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Level-I

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List of Acronyms/Abbreviations

ABCDE	Airway, Breathing, Circulation, Disability and Exposure
AED	Automatic External Defibrillator
AVPU	Alert, Voice, Pain, Unresponsive
BP	Blood Pressure
CPR	Cardiopulmonary Resuscitation
CRT	Capillary Refill Time
DOTS	Deformity, Open Wound, Tenderness and Swelling
EMS	Emergency Medical Staff)
EMT	Emergency Medical Technician
GCS	Glasgow Coma Scale
HIV	Human Immunodeficiency Virus
LOC	Level Of Consciousness
MAP	Mean Arterial Pressure
PPE	Personal Protective Equipment
PPT	Place, People and Time
PTSD	Post-Traumatic Stress Disorder
SCA	Sudden Cardiac Arrest

Introduction to the Module

This module covers the knowledge, skills and attitude required to provide an initial response where First Aid is required. In this unit it is assumed that the First Aider is working under the supervision according to the established workplace First Aid procedures and policies.

This module is designed to meet the industry requirement under the culinary art occupational standard, particularly for the unit of competency: - Provide First Aid

This Module covers the units:

- Assessing the situation
- Basic first aid techniques
- Communicating details of the incident

Learning Objectives of the Module

At the end of this session, the students will able to:

- Assess the situation
- Apply basic first aid techniques
- Communicate details of the incident

Module Learning Instructions

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions.
3. Read the information written in the information Sheets
4. Accomplish the Self-checks
5. Perform Operation Sheets, if any
6. Do the "LAP test

Unit One: - Assessing the Situation

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Identifying Physical hazards to self and casualty's health
- Minimizing hazard in accordance with OSH requirements
- Assessing casualty's vital signs and physical condition

This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Identify Physical hazards to self and casualty's health
- Minimize hazard in accordance with OSH requirements
- Assess casualty's vital signs and physical condition

1.1. Identifying Physical hazards to self and casualty's health

1.1.1. Definition of terms

First aid: is the initial assistance / support or treatment given to an injured or accidentally person using whatever materials or equipment available at the time before he / she reaches to a health facility. In the provision of first aid service, before providing the service, the first step that a first aider has to consider is that assessment and identification of clients condition. The identification of casualty's condition helps to set priority and decide the type of first aid measure that has to be initiated first. The casualty's condition can be assessed and identified by doing a quick observation of the surroundings and by taking quick history and physical examination.

The purpose of giving first aid is to prevent further deterioration of the patient's health. The responsibility of a First Aider is to help the patient by winning her/his confidence. At the same time, the First Aider must not endanger her/his own life while providing treatment. She/he must always keep in the mind that the casualty may have more than one injury.

1.1.2. Basic principles of first aid

In the management (mgt) of casualty, as a general principle, the first aider has to consider the following tasks as his or her responsibility.

- Preserve life: This includes preserving the life of the casualty and the rescuer.
- Ensure protection of the casualty from further harm: the treatment area needs to be safe and must not have excess people.
- Provide pain relief: This includes the use of ice packs or applying a sling.
- Prevent the condition from worsening: Ensure that the First Aid procedures do not worsen the patient's condition.

1.1.3. Assessing and Minimizing hazards

A. Assessment of the casualty's condition

This involves assessment of the overall situation and the general condition of the casualty. During the process of assessment the following principles has to be considered:

- ✓ be calm and confident
- ✓ Talk, listen & reassure the conscious causality
- ✓ Check safety of casualty and of yourself

- ✓ Check for breathing, bleeding and level of consciousness
- ✓ Get others to help / (Emergency Medical Staff)EMS/

B. Components of assessment process:

- ✓ Assessment of the situation and safety / scene size up/
- ✓ Initial assessment
- ✓ Physical examination
- ✓ Vital sign
- ✓ Focused History taking
- ✓ On-going assessment

C. Assessment of the situation /Scene size up/

An assessment of the scene (current situation of an event) and the surroundings, if it is safe, will provide valuable information to the first responder and will ensure the wellbeing of the first responder. Example, Unstable Situation, violent, Hazmat Situation (industry hazardous material) etc. Scene safety in relation to personal protection, casualty and bystander protection is important.

Assessment of the situation /Scene size-up/ is a multifaceted process that occurs before and immediately upon arrival at the scene, prior to executing any other activities. The subject to the unique environmental dangers associated with patient care in the field that often contributed to, or are a result of, the patient's injury or illness.

A successful first aider in active field operations, Assesses the scene, Acts on the assessment finding and Mitigates danger prior to the provision of any patient care or evaluation.

D. Purpose of Assessment of the situation /scene size-up

The purpose of scene size-up is to expeditiously ensure that there is a safe scene on which to provide care, and that the proper resources are summoned to the scene according to the number of patients and their specific care needs. Many scenes evolve even after the first unit has arrived, and various specialty units have different perspectives on the size-up of the same scene. The hazardous materials team will have a different focus and perspective during size-up than the first arriving advanced life support unit. Just as a scene is dynamic, aspects of the size-up should be reevaluated over the course of an incident.

If the scene is unsafe, make it safe, Otherwise, **DO NOT ENTER**

E. The components of assessment /scene size-up/

These components of size-up can initially be assessed from the relatively safety of the emergency response vehicle. The components of scene size-up require simultaneous assessment and include the review of dispatch information, identification of the number of patients, identification of mechanism of injury or nature of illness, resource determination, standard precautions determination and assessment of scene safety.

1.2.Minimizing hazard in accordance with OSH requirements

1.2.1. Minimizing hazards

Managing health and safety hazards is key to operational excellence in the work place regardless of its size. Where possible, Always try to remove or eliminate hazards from the workplace, for example by using a different process, or changing the way a job is done If it is not possible to eliminate the hazard.

Below are 6 steps to determine the most effective measures to control workplace hazards and to minimize risk.

Step 1: Design or re-organize to eliminate hazards

- It is often cheaper and more practical to eliminate hazards at the design or planning stage of a product, process or place used for work. In these early phases, there is greater scope to design out hazards or incorporate risk control measures that are compatible with the original design and functional requirements. For example, remove trip hazards on the floor or dispose of unwanted chemicals.

Step 2: Substitute the hazard with something safer

- If it is not reasonably practical to eliminate the hazards and associated risks, you should minimize the risk. For example, today the dangers associated with asbestos are well known and there are numerous alternatives to asbestos products currently on the market including cellulose fiber, thermoset plastic flour or polyurethane foams. Replacing solvent- based paints with water-based ones is also a better alternative.

Step 3: Isolate the hazard from people

- This involves physically separating the source of harm from people by distance or using barriers. For example, introducing a strict work area, using guard rails around exposed edges and holes in the floors, using remote control systems to operate machinery, enclosing a noisy process from a person and storing chemicals in a fume cabinet.

Step 4: Use engineering controls

- An engineering control is a control measure that is physical in nature, including a mechanical device or process. For example this can be done through the use of machine guards, effective ventilation systems and setting work rates on a roster to reduce fatigue.

Step 5: Use administrative controls

- Administrative controls are work methods or procedures that are designed to minimize exposure to a hazard. Establish appropriate procedures and safe work practices such as; limit exposure time to a hazardous task so that fewer employees are exposed, routine maintenance and housekeeping procedures, training on hazards and correct work methods and use signs to warn people of a hazard.

Step 6: Use Personal Protective Equipment (PPE)

- Provide suitable and properly maintained PPE and ensure employees are trained in its proper use. Examples include gloves, earplugs, face masks, hard hats, gloves, aprons and protective eyewear. PPE limits exposure to harmful effects of a hazard but only if workers wear and use the PPE correctly.

1.2.2. Types of hazards

Definition: There are many definitions for hazard but the most common definition regarding health and safety. A hazard is any source of potential damage, harm or adverse health effects on something or someone. The harm may include human injury or ill-health, damage to property, damage to the environment, or a combination of these.

A. Biological hazards: commonly known as biohazards, can be any biological substance that could cause harm to humans. Biological hazards are extremely dangerous. Wastes from hospitals and industries may contain disease-causing organisms that could infect human. e.g.; bacteria, viruses, insects, plants, birds, animals, and humans, etc Employees who work in hospitals, laboratories or various other outdoor occupations are at risk from biological hazards. Protective equipment can help reduce the chances of exposure.

B. Physical hazards; physical hazards are environmental factors that can harm the body without necessarily touching it, include radiation (microwaves, radio waves, etc.),high exposure to sunlight/ultraviolet rays, temperature extremes – hot and cold, constant loud noise

C. Ergonomics hazards; ergonomic hazards are a result of physical factors that can result in musculoskeletal injuries. occur when repetitive movements, improper set up of workstation, poor design of equipment, workstation design, (postural) or workflow, manual handling etc. They are the hardest to spot since you don't always immediately

notice the strain on your body or the harm that these hazards pose. For example, a poor workstation setup in an office, poor posture, vibration

D. Chemical hazards; are hazardous substances that can cause harm. these hazards can result in both health and physical impacts, such as skin irritation, respiratory system irritation, blindness, corrosion and explosions . For example, Gases like acetylene, propane, carbon monoxide and helium, Liquids like cleaning products, paints, acids, solvents , Flammable materials like gasoline, solvents, and explosive chemicals and Pesticides etc.

E. Psychosocial hazards; are hazards that can have an adverse effect on an individual mental health or wellbeing. For example, sexual harassment, victimization, stress and workplace violence, workload

F. Safety hazards; it is unsafe conditions that can cause injury, illness and death. These are the most common and will be present in most workplaces at one time or another. They include ;

- Working from heights, including ladders, scaffolds, roofs, or any raised work area
- Unguarded machinery and moving machinery parts; guards removed or moving parts that a worker can accidentally touch Electrical hazards like frayed cords, missing ground pins, improper wiring Confined spaces
- Machinery-related hazards (lockout/tag out, boiler safety, forklifts, etc

1.2.3. Minimizing risk

The first aider must consider the safety of the patient, self, and any bystanders before attempting to rescue and assist a sick or injured person. There are many situations in which great care must be taken because of the presence of a specific hazard, such as high-voltage electricity cables, fire, toxic fumes or road traffic.

I. Domestic electricity

The first aider must remember to make the area safe before attempting to touch or rescue the patient. The source of electricity must be identified and contact broken in the easiest but safest manner. If it is possible to remove an appliance plug from the power supply point, then this will stop the flow of electricity. DO NOT rely on the power point switch because it is still possible for electricity to flow even after the switch has been turned off. Alternatively, the power should be turned off at the mains supply board to ensure safety for all concerned.

II. Road crashes

Whether a driver, passenger, the patient who has been involved in a road accident can be seriously injured and in need of urgent medical assessment and treatment. The first aider might be the first person on the scene and may be influential in saving a life before the arrival of ambulance personnel. Anyone involved in the accident might also need support although there may be no obvious injuries. The driver of a car that has hit a pedestrian or cyclist will be most distressed and will require reassurance.

III. Motor vehicle crash patients

Whatever the circumstances, the first aider must ensure safety for self, patient and bystanders. This may involve obtaining help to make the area safe.

IV. Motorcycle crash patients

A person who is involved in a motorcycle crash may receive multiple injuries and could have a spinal injury. The first step is to ensure safety for the first aider, patient, and any bystanders.

V. Fumes Fire or toxic

When fire complicates an emergency, the first aider should be conscious of the danger and the serious risks of going into a burning room or building. Home fires are associated with the release of toxic fumes from furniture made of synthetic products. Entry into a place where there is dense smoke or toxic fumes is not recommended and may result in the loss of another life. Fire officers will generally use breathing apparatus to give protection from smoke or fumes and the first aider should make sure that the emergency services have been called and wait for such trained assistance to arrive.

1.3. Assessing casualty's vital signs and physical condition

1.3.1. Consider Hazards situation and safety first

In the assessment and management of casualty, as a general principle, the first aider has to consider the following tasks as his or her responsibility.

- ✓ Assessment of the situation and casualty
- ✓ Reaching to diagnosis for each casualty
- ✓ Giving immediate & adequate treatment based on priority matrix
- ✓ Arrangement for transport according to the seriousness of the condition
- ✓ Prevent cross infection
- ✓ Provision of psychological and emotional support

Assessment of the situation

Look to see who is at the emergency scene, and find out what others at the scene are doing. If anyone is in danger or hurt, you should immediately take charge of the situation. In high stress situations, people tend to panic if they or someone they know has been injured.

The role of assessment in an emergency is a critical and ongoing step in determining humanitarian needs and meeting obligations to humanitarian principles. Assessments are used to make decisions and help to identify the most appropriate response to an emergency and what value care can add to an emergency response.



Figure 1.1: Assessing the situation/Scene/

- **Components of assessment process**

✓ Assessment of the situation and safety / scene size up/

✓ Initial assessment

✓ Physical examination

✓ Vital sign

✓ Focused History taking

✓ Ongoing assessment

- **Assessment of the casualty's condition**

This involves assessment of the overall situation and the general condition of the casualty. During the process of assessment the following principles has to be considered:

✓ Be calm and confident

✓ Talk, listen & reassure the conscious causality

✓ Check safety of casualty and of yourself

✓ Check for breathing, bleeding and level of consciousness

✓ Get others to help / (Bystanders or Emergency Medical Technician(EMT)/



Figure 1:2: General assessment of the victim

1.3.2. Assess vital sign

Vital signs are an objective measurement of the essential physiological functions of a living organism.

