Signs:

a) Superficial

- Redness
- Tenderness
- Swelling

b) Medium

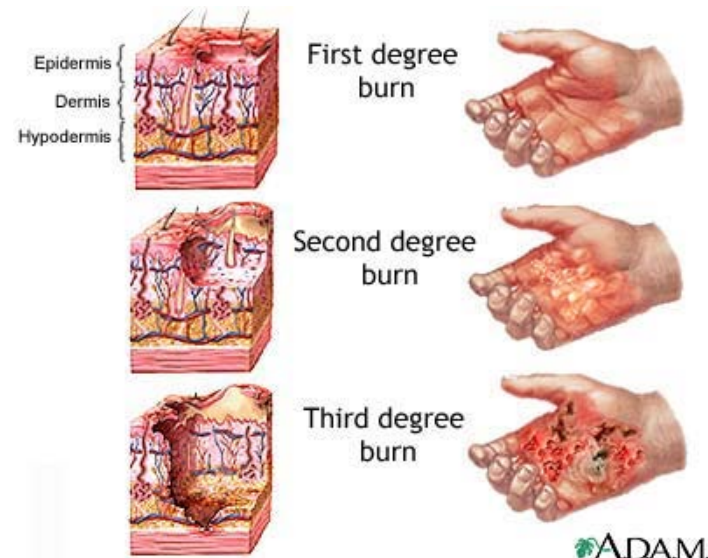
- Redness
- Tenderness
- Swelling
- Blistering

c) Deep

- Pale and waxy
- Charred tissue

Aims:

- Stop the burning
- Relieve pain and swelling
- Minimize risk of infection



Burns and Scalds (2)



Actions: DRABC

- Flood injured area with cold running water or any cold harmless fluid (do not over-cool casualty)
- Gently remove any rings, watches that is around the affected area
- Lay casualty down and treat for shock
- Apply the burn site with antiseptic cream (e.g. silver sulfadiazine and where appropriate cover area with a sterile dressing)
- Refer to a health centre for further management for moderate and severe burns

Fractures



For fractures other than fore and hind limb fractures, please refer the casualty for specialised care immediately. Only offer advice to immobilize possible fracture site and give some pain killers.

Signs:

- History of recent fall or blow
- Sound of snapping from injury site
- Difficulty moving the limb
- Severe pain and tenderness over the site of the injury
- Deformity or swelling or bruising
- Signs of shock if severe injury

Aims:

- Prevent movement at the site of injury
- Arrange transfer to medical aid while keeping casualty comfortable



Fractures (2)



Actions: Do initial assessment

- Advise casualty to keep still
- Treat any priorities from initial assessment
- If injury is in upper limb, probably casualty is supporting the injured limb in comfortable position
- If injury is in lower limb, apply support with your hands above and below the injury
- Refer immediately for further management





Aims: Maintain an open airway, breathing and circulation

- Maintain or make environment safe for the casualty and yourself
- Obtain urgent medical aid
- Identify the poison if possible



Inhaled Poisons



Actions:

- Remove casualty to open air or open windows
- If possible, cut off source of poison
- Make initial assessment
 - If casualty is breathing but unconscious, place in recovery position and monitor RABC
 - If casualty has stopped breathing, commence artificial ventilation and chest compressions if required
- Refer for further management in a health centre



Actions:

- Make initial assessment
 - If casualty is unconscious, put in recovery position, monitor RABC and be prepared to resuscitate
 - If casualty is conscious, place in recovery position and try to find out what has been taken



Swallowed Poisons (2)



Actions:

- Do not induce vomiting
- If casualty has taken a corrosive poison, give frequent sips of water or milk
- Use barrier to protect yourself, if resuscitation is required
- Refer to more specialised health centre for further management
- If casualty vomits, save sample for the medical team
- Identify containers that held poison if possible and give to medical team

Skin Contact Poisons



Actions:

- Make initial assessment
- Do not touch affected area with bare hands
- Wash away the poison with large amounts of water, avoid splashing onto yourself or into casualty's eyes, mouth or nose
- If chemical is causing burns, keep splashing with water for at least 20 minutes
- Do not re-use same water
- Remove any clothing contaminated by the poison, if possible, and if it is safe
- Try to preserve casualty's privacy if possible
- If casualty is unconscious, place into recovery position and monitor RABC.
- Be prepared to resuscitate, use barrier if face is contaminated
- If no improvement, refer to more specialised health facility for further management

Injected Poisons



Actions:

- Make initial assessment
- If casualty is unconscious, put in recovery position and monitor
- RABC and be prepared to resuscitate
- Place in recovery position even if casualty is conscious, keep him/her calm and quiet and monitor RABC
- If possible, identify injected syringes, needles, samples or the substance
- Refer to more specialised health facility for further management

Animal Bites



Aims:

- Control bleeding
- Minimize the risk of infection to yourself and casualty
- Obtain medical attention



Actions:

- Make initial assessment
- Flush superficial wounds with running water for at least five minutes
- Wash the wound with soap and water
- When dry, cover with a sterile dressing
- Advise casualty to seek further medical attention and to check whether anti-tetanus and rabies injections are required
- For more serious wounds, control bleeding with direct pressure
- Cover with sterile dressing and refer for further medical attention

Insect Stings



Aims:

- Relieve pain
- Obtain medical aid, if required

Actions:

- Make initial assessment
- Carefully remove sting if visible; be careful not to squeeze any poison sac attached
- Apply cold compress to relieve pain and antihistamine creams to relieve itching and swelling
- Advise casualty to seek further medical attention if the pain and swelling don't reduce in a day or so
- If sting occurs in the mouth, refer for further medical attention urgently, monitor RABC and reassure casualty while waiting

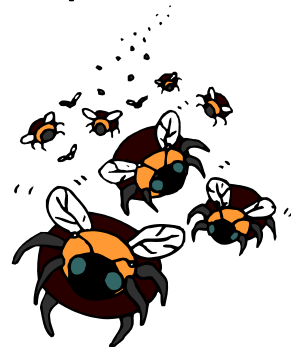


Insect Stings (2)



Insect stings

- If it is a swarm attack causing multiple stings, do not approach until it is safe
- Place casualty in the most comfortable position
- Keep casualty quiet and reassure him/her
- Monitor RABC and be prepared to resuscitate
- Arrange urgent transfer to a specialized medical facility



Snake Bites



Aims:

- Reassure the casualty
- Prevent spread of the venom
- Get urgent medical aid



Actions:

1. Little or localized swelling:

- Wash the wound with soap and water if available
- Reassure casualty to reduce anxiety
- Keep the casualty at rest, lying down with affected part level to his/her heart
- Get further medical attention as soon as possible

2. If bite is on limb, apply a pressure bandage to immobilize the area, apply a splint if necessary

3. If there is severe localized swelling, **immediately** refer for further medical attention

Snake Bites (2)



- Do NOT:
 - Cut the wound
 - Apply suction to the wound
 - Use a tourniquet or constricting bandage
 - Apply or inject chemicals or medicines into the wound
 - Use ice on the wound
- For non-poisonous snake bites, treat the bite as any other wound, however, casualty should be seen by medical aid
- If the casualty presents with any of the following conditions, refer immediately for more specialized care:
 - Chest pain
 - Non-breathing
 - No heart beat/pulse