I. Airway assessment

- ✓ Look for signs of airway compromise:
- ✓ Two- to three-word dyspnea
- ✓ Use of accessory muscles
- ✓ Nasal flaring and use of accessory muscles in children
- ✓ Labored breathing
- ✓ is it open & functional? If not, correct.
- ✓ Consider cause or mechanism of injury.
- ✓ (Use head-tilt, chin-lift if no injury; jaw-thrust maneuver if there is head/neck injury)
- ✓ airway may be obstructed



Figure 1.3: Airway assessment

II. Breathing



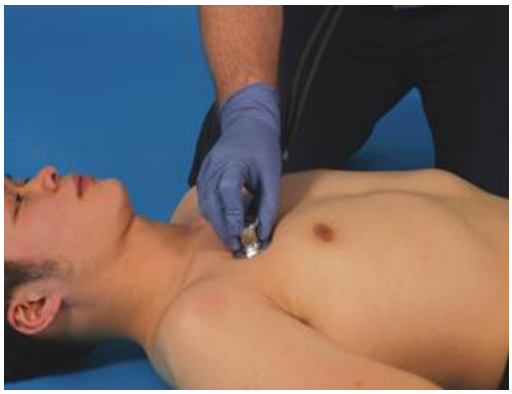


Figure 1.4: Assessing air way and breathing

Figure 1.5: Assessing Breath Sounds

2. Measuring breathing

One Respiration Consists Of One Inspiration And One Expiration

- ✓ The chest rises during inspiration (breathing in) and falls during expiration (breathing out)
- ✓ Count each time the chest rises
- ✓ Count for 30 seconds and multiply x 2
- ✓ Do not let the person know you are counting respiration
- ✓ Count after taking the pulse – keep your fingers on the pulse site
- ✓ Normal respiratory rate for adult is 12 – 20 breaths per min.

3. Abnormal findings of Breathing

- ✓ **Tachypnea** – respiratory rate over 20
- ✓ **Bradypnea** – respiratory rate below 12
- ✓ **Dyspnea** – shortness of breath – difficulty in breathing
- ✓ **Apnea** – no breathing
- ✓ **Hyperventilation** – fast and deep respirations
- ✓ **Hypoventilation** – slow and shallow respirations

III. Assessing the Pulse

The pulse rate is a measurement of the heart rate, or the number of times the heart beats per minute. As the heart pushes blood through the arteries, the arteries expand and contract with the flow of the blood. Taking the pulse allows us to find out what the patient's heart rate is and to assess the strength, regularity, and character of the pulse. Irregularities might indicate a heart problem and must be investigated. Assess pulse rate for Presence, Rate, Rhythm and Strength.

Normal adult pulse rate is: 60 to 100 beats per min for adult

Abnormal pulse rate findings:

- ✓ **Tachycardia** – heart rate over 100bpm
- ✓ **Bradycardia** – heart rate below 60bpm

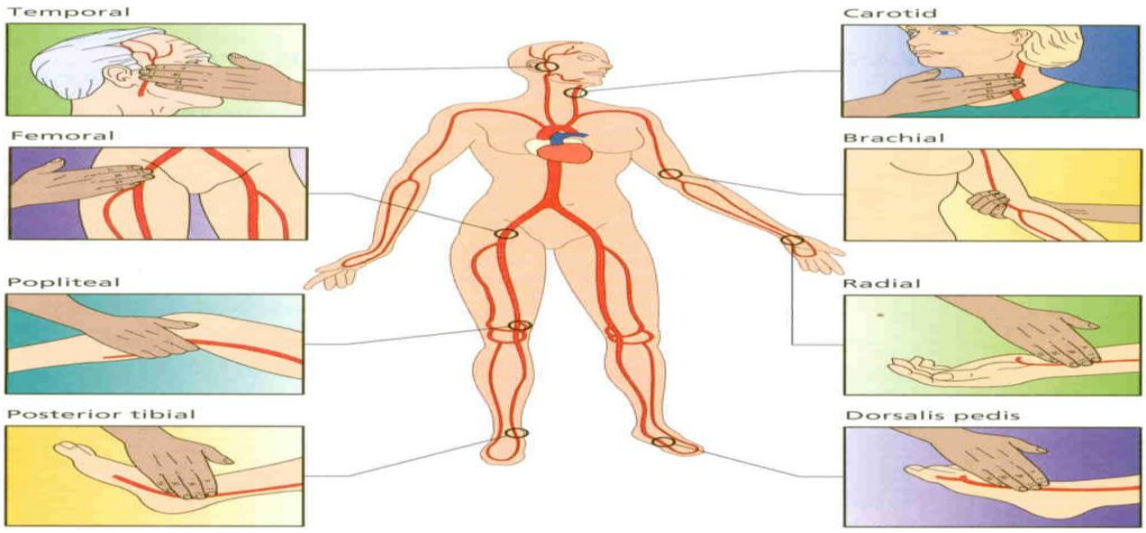


Figure 1.6: Pulse sites

IV. Blood pressure (BP)

The measurement of the amount of force the blood exerts against the artery walls

Systolic pressure – pressure exerted when the heart muscle is contracting

Diastolic pressure – pressure exerted when the heart muscle is relaxing between beats

Blood pressure is recorded as a fraction with the systolic pressure on top and the diastolic pressure on the bottom (Systolic/systolic /diastolic) 120/80. BP is measured in mm (millimeters) of Hg (mercury).

Normal blood pressure

- ✓ Average adult systolic range – 100 to 140
- ✓ Average adult diastolic range – 60 to 90

Abnormal Blood Pressure

- ✓ Hypertension – measurements above the normal systolic or diastolic pressures
- ✓ Hypotension – measurements below the normal systolic or diastolic pressures

Equipment needed for BP measurement

- ✓ Equipment for accurate BP measurement
- ✓ Functional & calibrated machine
- ✓ Right-sized cuff

- ✓ Pen or pencil
- ✓ Flow up sheet, chart, or medical record
- ✓ Clean hands and fingers!
- ✓ Patient in a comfortable & relaxed position
- ✓ Wait 5 minutes if patient was active

V. Assessing Perfusion

Evaluation of tissue perfusion can be done by considering gum or lip mucous membrane Colour, the capillary refill time, and the blood pressure. High mean arterial pressure does not guarantee adequate tissue perfusion. For example, when blood pressure increases during anesthesia in response to a surgical stimulus, cardiac output may be decreased due to increase after-load from peripheral vasoconstriction.

Tissue perfusion is usually decreased when the gums are pale, rather than pink, sometimes when very pink, and the capillary refill time (CRT) exceeds 1.5 seconds, or the mean arterial pressure (MAP) is less than 60 mmHg. When MAP is above 60 mmHg, palpation of the strength of the peripheral pulse and observation of oral membrane Colour and CRT should be used to assess adequacy of peripheral perfusion and cardiac output. During laparotomy, intestinal Colour should be bright pink and intestines that are pale pink, white, or grey may be an indicator of inadequate tissue perfusion.

Capillary refill assessment/procedure/

The following steps have to be followed when doing the test:

Step1. Remove finger rings and nail polish.

Step2. The therapist compresses the nail bed until it turns white and records the time taken for the color to return to the nail bed.

Step3. It normally takes 3 seconds or less. When it takes longer, arterial insufficiency is suspected.

Step4. Always compare to the normal side of the hand or fingers.

Although the CRT is used in both children and adults , there is less literature about its use among adults as well as very little research information about its validity.

Interpretation of Results

1. Normal Results: The CRT is largely recommended in the routine of unwell patients and should last less < 2 seconds. If the color is pink after there is no more pressure; it indicates a good blood flow to the finger.t It's part of the assessment of patients seriously ill.

2. Abnormal Results: A CRT> 2 seconds or prolonged CRT is suggestive of an early sign of shock. Several other factors can affect the CRT measurement and therefore its results. They may include: Peripheral vascular disease, Hypothermia, Cold ambient temperature, Poor lighting, Old age and Pressure application.

State of consciousness assessment

It is the assessment of level of awareness about ourselves and our environment.

- **Assess State of consciousness**

Level of consciousness (LOC) indicates a patient's level of arousal and awareness. Simply by walking into a patient's room you may be able to observe her awareness, but how you assess LOC and document it can be subjective.

- **Initial assessment**

Following a through observation of the situation and the surroundings, the first aider quickly assesses the patient's major body systems to identify life-threatening problems, initiate interventions, identify priority patients, and determine whether immediate transportation is necessary. Common priority patients include: General impression of a very sick patient, Unresponsive - no gag or cough, Responsive, not following commands, Difficulty breathing, Shock (hypo-perfusion), Complicated childbirth, Chest pain with blood pressure < 100 systolic, uncontrolled bleeding and Severe pain anywhere.

A. **General impression** – this is performed based on the First Responder‘s immediate assessment of the environment and the patient‘s chief complaint.
B. **Assessment of consciousness /responsiveness** by checking if the casualty is Alert, responding to Verbal stimuli, responding to pain stimuli or Unresponsive.

The level of responsiveness / consciousness can be expressed as:

- ✓ Full consciousness – able to speak & answer questions normally
- ✓ Drowsiness- Easley aroused (awoken) but lapses in to unconsciousness
- ✓ Stupor – Can be aroused with difficulty and is aware of painful stimuli Ex- pin prick
- ✓ Coma – Cannot be aroused by any stimuli



Figure 1.7: checking for the victim's responsiveness

- **Use AVPU scale to assess consciousness**

The AVPU scale (Alert, Voice, Pain, Unresponsive) is a system, which is taught to healthcare professionals and first aiders on how to measure and record the patient's level of consciousness. It is a simplification of the GCS Scale (Glasgow Coma) which assesses a patient's response using Eyes, Voice and Motor skills as measures.

The AVPU has only one of four possible outcomes:

A. Alert: Patient is fully awake (though not necessarily orientated), will have spontaneously open eyes, and will respond to voice (thought may be confused). They will have bodily motor function.

B. Voice: The patient makes some sort of response when you talk to them. This could be through the eyes, which open when you speak to them, or by voice which may only be as little as a grunt. Or, it could be by moving a limb when prompted to do so by the rescuer.

C. Pain: A patient may respond by using any of the three components when pain stimulus is used on them (Eyes, Voice, Movement). Recognized methods for causing pain are pinching the ear or pressing into the bed of a fingernail. A fully conscious patient will locate the pain and push it away, whereas a patient who is not alert and not responded to voice may only manifest involuntary flexion or extension of a limb. Performing pain stimulus should be used with caution as in extreme circumstances this could be considered assault.

D. Unresponsive: This outcome is noted if the patient does not give any Eye, Voice or Motor response to voice or pain.

In first aid, an AVPU score less than A is a good indication of the need to get further help.

Treatment:

If patient conscious level is below 'A' seek medical help.

- ✓ Monitor patient's level of response until medical help arrives.
- ✓ An unconscious patient is serious and the priority here is the patient's airway.

- ✓ Place in recovery position.
- ✓ Dial to Emergency Medical service
- ✓ Treat any bleeding or cover open fractures.

If first aiders have oxygen therapy, place pulse oximetry on patients finger and take reading, if below 94% place patient on oxygen therapy.

- **Physical examination**

The First Responder Physical Examination is designed to locate and begin the initial management of the signs and symptoms of illness or injury. The First Responder should complete a physical exam on all patients following the initial assessment. Inspection and palpation /feeling of body parts/ are the two important methods of physical examination in first aid practice. Inspect and palpate for DOTS (Deformity, Open wound, tenderness and Swelling).

Do the physical examination in the sequence of: Head, Neck, Chest , Abdomen, Pelvic and Extremities.



Figure 1.8: Head, neck and chest assessment



Figure 1.9: Assessment of Abdomen and Hip

Recognizing emergency situation

Emergencies are the situations which require immediate response. A first aid provider should have the knowledge on what is an emergency, what can cause emergency and how the emergency can be recognized. In this section, we shall discuss the emergency situation and understand when and where to suspect emergency.

The victim of an emergency can be anyone- he/she can be your friend, family member, stranger, or you yourself. An emergency can happen anywhere – on the road, at home, work or play and so on and can occur any time. Thus, in simple words it is the situation of sudden and unexpected occurrence which requires urgent attention.

Emergency is occurring because of certain things which anybody see, hear, smell, touch and so on. Usually smell or noise can indicate emergency even before you see them. There may be unusual noise, smells, symptoms and signs or behavior that point towards emergency.

Table 1.1: Emergency indicators and their signals.

Emergency Indicators	Signals/signs
Unusual noises	The noises that indicates • Someone is in problem or crises , such as screaming, shouting, moaning, crying and calling for help • alarming or high intensity sounds or noise, such as breaking glass, crashing metal or screeching tires. • loud noises such as collapsing structures or falling ladders.
Unusual Sights	• The Things that look out of ordinary • Stopped or parked vehicle which shows that some accident has occurred. • An overturned or tilted or fallen pot e.g. if filled with hot water , it can cause burns. • Spilled medicines, empty medicine container, household disinfectants, insecticides may suggest the chance of poisoning. • burnt electrical wires or if the wires indicate short circuit which may show the chance of electrical shock.
Unusual Odors/Smells	• The Odors/Smells which may be • Stronger than usual e.g. as in case of toxic fumes or fumes during fires, LPG fumes that may start fires. • unrecognizable odors or nauseous smells e.g. toxic fumes of sewage

	tanks or septic tanks which can cause poisoning and death. • Natural gas odors.
Unusual appearance or behavior	The Appearance or Behavior which may indicate • Unconscious e.g. not responding to your shouts or pain. • Difficulty in breathing as in asthma/choking. • Clutching the chest or throat as in heart attack or chest pain. • Slurred or hesitant speech e.g. in stroke. • Extreme confusion or drowsiness, sweating e.g. in blood sugar changes. • Changes in skin Colour as in insect bites/snake bites/ medical conditions.

1.3.3. Monitoring vital signs and State of consciousness

Vital signs are measurements of the body's most basic functions. These signs give us an indication as to how well the body is functioning and responding to an illness or injury. They are an objective measurement of the essential physiological functions. They have the name "vital" as their measurement and assessment is the critical first step for any clinical evaluation.

The most common vital signs monitored by medical personnel/workers are:

- ✓ Body temperature.
- ✓ Pulse rate.
- ✓ Blood pressure.
- ✓ Respiratory rate

1. Body Temperature

Body temperature is important vital sign that indicate physiological functions of our body. The normal body temperature of a person varies depending on different factors. e.g. recent activity, food and fluid consumption, time of day etc. The body temperature is measured by use of a thermometer. Common sites to measure temperature include under the tongue, the forehead, the armpit, or in the ear. A high temperature (fever) may be a sign of infection. A normal body temperature is between 96.8°f (36°c) and 98.6°f (37°c), although this can vary slightly from person to person. The location you use will depend on the model of thermometer you have. There are many varieties of digital thermometer available.



Figure 1: 10: Thermometer

2. Pulse Rate

The pulse rate is a measurement of the heart rate, or the number of times the heart beats per minute. As the heart pushes blood through the arteries, the arteries expand and contract with the flow of the blood. Each beat corresponds to the heart contracting and expanding, pushing blood through the body the pulse rate is recorded as the number of beats per minute (Bpm). Taking a pulse not only measures the heart rate, but also can indicate heart rhythm and strength of the pulse. Asses the pulse is regular or irregular. An irregular pulse may be a sign of an irregular heart rhythm. If you're unable to feel a radial pulse, attempt to feel a carotid pulse by placing two fingers on the victim's neck next to his windpipe. Do not attempt to feel both carotid arteries at the same time! The carotid arteries supply blood to the brain; if you compress both at the same time, you run the risk of cutting off this blood supply, and the victim will rapidly lose consciousness.

The pulse is often measured at the wrist by feeling the radial artery, in the neck using the carotid artery, and in the elbow crease using the brachial artery. The normal pulse for healthy adults ranges from 60 to 100 beats per minute. The pulse rate may fluctuate and increase with exercise, illness, injury, and emotions.

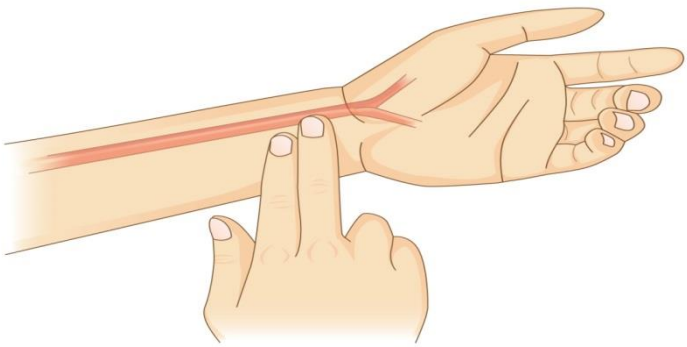


Figure 1:11: pulse rate measurement

3. Respiratory Rate

The respiration rate is the number of breaths a person takes per minute. The rate is usually measured when a person is at rest and simply involves counting the number of breaths for one minute by counting how many times the chest rises. Respiration rates may increase with fever, illness, and other medical conditions. When checking respiration, it is important to also note whether a person has any difficulty breathing. Normal respiration rates for an adult person at rest range from 12 to 16 breaths per minute. It vary depending on different factors.

4. **Blood pressure**

Blood pressure is the force of the blood pushing against the artery walls during contraction and relaxation of the heart. Each time the heart beats, it pumps blood into the arteries, resulting in the highest blood pressure as the heart contracts. When the heart relaxes, the blood pressure falls.

It is measured mostly both arm and wrist. The blood pressure is recorded as two numbers (for example, 130/80). The first number indicates the pressure in the blood vessels when the heart contracts. This is called the systolic blood pressure. The second, lower number is the pressure when the heart relaxes. This is called the diastolic blood pressure. Both the systolic and diastolic pressures are recorded as "mm Hg" (millimeters of mercury). It is measured by sphygmomanometer. Normal blood pressure in an adult is approximately 120/80. Persistent high blood pressure is known as hypertension and increases the risk of suffering a heart attack or stroke.

Equipment needed for B/P measurement;

- Alcohol swabs
- Sphygmomanometer with proper size cuff
- Stethoscope
- Tray
- Vital sign sheet
- Pen and pencil





Figure 1.12: Blood pressure measurement

1.3.4. Selecting, safety Equipment in emergency

All first aid kits should contain essential equipment in order to protect yourself and client from harm in an emergency situation. The following are major categories;

- Personal protective equipment/ safety equipment
- Safety equipment that is useful during an emergency.

A. Personal protective equipment (PPE) is a main safety equipment of protection for emergency and recovery workers. Depending on the type of emergency it is necessary to protect emergency response and recovery workers from physical, chemical and biological hazards. Therefore , main protective equipment includes respirators, eye protection, hearing protection and protective clothing. Some examples of PPE may include gas masks, gloves, overalls, boots, and goggles.

B. Infection control equipment

The first aid kits should contain basic protective equipment to reduce the risk of infection. It should contain equipment to safely clean up spills of blood or other bodily fluids

C. Wound management equipment

A first aid kit should contain equipment to deal with wounds of all sizes, ranging from minor cuts to life-threatening major bleeding. For example tourniquet ,bandages and others

Self-check -1	Written test

Name._____ ID. _____Date. _____

Test 1.1: True or False Question

Directions: Say true if the statement is correct and false if the statement is incorrect

1. Artificial Respiration is a procedure for making air to flow in to and out of a person's lungs when individual's natural breathing is inadequate or ceased.
2. The decision to perform mouth to mouth respiration by First Responders is a personal choice.
3. The aim of CPR is to compress the heart b/n sternum and the back bone (spine) thus literally squeezing blood out of it.

Test 1.2: Matching

Direction: Match Terms in column A with its meanings in column B

Column "A"	Column "B"
1. Tachypnea	A. Respiratory rate over 20
2. Confused	B. Respiratory rate below 12
3. Apnea	C. Shortness of breath – difficulty in breathing
4. Bradypnea	D. No breathing
5. Dyspnea	E. Fast and deep respirations
6. Hyperventilation	F. Slow and shallow respirations
7. Hypoventilation	G. heart rate over 100bpm
	H. Heart rate below 60bpm
	I. Average adult systolic range – 100 to 140
	J. Average adult diastolic range – 60 to 90

Test 1.3: Short answer questions

Directions: Answer all the questions listed below.

1. What is the purpose of First Aid?

_____

_____

_____

2. State the principles of First Aid.

_____

_____

_____

_____

3. Describe state of consensuses.

_____

_____

_____

4. The key signs that are used to evaluate the patient's condition are called?

_____

_____

_____

Operation Sheet -1

- **Operation Title:** Taking Vital signs

  Instruction: Perform all steps/tasks according to standard procedures /guideline

  Purpose: to identify the state of the clients

  Required tools and equipment: Vital sign measurement equipment; like thermometer, BP apparatus, etc.

  Precautions: use personal protective equipment

Procedures:

Step 1. Calibrate and ready each of vital sign measuring tool before measurement.

Step2. Calm yourself and select appropriate place

Step3. Sit the patents comfortable in appropriate place and position

Step4. Calm the patients appropriately

Step5. Control condition that affect patents Temperature, respiration, pulse and heart beat

Step6. Differentiate the normal and abnormal range of each vital sign.

Step7. Measure each of vital sign correctly

Step8. Register the findings.

Quality criteria: vital sign reading (measurement) done correctly manner.

LAP TEST-1	**Performance Test**

Name:_____ ID:_____ date:_____

Time started: _____ Time finished: _____

Instructions: Given necessary templates, tools and materials you are required to perform the following tasks within **1** hour. The project is expected from each student to do it.

Task-1: Count respiratory rate of individuals in all age groups accordingly.

Task-2: Count Pulse rate of individuals.

Task-3: Measure human body temperature of individuals.

Task-4: Perform measuring of blood pressure of individuals

Task-5: Records and interpret each findings of measurement.

Unit Two: Applying Basic First Aid Techniques

This learning unit is developed to provide the trainees the necessary information regarding the following content coverage and topics:

- Providing first aid management
- Reassuring casualty in a caring and calm manner
- Seeking First Aid assistance
- Monitoring and responding Casualty's condition
- Recording Details of casualty's physical condition
- Finalizing Casualty management

This Unit will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Provide first aid management
- Reassure casualty in a caring and calm manner
- Seeking First Aid assistance
- Monitor and responding Casualty's condition
- Record Details of casualty's physical condition
- Accomplish Casualty management

2.1. Providing First aid Management

2.1.1. Applying basic rules of ABCDE life

Respiratory Emergencies

Respiration involves the process of breathing and the exchange of gases (oxygen and carbon dioxide) in the lungs and in cells throughout the body. This could be takes place through respiratory system. Respiratory system comprises the mouth, nose, windpipe (trachea), lungs, and pulmonary blood vessels.

Natural breathing process is accomplished by increasing and decreasing the capacity of the chest and the lung. Atmospheric air being under pressure, rushes in and out with the increase and decrease of chest space.

During the inhalation phase of breathing (inspiration), the muscles of the chest lift the ribs, expanding the chest. At the same time the diaphragm contracts and descends toward the abdomen. In this way, the chest cavities increased in size and air flows in. When all muscles relax, the ribs and diaphragm resume their normal position, the chest cavity becomes smaller, and air flows outward. In all manual methods of artificial respiration, the objective is to cause an alternate decrease and increase in size of the chest cavity. When this is done, air flows in and out if there is no obstruction

Respiratory emergency is a condition in which normal breathing is reduced or stops so that oxygen intake is insufficient to support life

Causes of Respiratory Failure

A. Anatomic Obstruction:

- Obstruction by tongue – the most common cause
- Other causes of obstruction that constrict the air passages are:
- Asthma, , Diphtheria, Swallowing of corrosive poisons, Direct injury

B. Mechanical Obstruction :-

- Solid foreign objects lodging in the respiratory passage e.g. choking of food
- Accumulation of fluids in the back of the throat (mucous ,blood or saliva)
- Aspiration (Inhalation of any solid or liquid substance)

C. Air depleted of oxygen or containing toxic gases

D. Additional causes:

- Drowning , Circulatory collapse (shock), Heart disease, Strangulation
- Electrical shock
- Poisoning by alcohol, barbiturate, codeine etc.

- Lung disease e.g. pneumonia
- Compression of the chest e.g. accident

In case of respiratory failure the vital steps to carry out is applying basic rule of "DRS ABCDE"

Danger (D):- Check the surrounding area and make sure it's safe for you, the injured person and others in the area. Do this by looking, listening and smelling.

If the casualty is in immediate danger you should move them, but only if it is safe to do so. Try to lift or move the person in a way that will not incur further injury, and remember to protect yourself from back strain or other injuries.

Response (R): Check the patient's responses by talking and touching them (squeezing their shoulders). This is referred to as the "Talk And Touch Method". You may say: Can you hear me, What is your name and Open your eye.

If the patient responds they are conscious, breathing and have a pulse – make them comfortable and check them for any injuries using the secondary survey technique, call for help if required and continue to monitor them for at least 10-15 minutes before letting them move

A person who does not respond is unconscious and this is potentially life-threatening as they are at risk of choking, their breathing may stop or uncontrolled bleeding may result in death.

Send for help(S):- Call and Seek for an ambulance or medical assistance as soon as possible. When speaking on the phone, try your best to maintain your composure, speak clearly to the telephone operator and try to answer all the questions as best you can.

There are situations where it may be necessary to request the use of a bystander's mobile phone to make the emergency call. If possible you should ask a bystander to make the call for you so that you are able to remain with the casualty and continue with the required treatment. If you are alone you should shout for help. However if no one comes you should immediately proceed with CPR.

As well as seeking help for calling emergency services you may also ask bystanders for help in the treatment of casualties. This may be particularly helpful when conducting CPR as it can be physically tiring.

Elements of ABCDE approach:

It is very important approach in case of assessing Respiratory Emergencies.

- Approach every patient in a systematic way
- Recognize life-threatening conditions early
- DO most critical interventions first - fix problems before moving on
- The ABCDE approach is very quick in a stable patient

a. Airway (A): Open airway to allow air to reach the lungs. Check that the individual's airway is clear so that their breathing is not obstructed. To check their airway use the head tilt/chin lift technique as this helps lift the tongue from the back of the throat. One hand is placed on the casualty's forehead to tilt the head back while the fingers of the other hand are positioned on the bony part of the chin to lift it up and outward. The mouth should then be gently opened by pulling down on the jaw to check for any obstruction. If there is any foreign material present you should move the casualty into the recovery position and allow gravity to aid in draining material from the mouth. Ensuring and providing an open airway always takes precedence over the possibility of a spinal injury.

b. Breathing (B): While keeping the airways open, look, listen and feel for normal breathing signs. Restore breathing to reverse respiratory arrest, allow sufficient oxygen to enter the lungs and pass in to the blood. This is often easier to do when the injured person is on their back but can also be done while they are in the recovery position. For a full 3-5 seconds you should position yourself so that you can hear and feel if air is escaping from the nose and mouth, while also watching the chest and abdomen to see if they rise and fall with air movement. If the casualty is breathing normally, position them in the recovery position and again check their airway and head position. Check their airway after one minute and thereafter every two minutes.

c. Circulation(C): Determine if there is adequate perfusion and Check for life-threatening bleeding. Look, listen and feel for signs of poor perfusion, Cool, moist extremities, Delayed capillary refill, Diaphoresis, Low blood pressure, Tachypnea, Tachycardia and Absent pulses

d. Disability(D):

- Assess and protect brain and spinal functions.
- Assess level of consciousness (AVPU or GCS) in trauma
- Check for low blood glucose (hypoglycemia), pupils (size, reactivity to light and if equal), movement and sensation in all four limbs
- Look for abnormal repetitive movements or shaking and Seizures/convulsions

E. Exposure(E):

- Examine the entire body for hidden injuries, rashes, bites or other lesions
- Rashes, such as hives, can indicate an allergic reaction
- Other rashes can indicate infection

2.1.2. First Aid management of air way and breathing problem

Emergency medical care begins with ensuring an open airway and breathing status. The patient's airway and breathing status are the first step in your initial assessment for a very good reason: unless you can immediately open and maintain a patent airway.

The following activities are helpful to position the patient for airway and breathing status management:

- Shout for help (depend on the condition)
- Determine the consciousness of the causality by taping the victim on the shoulder and asking loudly
- Are you okay!?
- Assess and ensure that patient air way is clear
- Place the patient flat on his back with the head turned to one side
- Remove any thing which is preventing the taking in of air (Remove constraints from the neck)
- Kneel beside the patient's head place one hand under his neck and the other hand under his lower Jaw extend his head and neck gently back ward.
- This prevents the tongue from falling back in to the throat.
- Place your cheek and ear close to the victim's mouth and Nose.
- Look at the victim's chest to see if it rises, falls, and listen and fell for air to be exhaled for about 5 seconds.
- If there is no breathing pinch the victim's nostrils shut with thumb and index finger of your hand that is pressing on the victim's forehead.
- This action prevents leakage of air when the lungs are inflated through the mouth.
- Take very deep breath and hold it.
- Fit your mouth tightly over the patients open mouth and forcibly in to the lungs
- While carrying out respiration, check the patient's pulse every 2 or 3 minutes to ensure the heart has not stopped.
- Continue the breathing procedure at the rate 12 to 18 breaths per minute until the chest is seen to rise and the patient is breathing for himself or until is certain.

- If a patient is child, our mouth should cover both his nose and mouth. Very gentle breathing should be used and the younger the child, the gentler this should continue at a rate of 25 breaths per minute.
- Once the patient can breathe by him/herself/ place him/her in what is called the recovery position.



Figure2.1: Mouth to mouth respiration

For infants and children mouth- to- mouth and -nose resuscitation are administered as described above except that the

- Backward head tilt should not be as extensive as that of adult.
- Both the mouth and nose of the infant or child should be sealed off by your mouth.
- Blow in to the infant's mouth and nose once every 3 seconds (about 20 times per minutes)
- But in the case of children blow once every 4 seconds (about 15 times per minute).
- The amount of air is determined by the size of the victim.

If mouth to mouth is failed and no pulse cardiopulmonary resuscitation is followed.

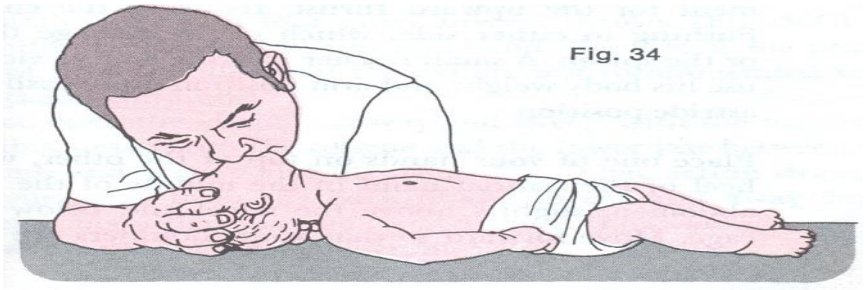


Figure2.2: Infant mouth to mouth respiration

Compressions/CPR

Cardiopulmonary Resuscitation (CPR) is the name given to the technique of combining rescue breaths with external cardiac compressions. It restore circulation to keep blood circulating and carrying oxygen to the heart, lungs, brain, and body. When CPR is applied to

the casualty, multiple body systems such as the brain and the heart are affected by the procedure as oxygen is being pumped into the blood through the circulatory system.

CPR can save lives or increase the chance of survival for the casualty until qualified medical help takes over. The job of the first aider who is considering CPR as a lifesaving option is to determine whether the casualty has a need for it. This can be assessed by looking for signs of collapse or indications of a life-threatening situation such as stopped breathing, no pulse and unconsciousness. If there is a lack of response from the victim and vital signs are missing, then it is cause to proceed with CPR immediately.

The importance of the initial assessment cannot be overstated. If the casualty has been assessed to be in a life and death situation, there is a high priority to implement appropriate life saving strategies.

For example,. If the casualty was found unconscious and not breathing properly, then CPR could be performed.

Failure to initiate CPR promptly can lead to brain damage and subsequent death of the injured person. The more immediate the response time to perform CPR, the better the chances of survival and less injury to the casualty. Timing is crucial when dealing with life-threatening injuries and illnesses as brain damage can occur within four minutes of oxygen being deprived.

When you perform CPR apply the following steps:

- ✓ Ensure the person is lying on their back, if possible and ideally on a flat, hard surface, and with their head at the same level as their heart.
- ✓ Kneel beside the person midway between the head and chest for ease of movement between giving breaths and compressions.
- ✓ Find the correct hand position – this is in the center of the chest.
- ✓ Apply pressure to the sternum with the heel of your hand, keeping your fingers up.
- ✓ With the other hand either grip the wrist of the hand on the chest, or place it over the top of the first hand. You can interlace your fingers so that the top ones pull the bottom ones off the chest during compressions.
- ✓ Use two hands for an adult, one for a child and the pads of two fingers for an infant.
- ✓ Keep your shoulders directly over your hands when making compressions – this will help you to push straight down on the chest giving the best blood flow.
- ✓ Keep elbows locked – this applies to the elbow of the hand on the chest if holding the wrist and both if interlacing the fingers. This will help reduce fatigue as you will

be able to use the weight of your upper body, rather that the strength of your arms when doing the compressions.

- ✓ Compress the lower part of the sternum by up to a third of the chest depth – this will vary depending on the size of the person.
- ✓ After each compression, allow the chest to return to the normal position as you rise up, but keep contact with it.
- ✓ Keep the up and downward movements smooth, with a steady rhythm.
- ✓ Compress faster than 1 per second.
- ✓ After every 30 compressions, give two rescue breaths.

After every 30 compressions you will need to deliver 2 rescue breaths. To do this:

- ✓ Position the head using the head tilt/chin lift method. The 'pistol grip' is often the best and easiest way to hold and position the jaw.
- ✓ Take a breath and place your mouth over the person's mouth.
- ✓ Pinch their nose or seal it with your cheek.
- ✓ Blow into their mouth and then turn your head to see if their chest rises and falls with the breath, indicating an effective breath and that air has reached their lungs. This also prevents you from inhaling their exhaled breath and allows you to hear air escaping from their mouth.
- ✓ If the chest does not rise and fall, adjust the position of the person's head, being careful not to lift, twist or turn their neck.
- ✓ Repeat with a second breath.

Remember to give smaller breaths to infants and children as they have smaller lung capacities. Whenever possible use a resuscitation mask. If signs of life return consciousness, normal breathing, moving place the person in the recovery position. It is more important that CPR is not interrupted too often to check for signs of life as regular checking has been shown to reduce survival rates. If you are unwilling to give mouth-to-mouth you should at least continue to administer chest compressions. Any resuscitation is better than none. Do not stop until emergency help arrives.





Figure 2.3: Cardio pulmonary resuscitation

The chain of survival:

The chain of survival is the rapid administration of CPR in sudden cardiac arrest situations to maximize its life saving potential. Understanding the links in the chain of survival will improve the probability of survival from a cardiac arrest.

Four links in the chain of survival:

1. **Early Access:-** Recognize the signs of an impending cardiac arrest and call for help
2. **Early CPR**: - As soon as the first aider observes the victim collapse to the ground, Commence CPR immediately.
3. **Early Defibrillation: -** Request an AED (Automatic External Defibrillator) from a by stander, they are easy to use and applied the moment the heart is in ventricular defibrillation (VF). For every minute defibrillation is delayed, there is approximately 10% reduction in survival. CPR should not be stopped until ambulance personnel or an AED (Automated External Defibrillator) arrive. An AED is an electronic device that is portable, easy to operate, and used when the casualty is having a Sudden Cardiac Arrest (SCA). When the machine detects an abnormal heart rhythm, such as Ventricular Fibrillation (VF) or Ventricular Tachycardia (VT), an electrical shock is sent to the heart, which can restore normal heart rhythm. People requiring CPR have abnormal heart rhythms.
4. **Early Advanced Care Procedures:-** The sooner professional emergency medical personnel/workers can attend the casualty, the better the chance of survival. Seek assistance from paramedics as soon as possible.



Figure 2.4:-chain of survival

Obstructed Airway: Conscious Victim

If the victim has good air exchange with only partial obstruction and is still able to speak or cough effectively, do not interfere with his attempts to expel a foreign body. If the victim cannot speak or cough, shows a distress signal, appears cyanotic or reveals an exaggerated effort to breathe, you must intervene appropriately.

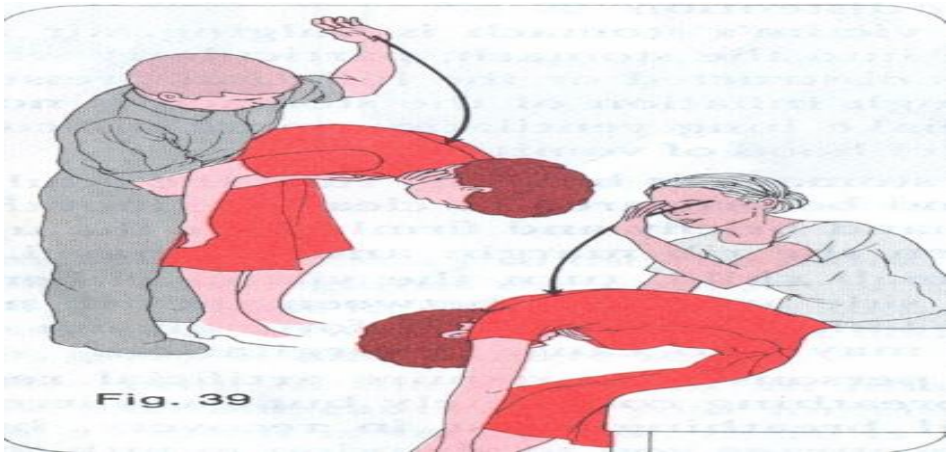


Figure 2.5: Techniques of Obstructed Airway management/Conscious Victim

Obstructed Airway - unconscious victim

- ✓ If you are not getting air exchange, reposition the head and again attempt to ventilate.
- ✓ If you still do not get an air exchange immediately turn the victim on his side towards you, resting his chest against your knees and administer four sharp blows between the shoulder blades
- ✓ Place the victim on his back (supine) and spread legs wide apart, straddle his hips or one thigh. This position gives comfort for the first -aider.
- ✓ Open the victim's airway and sweep with the fingers.
- ✓ If the procedures are ineffective, you must repeat the sequence.
- ✓ Attempt to ventilate and Perform five rapid back blows
- ✓ Perform five thrusts (push on the chest) and Do finger sweep
- ✓ If the stomach is building gastric distention, turn the adult victim to one side and clear the mouth after pressing your hand briefly and firmly over the upper abdomen between the rib margin and the navel. This procedure will force air out of the stomach. But it may also cause regurgitation.

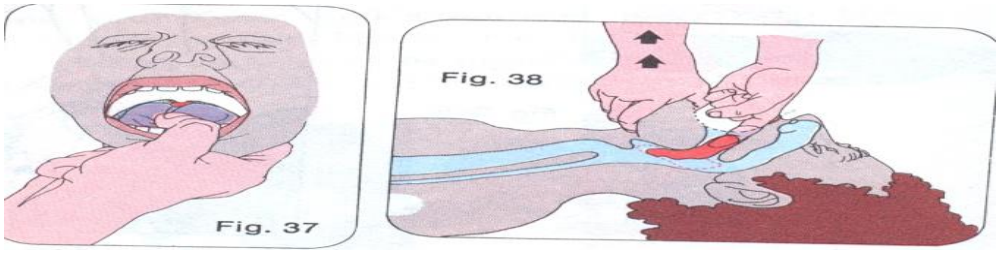


Figure 2.6: Techniques of Obstructed Airway management/unconscious Victim

Choking:

Choking is difficulty of breathing or stopping of breathing a totally or partially obstructed airway – caused by swollen tissues or a foreign body. E.g. Food or other material entering the windpipe instead of the gullet.

Common signs and symptoms include:

- ✓ Inability to cough breathes, speak or cry out.
- ✓ Clutching/gripping of throat.
- ✓ Cyanosis – blue skin, tongue, mouth lining.
- ✓ Anxiety/restlessness and Noisy breathing/wheezing.
- ✓ Red/congested face with bulging neck veins and Collapse/unconsciousness.

Table 2.1. First aid Management

Can the patient breathe, speak or cough?		
If Yes:	**If No and Conscious:**	**If No and Unconscious:**
1. Give the patient reassurance and encourage coughing until cleared. **Do nothing else.** 2. If the patient continues/starts wheezing or breathing noisily	• Call for help and ambulance. • Have person stand if able and lean on the back of a chair. • Give five sharp, upward *back blows* between the shoulder blades, using the heel of the hand. • After each blow – check if the object has been expelled. • If not successful – give up to 5 chest thrusts (similar but slower and sharper than CPR compressions). • Check to see if object has been expelled. if person becomes unconscious: • Lie on person on side and try to clear the • airway – check mouth for visible foreign material. • Use head tilt and jaw support to open airway • look, listen and feel for breath signs. • If person still not breathing commence ABC Basic Life Support process	• Call for help and ambulance. • Lie on person on side • and try to clear the airway – check mouth for visible foreign material. • Use head tilt and jaw support to open airway – look, listen and feel for breath signs. • If person still not breathing commence ABC Basic Life Support process.



Figure 2: choking

For infant /child:

Follow procedures for an adult, with these differences:

- ✓ Position child face down over your lap to take advantage of gravity.
- ✓ Position head lower than chest, at a 45 degree angle.
- ✓ Give 5 back blows between the shoulder blades.
- ✓ While giving back blows support the child's head by placing hand around jaw.
- ✓ If unsuccessful give up to 5 chest thrusts.
- ✓ If child becomes unconscious and stops breathing commence CPR.



Figure 2.7: Child choking

Shock:

It is potentially life-threatening. Shock can occur when the body is unable to cope with serious injuries, illnesses or stressful situations e.g. bleeding, burns, severe allergic reactions, witnessing an accident.

A person who goes in to shock the body prioritizes the supply of oxygen/blood to the vital organs first, restricting blood to the limbs, resulting in pale, cold, sweaty skin. Blood will then be restricted to the digestive system, resulting in nausea. After a time the tissues of the arms and legs will begin to die, at this stage the brain will return blood flow to these parts, causing vital organs to loose blood flow. If this continues the person will become drowsy, and the heart and lungs will begin to shut down, resulting in death.

Recognizing shock:

- ✓ Cold, pale, sweaty skin.
- ✓ Rapid, weak pulse.
- ✓ Rapid breathing.
- ✓ They may feel anxious, restless and very thirsty.
- ✓ They may develop nausea/vomiting and Altered conscious state

First aid Management:

If the patient is conscious:	If the patient is unconscious :
▪ Prevent further injury. ▪ Assess patient and provide first aid for major injury/illness. ▪ Manage any other injuries e.g. fractures, bleeding. ▪ Make person comfortable and cover with a blanket to maintain body temperature. ▪ Do not give the patient any food or drink. If needed moisten lips to make more comfortable. ▪ Call for an ambulance and for help. ▪ Continue to monitor ABC (Airway Breathing Circulation) and consciousness/responses.	1. Commence ABCDE Basic Life Support. 2. Call for help and an ambulance.

Stroke

Most commonly caused by a bleeding or a blood clot in the brain, a stroke occurs when the brains blood flow is disrupted, leading to brain tissue damage.

The most common method for checking for a stroke is using the **FAST** method.

F – Facial weakness – Can the person smile? Does the mouth or eye droop?

A – Arm weakness – Can the person raise both arms?

S – Speech – Is the speech slurred? Can the person understand what you say?

T – Time to act fast – Call an ambulance

Other common signs and symptoms include:

- ✓ Sudden weakness/numbness/paralysis of one side of the face, arm or leg.
- ✓ Sudden difficulty swallowing and Blurred/decreased vision
- ✓ Severe sudden headache and May develop nausea, vomiting and drowsiness.
- ✓ May develop dizziness, fatigue or become and unconscious.

Time is critical so calling an ambulance quickly is vital.

If the patient is conscious:

- ✓ call an ambulance
- ✓ Carry out any required first aid.
- ✓ Help the person rest comfortably
- ✓ Reassure person to help relieve anxiety.

- ✓ Do not give the casualty anything to eat or drink.
- ✓ If the person is drooling or has difficulty swallowing move them in to the recovery position on the side with the facial droop facing down/closest to the ground.

If the patient is unconscious;

- ✓ Commence DRS ABCDE Basic Life Support.
- ✓ Call an ambulance
- ✓ Move them in to the recovery position on the side with the facial droop facing down/closest to the ground.
- ✓ Care for any life-threatening illnesses/injuries.
- ✓ Continue to monitor vital signs until ambulance arrives.

Bleeding:

Bleeding is defusing or oozing of blood from blood vessels(Hemorrhage)

Any bleeding, wounds and injuries will need to be located and treated accordingly. It may be life-threatening if there is blood spurting from the wound. Bleeding can be classed and checked as internal or external .

Methods of controlling bleeding externally

Direct pressure- using compresses

- ✓ Pressure bandage can be placed to hold pads of cloth.
- ✓ Put a thick pad of cloth held between the hand and wound

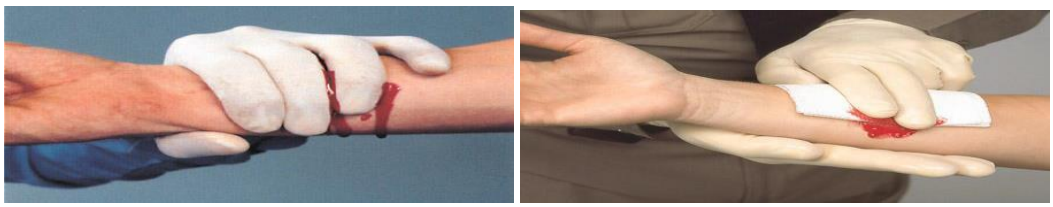


Fig. 2.8: Fingertip and direct pressure

Elevation:- The injured part of the body should be raised about the victim's heart

- ✓ Applying pressure on the supplying artery specially on brachial artery in severe bleeding,
- ✓ Apply tourniquet in severe bleeding



Fig. 2.9: Elevated extremity Pressure point brachial and Pressure point Femoral

Wounds:

A wound is a break in the continuity of the body tissue either internal or external.

Wounds are categorized as either closed or open.

A. Closed Wounds – damage occurs beneath the surface of the skin e.g. a bruise.
B. Open Wounds – damage breaks the outer layer of the skin e.g. scrape, cut. Usually involves bleeding.

Types of Wounds: Abrasions**,** Incisions**,** Lacerated**,** Punctures**,** Avulsions

The main aims when dealing with wound:

- ✓ To control the wound stop bleeding
- ✓ To treat and prevent shock
- ✓ To protect the wound from contamination and infection
- ✓ To prevent complication

Table 2.2. General first aid treatment for major wounds involves:

If the patient is conscious:	If the patient is unconscious:
• Put a dressing on the wound and control bleeding • (as for external bleeding). • Call for help or get the person to medical attention. • Do not remove bandage once bleeding has been controlled. • Do not try to clean the wound – medical staff will do this. • Continue to monitor person closely.	• Follow ABC Basic Life Support process. • Call for help and follow emergency personnel instructions.

Seizures:

Seizures occur when the electrical activity of the brain is interrupted or becomes irregular. This may be caused by a number of conditions and injuries including: Stroke, Poisoning. Head injury, Meningitis ,Brain tumour. Epilepsy etc.



Figure 2.10: Seizures

First aid management may include;

During the seizure:

- ✓ Do not try to stop the seizure.
- ✓ Do not try to restrain/hold the person – this could result in other injuries.
- ✓ Make the area around the person safe – remove objects, furniture etc. Away form the person.
- ✓ Protect the person's head – use a low pillow or folded clothing etc. Under their head.
- ✓ Do not place anything in the person's mouth/between their teeth – they will not swallow their tongue. While they may bite their tongue or cheek this is not usually done with enough force to cause significant damage/bleeding.

Immediately after the seizure:

- ✓ Place the person in the recovery position to manage the airway and allow any fluids to drain out of the mouth. This may include blood and vomit.
- ✓ Keep on side until fully conscious – they may be drowsy or disoriented after the seizure.
- ✓ Carry out any required first aid.
- ✓ Reassure the person.
- ✓ Ask bystanders not to crowd around.

- ✓ If the person became incontinent during/after the seizure provide some covering for the person's clothing ifpossible.
- ✓ Remain with the person until they are fully conscious and aware of their surroundings.
- ✓ Contact for medical help.

Burns:

A burn is an injury that results from heat, chemical agents, or radiation. It may vary in depth, size, and severity causing injury to the cells in the affected area.

Burns are usually classified in three levels based on the depth or degree of skin damage. These are:-i

1. First degree burn
2. Second degree burn, and
3. Third degree burn.

- **1st degree burn** (**Superficial burn):** may have Redness or discoloration, Mild swelling and pain and Rapid healing.




Fig. 2.11:- superficial burn

- **2nd degree burn(Intermediate burn):** Greater depth than first degree burns; Redness and mottled appearance, Blisters, Severe pain, Swelling and Prone to infection.




Fig. 2.12: 2nd degree burn(Intermediate burn)

- **3rd degree burn(Deep burn):** Deep tissue distraction, White appearance, No pain and blisters; and Complete loss of all layers of skin. This type of burn results in severe disability and/or death



Fig.2.13: 3rd degree burn(Deep burn)

First-aid measures: If the victim is burned with fire apply cold applications, immerse the burned area in cold water role the burned person on the ground, or cover with water socked thick cloth or blanket and put out the fire. If the accident is of electric source, quickly disconnect at the electric meter or check point, or use rope wooden stick, dried cloth etc. to disconnect it.

- ✓ Move the victim from the accident place to avoid further injury;
- ✓ Loosen and/or remove burned dresses and lay down the victim on his/her back and let him/her breathe fresh air and ensure that no foreign objects have entered and blocked the passage of the respiratory system;
- ✓ If the victim is not breathing properly, initiate mouth to mouth artificial respiration;
- ✓ Cool the burned area under cool water for 20 minutes.
- ✓ Gently remove any clothing and jewellery from the burned area.
- ✓ Thoroughly check the wound to determine the size, and the degree of burn;
- ✓ Do not try to remove any clothing that is sticking to it.
- ✓ If the area cannot be immersed – such as the face – towel, sheets or wet clothes that have been soaked in water can be applied. Change/rewet these regularly as they will absorb heat from the burn.
- ✓ Cover the burn with a sterile, non-stick dressing and loosely bandage in place. If this is not available or the burn covers a large area use a dry, clean sheet or other material that is not fluffy.
- ✓ Minimize shock.
- ✓ Do not use ointments, lotions, creams or powders on a burn – these will seal in heat and may contaminate the burn
- ✓ Seek for medical care

Measure to prevent burns:

- Keep away from children items such as matches, burning lamp and candles;

- Prepare and place stoves and other cooking installations in a safe way. E.g. locally made standing stove
- Keep away from fire inflammable materials and don't' come with materials such as nylon close to fire-place;
- Educate smokers not to smoke inside a house and if they smoke give them strict advice to put off the burning left over cigarette

Fractures:

Fractures are breaks in bones tissues and can be classed as either open or closed fractures.

- **Open fractures**: involve an open wound – both sides of the fracture do not need to be visible. Limb may be severely bent or an object may have penetrated the skin, breaking the bone.
- **Closed fractures**: no unbroken skin, more common than open fractures.
- **Compound fractures:** involve both feature

Fractures can become life-threatening if there is severe internal or external bleeding and due to the risk of shock. If organs or major nerves or other structures/systems are also injured, the fracture, whether open or closed, is classed as 'complicated'.

Common signs and symptoms include;

- ✓ Pain/tenderness – at or near injury site.
- ✓ Deformity or abnormal position/twist of limb.
- ✓ Swelling and Loss of function.
- ✓ Discoloration, Bruising of skin and Shock.

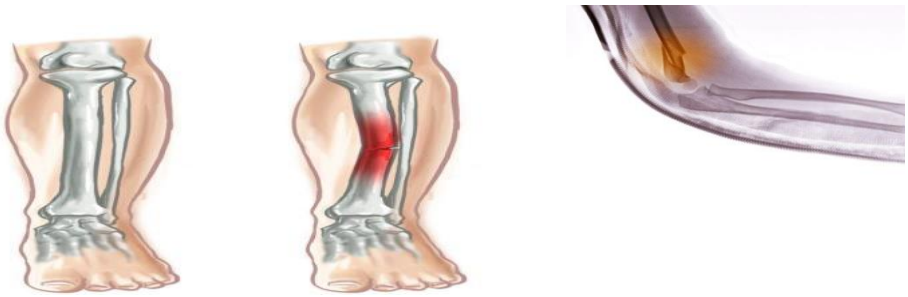


Figure 2.14: Fracture

General first aid measure includes:

If the patient is conscious:

- Control any bleeding and cover any wounds.
- Check for signs of fractures.

- Ask casualty not to move injured body part.
- Immobilize and/or support the fracture.
- Handle gently – move the limb/body part as little as possible to prevent making the fracture worse (e.g. a closed fracture may become an open fracture) and to lessen the person's pain.
- Seek medical aid.

If the patient is unconscious:

- Give ABC Basic Life Support
- Seek medical aid.

Dislocations:

Dislocations occur when a bone is separated or displaced from its normal anatomical position. If left untreated dislocations may lead to a permanent loss of function in the affected area. Joints which are most frequently dislocated are shoulder, elbow, thumb, finger, Jaw and etc.

Signs and symptoms:-Pain, near the joint, victim cannot move it, deformity abnormal appearance, swelling and busy are usually present.

First aid and management:-

- ✓ Support and secure the part in most comfortable position
- ✓ Obtain medical aid at once
- ✓ Do not attempt to replace the bones to normal position
- ✓ Seek professional medical help

Unconsciousness:

victim is said to be unconscious when the patient is asleep, he/she cannot speak and has no control over his movement. Victim cannot respond to place, people and time (PPT)

Cause of unconsciousness

Head injury (bleeding),Fainting, Heart attacks, Poisoning, Shock, Epilepsy, Diabetes etc

Level of unconsciousness

- ✓ Alertness: the patient can speak, answers, questions and feels pain
- ✓ Lethargy: the patient is awoke but answers questions slowly- he may be confused about what is happening and where he is.
- ✓ Drowsiness: the patient is sleep of he is unable to concentrate on what we are saying
- ✓ Semi-consciousness: the patient is very sleep of and has great difficulty in speaking and in answering your questions

✓ Unconsciousness: the patient is sleepy we cannot speak and has no control his movements

First aid management for unconscious Patient

During treatment of unconscious patient follow principles of ABCDE and

- ✓ Check for any bleeding and attempt to stop bleeding
- ✓ If the victim is improving place in recovery position
- ✓ Do not give to an unconscious victim anything by mouth
- ✓ Establish level of responsiveness, check pulse,
- ✓ Breathing rate and record any observations
- ✓ Give priority to respiratory problems and heartbeat.
- ✓ Seek for medical help



Figure 2.15: Recovery position of unconscious patient.

Strains and Sprains

A **strain** is over stretching of muscles due to over pulling of Muscles.

Occurs when muscle or tendon fibers are stretched and torn.

Sprain is an injury which occurs at joints when the ligaments and tissue around particular joints are suddenly twisting or torn. Sprain is more severe than strain**.** It usually happens or occurs at joint especially at ankle joint. It might involve bone (broken)**.** Sprain is also tearing of ligaments Signs and symptoms**.** Pain especially on movement**,** Swelling**,** Loss of movement

Common signs and symptoms of strains include:

- ✓ Signs and symptoms of strain
- ✓ Pain (sudden sharp pain at the site of the injury)
- ✓ Stiffness of muscles
- ✓ Difficulty in moving the affected parts

First aid treatment for sprains and strains uses the RICER acronym:

- **R – Rest**: Avoid movement/activities that cause pain. Assist person to most comfortable position – if head/neck/spinal injuries are suspected leave person lying flat.
- **I – Ice**: Control bleeding if applicable then apply a wrapped ice pack/cold compress. Reapply every 2hours for first 48-72 hours. This helps to reduce swelling and relieve pain/discomfort.
- **C –Compression**: Apply a firm, supporting bandage over the area, giving even pressure over the area. Light padding may be used if pain is severe.
- **E – Elevation**: If possible, raise the injured area above the level of the heart. This slows the blood flow to the area and reduces swelling. Do not elevate if fracture is suspected.
- **R – Referral**: refer the person for further advice and treatment. May be their doctor or emergency department



Figure 2.16: sprain and strain

Poisons:-

A poison is a substance that can cause injury, sickness and possibly lead to death.. Many poisons may only be harmful if exposed to larger quantities. Poisons enter the body either accidentally or intentionally. As with any medical emergency it is important to try and identify the source of the injury and illness so that it may be treated appropriately.

Poisons can enter the body by contact with the skin, ingested, injected or inhaled and they can be solid, liquid or gas (including fumes and vapours)

Inhaled Poisons include

- ✓ Gases:- carbon monoxide from an engine, carbon dioxide occurring naturally from decomposition, nitrous oxide used in medicine, chlorine used in pools and cleaning.
- ✓ Fumes from sources such as: glues, paints, petrol, drugs, including cocaine, as well as other odour less fumes.

Ingested Poisons include:

- ✓ Medications – both prescribed and over-the-counter.
- ✓ Contaminated foods including mushrooms and shellfish.

- ✓ Alcohol and Cleaning products.
- ✓ Pesticides and Plants.

Injected Poisons include: Those obtained through the bite or sting of insects, spiders, snakes, marine animals, etc. Those from drugs or medications injected through a needle or other sharp object.

Common signs/symptoms of poisoning include: Chest and/or abdominal pain, Nausea, Vomiting, Diarrhea, Difficulty breathing/irregular breathing, Presence of drug paraphernalia., Sweating, Seizures, Altered conscious state, Burns around the lips and tongue in inhaled/ingested.

General steps for dealing with a poisons situation are

- ✓ Remove the poison from the body
- ✓ Give the patient the antidote
- ✓ Treat symptoms
- ✓ Give comfort and confidence

How to remove the poison from the body

- ✓ Make the victim vomit it
- ✓ Give plenty of tape water.
- ✓ If it is a child give them syrup or water
- ✓ Repeat the procedure
- ✓ Refer the victim if it is not improving

NB. Do not make patient vomit if the poison e.g. paraffin or kerosene. Do not make the patient vomit if unconscious. For poisoning by acid, give alkali, anti-acids.

Substance Misuse (alcohol & other drugs)

Substance misuse occurs when a person takes an overdose of a drug and it becomes toxic to the cells and organs in the body. There are accidental and intentional overdoses. As a result, a drug overdose can be life threatening and require first aid management.

Any drug, can be misused when it is taken outside approved medical uses. With over the counter drugs or commonly used drugs, there are strict instructions on the package of the drug that specifies the daily dosage. Examples of commonly used over the counter drugs are aspirin, ibuprofen, paracetamol, acetaminophen (Tylenol) and products that contain codeine.

With all prescription drugs, there is a sticker label with the name of the patient, the daily amount to be taken and when to take the medication (morning/afternoon or before/after meals).

Illicit drugs or street drugs are those obtained without a prescription and are illegal to possess. Alcohol overdose, can be harmful and in extreme cases cause death.

In medical literature, it is known that excessive alcohol consumption can cause drunkenness, impair judgment and make the person more prone to accidents in the workplace when operating machinery or driving.

Binge drinking can slow respiration and lead to unconsciousness. Too much alcohol can cause death. First aid management of substance misuse is similar to treating casualties who have been affected by poisonous substances because the body sees a drug overdose as being a poison. First aid treatments can include:




Figure 2.17: Substance abuse

Bites:

There are different types of bite occur. The following are commonly happen bite.

I. Snake Bite

Signs and symptoms

- ✓ Disturbed vision
- ✓ Feel nauseated or vomiting
- ✓ One or two small puncture wounds with sharp pain and local swelling
- ✓ Symptoms and sign of shock
- ✓ Sweating and salivation in advanced stages of venom reaction

First aid management;

- ✓ Lay the victim down and advise not to move
- ✓ Calm the victim
- ✓ Immobilized the affected part and keep it below the level of the heart
- ✓ Wipe the wound of venom
- ✓ Apply firm cord just above the bite
- ✓ This must be removed if you are sure that anti venoum has been injected and you cannot get the victim to hospital in time.

- ✓ Seek for medical help

If there is no anti venoum do the following:

- ✓ Tie a cord tightly around the limb just above the bite
- ✓ Using a razor blade or a clean knife make a cut 1 cm deep
- ✓ Suck the liquid which is coming out of the wound
- ✓ Continue to suck and dispose for 5-10 minutes
- ✓ Loosen the cord around the patients limb
- ✓ Disinfect the wound
- ✓ Refer to hospital for anti- venom injection.



Figure 2.19: Snake bite

II. Dog Bite

Rabies is a sickness due to an infection from an animal usually a rabid dog, cat, fox, wolf, and bats. The infection grows in the animal's nerves, may develop the disease, if the saliva enters a wound or scratch on a human being.

Signs and symptoms of a rabid dog

- ✓ Has difficulty in swallowing
- ✓ Is lethargic /lazy/
- ✓ Hides it self
- ✓ Does not want food, but swallows, pieces of wood stone etc.
- ✓ Barks in unusual way and never stop barking
- ✓ Saliva runs out of its mouth

First aid management:

- ✓ Clean the wound with soap and water
- ✓ Cover the wound with dressing ointment/powders
- ✓ Find out if anyone knows the dog that bit the patient
- ✓ If the dog known, ask its owner to watch the dog carefully for lodges and to let you know it shows any of the above sign and symptoms in that time. See, during that time, it

begins to show any of the above signs and symptoms. Get the dog Killed. Send the person to hospital or Health center immediately for anti-rabies vaccination.

Eye Injury

Eye injuries may be serious, even if minor, as the eye is very sensitive and easily damaged. Eye injuries may involve either or both the bones and soft tissues surrounding the eye, as well as the eyeball itself.

Since the eyes are delicate, they can be affected easily therefore; immediate help should be given.

Signs and symptoms

- Pain inside the eye
- A high volume of tears in the eye.
- Wound or cut around the eye ball
- Different between the size of eye ball
- Sight decreases
- Inflammation and infection

Management of the eye injury

- ✓ Avery light covering be applied to an injured eyes
- ✓ Do not apply pressure
- ✓ Reassure the patient
- ✓ If no improvement in few days, Refer the victim to the nearest health facility

If foreign bodies in the eye (such as dirt, sand, slivers of wood etc.):

- ✓ Tell the person the try to remove the foreign body by blinking several times – this will produce more tears, which may flush it out.
- ✓ If this does not work, try flushing the eye with water – keep the affected eye lower so the unaffected eye does not become contaminated.
- ✓ If this does not remove the object, cover the eye with a pad, taped in place, then seek professional medical attention

If object is embedded in the eye:

- ✓ Do not attempt to remove the object.
- ✓ Place a sterile dressing around the object.
- ✓ Stabilize the object in place as best as possible: a paper cup could be used, placing it over the object before applying the bandage.
- ✓ Bandage it in place.

- ✓ Ask the person to keep unaffected eye closed – this will prevent blood/dirt/fluid from entering it.
- ✓ Advise person to try not to move the unaffected eye – this will prevent movement in the affected eye also.
- ✓ Seek for medical help



Figure 2.20: Eye injures

Ear Injuries

Bleeding and fluids in or draining from the ear may be from an injury to the ear itself or as a result of a serious head or spinal injury.

Signs and symptoms of ear injuries may include:

- Pain and Impaired hearing or deafness in affected ear.
- Bleeding from the ear.
- If related to an injury within the skull: watery fluid mixed with blood coming from the ear, headache and/or altered conscious state.

If Bleeding from the ear:

- Cover the ear with a clean material (sterile if available) dressing.
- Do not plug the ear with wool
- Do not put in drops
- Refer the victim to the nearest health facility

Foreign body in the ear:

- Turn the patient's head to the affected part of the ear so that the foreign body may drop out.

- If it is an insect which is inside the ear, direct torch- light to the ear- the insect may follow the light and come out of the ear. If this does not succeed, Pour in taped boiled water, the insect may float out
- If neither these treatment is successful refer the client to the next health facility.



Figure 2.21:Ear injure

Nose Injures

Bleeding from the Nose: If the foreign body is either beans, peas, avoid putting water or any fluid:

- ✓ Get the patient to pinch the lower part of his nose firmly for 10 minutes, while breathing through his mouth
- ✓ Loose tight clothing around his neck
- ✓ Tell the patient not to blow his nose for several hours
- ✓ If bleeding persists, refer the client to the next health facility.

Foreign body in the nose: In an adult, a foreign body may enter the nose by accident, but mostly common in children who insert a pea or a bean in to their noses.

NB. - Do not attempt to remove it, refer to the next health facility.



Figure 2.22: Noise injures

Needle Stick Injuries

A needle stick injury occurs when a used needle punctures a person's skin. This puts the person at risk of infection of blood-borne diseases such as HIV, hepatitis B and hepatitis C.

General first aid treatment for a needle stick injury involves:

If the patient is conscious:

- ✓ Reassure the patient and get them to rest and stay calm.
- ✓ Let the wound bleed freely for a few seconds.
- ✓ Flush/wash the injury site with soap and running water – if not available an alcohol-based hand rub/wash may be used.
- ✓ If necessary a sterile, waterproof dressing may be applied.
- ✓ Urge the person to go straight advanced treatment. If possible the needle should be retained in a rigid, puncture resistant container with lid for later testing.

If the patient is unconscious

- ✓ Follow DRS ABCDE Basic Life Support process.
- ✓ Call for ambulance and help.



Figure 2.23:-Needle stick injures

DIARRHEA

If someone has over three frequent/subsequent loose stool in a day, it is called diarrhea. When an individual loses much fluid from the body due to diarrhea and vomiting, it is likely that he/she becomes unconscious and /or dies.

Causes of diarrhea and/or vomiting: Food poisoning and Intestinal parasites. Excessive diarrhea may lead to loss of body fluids and called dehydration

Signs of dehydration:-

- Body debilitation or loss of weight
- Dryness of the mouth or tongue, sunken eye balls, eye drops, and sunken fontanel, in children
- Dry and wrinkled skin,
- Restless and unconscious and others

First-aid measures:

- ✓ First, ensure that there are no adverse signs that are usually precipitated by diarrhea and vomiting such as:- Sunken eye balls, wrinkled skin, restlessness; and unconsciousness; and in children, continuous vomiting after taking fluids, shivering etc.
- ✓ Prepare ORS in one litter of boiled and cold water. If ORS is not available prepare homemade solution as follows. Mix eight spoon of sugar, with half a spoon salt in one litre (three normal beer bottles) of boiled cold water. If available, add half a glass of orange or banana juice into the solution; The ORS or home-made solution is prepared for an adult. Therefore, he/she must take the fluid in small amount every five minutes. If the one liter solution is not finished in 24 hours, prepare and give a new/fresh solution in the following day. In addition frequently provide the victim soup, rice water, gruel/oatmeal (an adult can take daily up to three liters of fluid)
- ✓ For children give ORS or a solution mix of eight spoon of sugar and half spoon of salt in one liter of boiled cold water or mix of 2 times rice flour or corn or wheat or smashed potato in one liter of water and boiled for 5-7 minutes. Feed children after it is properly cooled in the following manner.
- ✓ Children 2 months to 2 years old must get 50-100 milliliters (1 or 2 cups), a maximum of 500 milliliters in one day (one spoon every 2 minutes)
- ✓ Children 2-10 years old must get 100-200 milliliters or 2-4 cups of ORS or home-made solution after every diarrhea episode the child can take up to one liter of the solution).
- ✓ If the victim is over 10 years old, give the fluid until satisfied
- ✓ If the victim vomits the fluid, wait for about 10 minutes, and give one spoon of the solution every three minutes
- ✓ Frequently breast feed the victim and add in small amount other supplementary foods such as gruel/oat meals every 10 minutes; and
- ✓ Continue the supplementary feeding for about two weeks after the diarrhea ceased.
- ✓ Consult care takers for further medical help.

Rationale for referral

- Persistent vomiting after taking fluids
- If the diarrhea is stained/mixed with blood and the victim has high fever
- If the vomiting is accompanied with sign such as tenderness and sever cramp of the stomach
- If the diarrhea continues for 3 days in children and 4 days in adults without improvement.

Measures to be taken after first-aid assistance:

- Explain the causes of diarrhea and vomiting'
- Observe on the presence of precipitating factors in the household, such as the maintenance of house cleanliness and personal hygiene, water source usage, the handling of food and feeding practices. Based on the findings educate the household or the community with demonstrations.

Preventive Measures:

- Educate and demonstrate to the household on the importance of washing hands with soap and water, or sand and water etc. before eating
- Feed children supplementary food and milk with cup and spoon or breast-feed instead of bottle feeding
- Keep children in clean areas and keep them always away from dirty area
- Don't feed on unclean and unprotected food stuff
- Use always latrines/toilets
- Maintain personal hygiene and clean environment.

Diseases Characterized By Fever

When an individual's body temperature is too hot than normal (above 37.5 oc) he/she has a fever. Fever itself is not an illness, but a sign of many different illnesses.

Common diseases that precipitate fever:-Yellow fever, Typhus, relapsing fever , Typhoid, Meningitis'**,** Influenza, Malaria and etc

Adverse consequences of febrile diseases

- Mental confusion, unconsciousness;
- Reduction of body fluid;
- Convulsion; and
- High fever precipitates brine damage, paralysis, low blood pressure, dysfunction of kidneys, inability to hear, speak, and liver damage.

First-aid Measures for febrile cases in general

- Cover with or put light dress on the victim. If the victim is a child, cover it with light cloth and carry it in your arms;
- Replace fluids lost by profuse sweating give frequently the victim, soup, gruel oatmeal, if the victim is a child, give frequently breast-milk;
- Put cloth soaked in lukewarm water on the chest, face and abdomen to bring down the fever;

- Ask or ensure perhaps the presence of convulsion, chillness, vomiting, diarrhea, meningitis etc;
- Consult or refer for the professional staff in the health facility to find out whether the cause of the fever is or not an infectious disease

2.2. Reassuring Causality

2.2.1. Causality level of consciousness and communication style

Level of consciousness

Level of consciousness is a term used to describe a person's awareness and understanding of what is happening in his or her surroundings.

There are three main levels of consciousness:

1. Consciousness is an awake state, when a person is fully aware of his or her surroundings and understands, talks, moves, and responds normally.
2. Decreased consciousness is when a person appears to be awake and aware of surroundings (conscious) but is not responding normally. While in a state of decreased consciousness, a person may not answer when spoken to, stare straight ahead, and have no facial expression. Others may think the person is acting confused, odd, or sleepy. Later, the person may not be able to recall what happened.
3. Unconsciousness is when a person is not aware of what is going on and is not able to respond normally to things that happen to and around him or her.
   - ✓ Fainting is a brief form of unconsciousness.
   - ✓ Coma is a deep, prolonged state of unconsciousness.
   - ✓ General anesthesia is a controlled period of unconsciousness.

2.2.2. Communication style

When professional medical assistance or a relieving first aid provider arrives, you must communicate to them all knowledge you have about the casualty, changes in their vital signs, action taken and, where appropriate, the incident giving rise to the injury.

Communicating details of the incident

When making initial contact with Emergency Services to obtain help they will require information about the incident before they send assistance:

- Be guided by them – let them ask questions and answer them as required
- Speak clearly and calmly
- Never hang up the telephone until directed to do so.

Emergency service telephone operators will want information about:

- The exact location of the casualty
- The number of casualties
- The age and gender of casualties
- Descriptions of injury, illness and symptoms
- Details of any first aid which may already been given
- Whether or not the situation is life threatening and if you need over-the-telephone assistance in rendering more first aid.

While the authorities will prefer to have all of the above information, **never** delay calling them just because you are missing some of the information, they will ask you about. Always contact them and get them moving towards you.

When assistance arrives

When professional medical assistance arrives:

- Identify yourself – then be quiet!
- Allow them to take the lead and ask questions
- Provide accurate information. Advise them regarding:
  - ✓ What you discovered on arrival at the scene
  - ✓ The treatment you provided
  - ✓ Details of any movement of the casualty you were forced to make
  - ✓ Relevant information about the casualty provided by others. For example, the family of the casualty may have advised you the casualty is deaf, a diabetic, or has just been released from hospital following a certain medical condition.

- Refer to notes taken at the time when assessing and monitoring the casualty – about respirations, pulse rates. Highlight changes in vital signs and other physical conditions of the casualty
  - ✓ Add any relevant information you believe exists in relation to
  - ✓ the casualty or the treatment you have provided
  - ✓ Follow their instructions – about what to do, hold, move or apply
  - ✓ Supply any local/venue-specific information you believe is useful or will facilitate the treatment and/or removal of the casual

2.3. Seeking first aid assistance and monitoring Causality Conditions

2.3.1. Seeking first aid assistance in a timely manner

In all first aid situations there can be a need to call on others who are not professional medical people to help/ provide the basic first aid in an emergency situation.

Wherever possible you should always seek assistance from others to help someone. Seek assistance from work colleagues, supervisors, Friends and family members of casualty and anybody else close by. You may also ask by standers for help in the treatment of casualties. Call for help if possible. When asking for help: Never be afraid to ask for help – from anyone; Most people are prepared to help even if they do not know what to do. They will do what you tell them or ask them to do. A vital thing they can do is to confirm professional medical help is on the way. If one person refuses to help, ask someone else. Never assume just because one person has refused, everyone will refuse

People may be asked to:

- Give information about causes of injury
- Provide directions to emergency services and Contact friends or relatives of the casualty
- Help carry or move the casualty and Protect casualty
- Communicate with emergency services and Record verbal information you give them
- Obtain first aid requisites for you.

2.3.2. Requesting ambulance support and medical assistance

Ambulance is a vehicle that transports critically sick or injured people to a medical facility.

It accommodate one or more patients and emergency medical personnel, supplies and equipment to stabilize a patient's condition en-route a hospital. Requesting of ambulance support and/or appropriate medical assistance according to relevant circumstance using relevant communication media and equipment is live saving.

Accurately convey assessment of casualty's condition and management activities to ambulance services /other emergency services/relieving personnel.

Obtained professional medical help as much as possible. Ask someone else to call for help such as a colleague, management, a bystander or member of the public while you go to the casualty or while you are rendering first aid**.** Yelling out for help. Yell out for someone to ring an ambulance**.** Flagging down a passing vehicle and asking them for help or to ring an ambulance**.**

The importance of obtaining professional medical help:

- It increases the likelihood of survival of the casualty
- It allows necessary drugs and medications to be administered to the casualty at the earliest opportunity

- It enables professional care to be provided as soon as possible
- It reduces the possibility of the casualty suing the venue for breach of 'duty of care'.

Facilitate the arrival of emergency services or other help by:

- Opening gates, or arranging for them to be opened
- Moving vehicles which may impede access
- Asking others to position themselves in locations to signpost the location of the casualty as emergency service workers arrive on scene.

2.3.3. Observation of casualty's condition and management activities

Once you have started treating the casualty for their injuries you should continue to monitor their condition and document any changes, or treatments that you administer. Continue to monitor the vital signs of the casualty including: Body temperature, Pulse (or heart rate), Blood pressure, Respiratory rate.

It is important to monitor these vital signs as they can change rapidly causing the casualty to descend into unconsciousness or regain consciousness. The casualty's condition can deteriorate or improve according to the treatment being administered. All information form the assessment must be carefully collected, ready to be passed onto ambulance/paramedic personnel.

2.3.4. Details of casualty's physical condition, management

When relaying information to the emergency care, stick to facts about the incident not opinions. Answer questions and convey information in a calm, clear and concise manner.

Convey information:

- Where the incident occurred
- What has happened
- When the incident occurred
- Who you are and the identity of the casualty
- What action taken to casualty

2.3.5. Confidentiality of records and information

Accurately record details of casualty's physical condition, changes in conditions, management and response to management in line with established procedures. Maintain confidentiality of records and information in line with privacy principles. Explain to the person involved, where possible, that a record of the incident will be made and the reasons for doing so and that they may access the record if desired. File the record appropriately.

First aiders also need to be aware of privacy legislation that protects medical data from being circulated to the general public and to be handled by authorized workers on a need to know basis. You should safeguard sensitive medical information. Remember, there are consequences and legal implications should patient information be leaked.

2.4. Monitoring and responding Casualty's condition

It is important that the whole process of responding to the casualty occurs quickly so that assessment and management of the situation may be carried out effectively.

2.4.1. Guidelines for responding to the casualty's condition

- Do not approach the casualty if it is unsafe to do so.
- Always call for help.
- If the casualty is unconscious, determine airway and breathing
- If the person is conscious but can't move or feel their arms or legs, Don't move them. They may have a spinal injury.
- Manage illness and injuries with the guidance of a qualified first aider and stay with the casualty.

If you need to phone for an ambulance and give details of the situation and workplace location, make sure you know exactly where you are! You should know the following:

- address
- nearest cross street
- the building level you are on
- the best way for the ambulance to gain access to the casualty.

2.4.2. Effective first aid principles

What actually is first aid? First aid is the initial care of the sick or injured. First aid management is a set of established procedures and aims to:

- help promote recovery
- prevent the injury or sickness from becoming worse
- seek medical help
- promote a safe environment
- provide comfort
- protect the unconscious casualty

- preserve life.

It is important to follow these basic first aid steps:

- ✓ do not panic
- ✓ assess the situation quickly
- ✓ make sure the area is safe to approach
- ✓ identify the injury or sickness
- ✓ call for help
- ✓ stay with the casualty
- ✓ manage the casualty
- ✓ monitor the casualty; their situation could change at any time.

The best method for assessing a casualty in an emergency situation is to perform a quick primary survey followed by a more thorough secondary survey.

A primary assessment is a **quick** assessment of a casualty to find and correct any life-threatening issues. It often follows a structure such as DR ABC (or DRSABC). This involves checking the following things:

- ✓ Danger – any hazards to yourself or bystanders?
- ✓ Response – is the casualty unconscious?
- ✓ Shout for help – if they are unconscious, shout for further help but do not leave their side
- ✓ Airway – open the airway by tilting the head back and lifting the chin
- ✓ Breathing – check for normal breathing for up to 10 seconds
- ✓ Circulation – perform CPR and use a defibrillator if the victim isn't breathing

Danger: Assess situation and check for danger

Before you give first aid, you must assess to the best of your ability the situation you are facing.
To re-cap, the important aspects are:

- Check for danger to yourself, the casualty and others. Look for obvious, immediate, life-threatening hazards such as fire, the possibility of a gas explosion, and electrical hazards
- If there is danger around, you will need to move yourself and your casualty to prevent further injury to anyone
- If you think the casualty has a spinal injury, take care to stop more damage to the spine by stopping movement of the casualty's neck and back.

Response: Check to see if the person is conscious or unconscious

Response‟ is a step enabling you to determine if the casualty is conscious or unconscious.

- Try and get a response from the casualty by gently tapping his or her shoulder and calling his or her name
- Avoid shaking them as this may worsen an existing injury
- Get a history – ask the casualty or any witnesses who saw the incident: What happened? Does the casualty have a neck or back injury? Does the casualty have an allergic reaction?
- Identify how the casualty feels. Ask: „How do you feel? ‟, „Do you feel dizzy or weak?‟, „Do you have pain? Where? For how long? ‟
- Check the physical condition of the casualty – take a look at them and around them. Is there evidence:

  Of bleeding? Where from? How badly?

  Bones are broken?

  Of swelling, bites, burns, scalds?

  Of possible neck or back injury?

  They are suffering allergic reactions – perhaps to food, sting or bite?

The casualty is in shock – symptoms of shock include:

- Sweaty but cool skin, pale colour or bluish skin around the mouth
- Shallow, fast breathing
- Rapid pulse that becomes weaker

As shock progresses, you will see the casualty has:

✓Anxiety – they will appear restless, agitated, worried

✓ Unusual thirst

✓Yawning and sighing

✓Nausea

Airway: Check to make sure the airway is free of obstructions

- If casualty is not breathing, open the airway by placing one hand on their forehead and gently tilt the head back by lifting the chin
- Remove any visible obstructions (vomit, mucus, saliva, false teeth, loose or broken teeth, food, tongue) from the mouth and nose to unblock the airways

- If obstructions are present the casualty will not be able to breathe and the obstruction will also impede the provision of rescue breathing/mouth-to-mouth resuscitation also known as EAR (Expired Air Resuscitation).

Breathing: Check to determine if casualty if breathing

- Check breathing by looking (to watch the rise and fall of chest), listening (to the sounds of inhaling and exhaling) and feeling for breathing (by placing your cheek next to their mouth and feeling for exhaled breath on your check) for up to 10 seconds. Is the casualty's breathing regular or irregular?
- If casualty is not breathing, administer rescue breathing/mouth-to-mouth resuscitation
- If casualty is breathing:
  - ✓ Continue to monitor it to ensure they continue to breathe
  - ✓ Apply rescue breathing if their breathing stops
  - ✓ Note their respiration rate so it can be communicated to professionals when they arrive.

Vital signs respiration rate

- ✓ Respiration rate" is the rate at which the casualty is breathing.
- ✓ To determine the respiration rate for a casualty, watch their chest or stomach rise and fall for 15 seconds counting how many times it rises.
- ✓ Multiply this figure by four to obtain respirations per minute.
- ✓ Write down your findings so they can be passed on to professional medical help when they arrive.

Respiration rates

- The normal range of respiration rates in an adult when resting is 12 to 20 respirations per minute
- Respiration rate below 12 respirations per minute is called slow
- Respiration rate above 20 respirations per minute is rapid
- A breathing rate slower than 12 respirations per minute or faster than 20 respirations per minute may indicate a problem affecting the casualty's ability to get oxygen.

Circulation: Check to see if the person has a pulse

- This will indicate whether or not their heart is beating
- Without a pulse, there is no heart beating and there is no circulation
- If you cannot detect a pulse, commence chest compressions

- If casualty is not breathing ***and*** there is no pulse, administer CPR (Cardio-Pulmonary Resuscitation)

A primary assessment should be carried out to assess all casualties. Once a primary assessment has been performed, you can move onto a more **thorough** secondary assessment. It may not be possible to perform a secondary assessment if there are problems with the primary assessment. For example, performing CPR takes priority over performing a secondary assessment.

Approach to the Primary Assessment

- Focus on life threats Airway (A), breathing (B), circulation (C)
- May vary depending on Patient's condition.
- On the scene resources other order of A-B-C depends on initial impression of patient. Sequence will vary A-B-C if patient has signs of life C-A-B if patient appears lifeless, no pulse Immediate interventions may be needed

The secondary assessment involves:

- History: Finding out the history of the incident/illness from the casualty or bystanders.
- Examination: looking for visual clues.
- Vital sign/observation: if trained, recording relevant observations.

The primary and secondary assessment provides a structure for you to assess each casualty in a logical way.

2.5. Recording Details of casualty's physical condition

It is always good practice to record an accident however small, it protects both the employers and the injured person (IP) should any future problems occur. Reporting all accidents also makes it easier to spot trends and prevent such accidents happening again.

Below there is a 12-step guide to completing an accident report and investigation. Each step lists what information should be gathered or examples of questions you should be asking yourself when completing that step of the accident reporting process.

- Record the IP's Personal and Contact Details
  - ✓ First name
  - ✓ Last name
  - ✓ Contact phone number
  - ✓ Email Address

- ✓ Home Address
- ✓ Reason for being at the location
- ✓ Sex
- ✓ Age or Date of Birth
- ✓ Occupation
- ✓ Employee Number (where applicable)
- ✓ Whether the IP was a member of the family

- Record Your Contact Details and Information
  - ✓ First name
  - ✓ Last name
  - ✓ Position
  - ✓ Contact phone number
  - ✓ Email Address
  - ✓ Employee Number (where applicable)
- Record Accident Details
  - ✓ The date of the accident
  - ✓ The time of the accident
  - ✓ The location of the accident
- Record Injury Details
  - ✓ The type of injury the IP suffered e.g fracture, laceration, bruising, burn
  - ✓ The part of the body injured
  - ✓ Whether the IP required hospitalization or resuscitation
  - ✓ Whether the IP was unconscious
  - ✓ Whether the IP is an employee and had lost days from work due the accident and how many days
  - ✓ Whether the IP taken from the scene by ambulance to hospital
- Collect Witness Details
  - ✓ First name
  - ✓ Last name
  - ✓ Contact phone number
  - ✓ Email Address
  - ✓ Address

- Gather Supporting Evidence
  - ✓ If witnesses are available and can provide a written statement, record the statement along with the accident report as evidence.
  - ✓ Other examples of evidence…
    - Photographs
    - Training Records
    - Health and Safety Check Records
    - Cleaning Logs
- Record How the Accident Happened
  - ✓ Record any details of the accident given to you by the IP in your accident report.
  - ✓ Example questions to ask yourself and information to record at this stage…

    How did the injury occur? What have you observed? Was there anything unusual or different about the working conditions? What personal protective equipment was being worn at the time of the accident? What work process or activity was being carried out at time? What equipment was being used at the time? What were the events that led up to the accident?

- Record What Caused the Accident
  - ✓ When recording information about how the accident happened use only the objective facts that you have gathered e.g. leave assumptions or accusations out of the record.

- Record What Was Done When Dealing with the Accident
  - ✓ Example questions to ask yourself and information to record at this stag

    Was first aid was administered? What first aid was administered? Was an ambulance called? How was the area made safe?
    What had been done directly after the accident happened?

- Record What Has Been Done to Prevent Such an Accident Happening Again
    - ✓ Example questions to ask yourself and information to record at this stage…

      Have any training needs been identified? Has a plan been put in place for corrective action? How will your preventative measures stop future occurrences of the accident?
- Review Risk Assessments
    - ✓ Review and update any relevant risk assessments to reduce the risk of re-occurrence. Record within your accident report which risk assessments have been reviewed.
- Report the Accident to the HSE as Requirements

2.6. Finalizing Casualty management

- **Preserve Life**

The first aim of first aid is to preserve life, which involves the key emergency practices to ensure that the casualty isn't in any mortal danger. Remember though, this includes preserving your own life as you shouldn't put yourself in danger in order to apply first aid. It's at this stage where you should do a quick risk assessment to check for dangers to the injured person, yourself or bystanders which could cause the situation to escalate. If in doubt, do not attempt to apply first aid and immediately call for a medical professional.

- **Prevent Deterioration**

Once you've followed all the steps associated with the first principle, your next priority is to prevent deterioration of the injured person's condition. Keeping a casualty still to avoid aggravating their injury, or from complicating any unseen issues, is crucial. This helps prevent to further injuries, and clearing the area of any immediate dangers will help you to do so.

- **Promote Recovery**

Finally, there are steps you should follow which will help lessen the amount of time taken for a casualty to recover from an accident and aid in minimizing lasting damage and scarring.

The prime example of this is applying cold water to a burn as soon as possible to lower the chance of long-term scarring and helps speed up the healing process.

2.6.1. First Aid Practices

A. Taking immediate action

This is the key to the 'Preserving Life' principle – a quick response to an accident can save lives and minimize the risk that things get worse. If someone needs help, either from an injury or sickness, you shouldn't hesitate to help if possible.

B. Calming down the situation

First aiders should be able to remain calm under pressure and help reduce the overall stress levels of the injured person as well as other people who may be concerned. Reassurance can provide more support that you might expect in an emergency situation and help people make the right decisions.

C. Calling for medical assistance

Make sure to get a hold of the emergency services by calling as soon as possible, either by calling directly yourself or asking a bystander to do so if you're preoccupied handing the injury. This will ensure that a medical professional arrives quickly to handle the situation in a more comprehensive manner and provide more specialist treatment.

D. Apply the relevant treatment

Before a medical professional does arrive, you will need to apply first aid treatments in order to stabilize the condition of the injured person. This comes under the 'preserve life' banner, and follows this flow of procedures:

- ✓ Check for consciousness
- ✓ Open the airway
- ✓ Check for breathing Follow airway, breathing, of resuscitation, administer CPR if needed
- ✓ Check for circulation
- ✓ Check for bleeding, controlling any major bleeding

There are number treatments which correspond to the different problems that might arise as you work through this list, e.g CPR, applying a tourniquet, running a burn under cold water, etc.

2.6.2. First Aid Legislation

Under the Health and Safety at Work etc. Act 1974 (HSWA), employers are responsible for making sure that their workplace has a health and safety policy. This should include arrangements for first aid.

Employers should also be aware of the Health and Safety (First Aid) Regulations 1981. This places a responsibility on all employers (no matter the size of their business) to provide adequate resources to those who are injured at work. This includes ensuring there is equipment, facilities and first aiders who have had appropriate training.

If you're interested in finding out more about first aid and the different treatments which can be needed in an emergency situation, take a look at our online first aid course which covers everything you need to know about first aid including what you'll need in a first aid kit.

Self-check -2	Written test

Name_____ ID _____Date_____

Test 2.1: Choose the best answer

1. Which of the following is a signal of respiratory distress?

A. Gasping for air

B. Breathing that is slower than normal

C. Wheezing

D. All of the above

2. Before beginning a check for life-threatening conditions, you should first;
   A. Move the person to a convenient location for care.
   B. Check the scene.
   C. Call for help
      A and B
3. After checking for consciousness, you determine that the person is unconscious. What should you do next?
   A. Have Call for help
   B. Give 2 rescue breaths.
   C. Check for breathing and severe bleeding.
   D. Begin a check for non-life-threatening conditions.
4. When you give rescue breaths, how much air should you breathe into the person?
   A. Enough to make the stomach clearly rise
   B. Enough to make the chest clearly rise
   C. Enough to fill the person's cheeks
   D. As much as you can breathe in 2 seconds
5. Which is the purpose of CPR?
   A. To keep a person's airway open
   B. To identify any immediate threats to life
   C. To supply the vital organs with blood containing oxygen
   D. All of the above
6. When is CPR needed for an adult?
   A. When the person is conscious
   B. For every person having a heart attack
   C. When the person is unconscious and is not breathing
   D. When the person who is having a heart attack loses consciousness

Test 2.2: Matching Questions

Direction: Match Terms in column A with its meanings in column B

Test 2.3: Short Answer Questions

1. What mean by ABCDE ?

Column "A"	Column "B"
1. Unconsciousness	A. Patient is sleepy, cannot speak and has no control his movements
2. Semi-consciousness	B. Patient is very sleep of and has great difficulty in speaking and in answering your questions
3. Drowsiness	C. Patient is sleep, unable to concentrate on what we are saying
4. Lethargy	D. Patient is awoke but answers questions slowly
5. Alertness	E. Enough to make the chest clearly rise
	F. Patient can speak, answers, questions and feels pain
	G. False interpretation in case of febrile condition

_____

_____

_____

2. Discuss the following emergency term and how it manage Bleeding, wound, Shock, fracture, Burn, choking, Eye, ear ,noise injures and Obstructed air way.

_____

_____

_____

_____

Operation Sheet -1

Operation Title: Apply Basic rules of ABCDE life

Instruction: Perform the ABCDE rules correctly.

Purpose: to help patient suffered for emergency

Required tools and equipment: Vital sign measurement equipment; like thermometer, BP apparatus, Basic first aid kit, ambulance.

Precautions: use personal protective equipment (PPE)

Procedures:

- ✓ Find all important first aid equipment to provide first aid service for patients in emergency condition.
- ✓ Identify the client status ,
- ✓ Place the client comfortable in appropriate place
- ✓ Apply basic rules of ABC
- ✓ Provide first aide service to patients with the following emergency accordingly.

LAP TEST-1	Performance Test

Name _____ID _____Date _____

Time started: _____ Time finished: _____

Instructions: Given necessary templates, tools and materials you are required to perform the following tasks within short time. The project is expected from each student to do it.

Task-1. Perform ABC rule of life

Task-2. Give first aid for the patents with bleeding

Task-3. Give first aid for the patents with shock

Task-4. Give first aid for the patents with obstructed air way

Task-5. Give first aid for the patents with wound

Task-6. Give first aid for the patents with choking

Task-7. Give first aid for the patents with burn

Task-8. Give first aid for the patents with drowning

Task-9. Give first aid for the patents with poison

Unit Three: Communicating Details of the incident

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Using the relevant communication media and equipment
- Conveying casualty's condition and management activities
- preparing reports to supervisors

This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Use the relevant communication media and equipment
- Carry casualty's condition and management activities
- Preparing reports to supervisors

3.1. Using the relevant communication media and equipment

3.1.1. Introduction

Whenever there is a need for you to provide first aid, it should be standard practice to also involve professional medical authorities.

Your role should only be as a "first responder" to provide emergency help.

Your job is not to deliver professional medical assistance.

This should apply whether the casualty is a customer, member of staff or member of the public.

3.1.2. The importance of obtaining professional medical assistance

It is more important to get suitably-qualified professional assistance moving in your direction than it is to render first aid.

This means professional medical assistance must be summoned when you are advised there is a need to attend a casualty to provide first aid.

Never wait until you have started treating the casualty before contacting professional medical assistance. Contact the ambulance or other suitable people as soon as possible.

You do not need to have attended the casualty before requesting help. Contact the ambulance and give them the information you have to begin with and get them moving towards you. You can always phone back later and give them an update.

If you *have* to choose between providing first aid, and summoning professional medical help always choose to contact the ambulance or professional assistance first.

3.1.3. Objective of professional help

Professional helps moving towards you as soon as possible.

This will reduce the amount of time you have to spend alone with the casualty, and means the casualty will receive professional medical assistance at the soonest possible opportunity.

Doing this is best practice because:

- It increases the likelihood of survival of the casualty
- It allows necessary drugs and medications to be administered to the casualty at the earliest opportunity
- It enables professional care to be provided as soon as possible

- It means the casualty can be hospitalized as soon as possible, where there is a need for this
- It reduces the possibility of the casualty suing the venue for breach of "duty of care".

Common sense must be used when contacting professional medical assistance.

Options include:

- ✓ Asking someone else to call for help whether it is a colleague, management, bystander or member of the public. This can be done while you go to the casualty or while you are rendering first aid
- ✓ Yelling out for help or for someone to ring an ambulance
- ✓ Flagging down a passing vehicle and asking them for help or to ring an ambulance
- ✓ If you cannot make telephone contact – activating a "Fire alarm".

Facilitate arrival of authorities

You should take whatever action you can to facilitate the arrival of emergency services or professional medical help to the casualty's location.

This may involve:

- ✓ Opening gates or arranging for them to be opened
- ✓ Moving vehicles which may impede access
- ✓ Asking others to position themselves in locations to signpost the location of the casualty as emergency service workers arrive on scene.

3.2. Conveying Details of casualty's condition and management activities

Introduction

When professional medical assistance or a relieving first aid provider arrives, you must communicate to them all knowledge you have about the casualty, changes in their vital signs, action taken and, where appropriate, the incident giving rise to the injury.

Communicating details of the incident

Summoning assistance

- ✓ When making initial contact with Emergency Services to obtain help they will require information about the incident before they send assistance:
- ✓ Be guided by them – let them ask questions and answer them as required Speak clearly and calmly
- ✓ Never hang up the telephone until directed to do so.

Emergency service telephone operators will want information about:

The exact location of the casualty

- ✓ The number of casualties
- ✓ The age and gender of casualties
- ✓ Descriptions of injury, illness and symptoms
- ✓ Details of any first aid which may already been given
- ✓ Whether or not the situation is life threatening and if you need over-the-telephone assistance in rendering more first aid.

While the authorities will prefer to have all of the above information, **never** delay calling them just because you are missing some of the information, they will ask you about.

Always contact them and get them moving towards you.

When assistance arrives

When professional medical assistance arrives:

- Identify yourself – then be quiet!
- Allow them to take the lead and ask questions
- Provide accurate information. Advise them regarding:
  - ✓ What you discovered on arrival at the scene
  - ✓ The treatment you provided
  - ✓ Details of any movement of the casualty you were forced to make
  - ✓ Relevant information about the casualty provided by others. For example, the family of the casualty may have advised you the casualty is deaf, a diabetic, or has just been released from hospital following a certain medical condition

- Refer to notes taken at the time when assessing and monitoring the casualty – about respirations, pulse rates. Highlight changes in vital signs and other physical conditions of the casualty
- Add any relevant information you believe exists in relation to

the casualty or the treatment you have provided

- Follow their instructions – about what to do, hold, move or apply Supply any local/venue-specific information you believe is useful or will facilitate the treatment and/or removal of the casualty.

3.3. Prepare Reports To Supervisors In A Timely Manner

Introduction

It is standard industry practice for you to be required by your employer to complete a report following a need to provide workplace first aid.

This requirement commonly applies regardless of the reason the first aid was required, and regardless of whether it was provided to a customer or to a staff member.

The report may only be a verbal report but there is often a need for a comprehensive written report.

Preparing a report

When preparing a report:

- Observations taken at the time should be referred to. This may include vital signs or actions taken.
- Any record prepared should be used
- Ensure “facts” are distinguished from “beliefs” it is important for the report to be fact-based. Facts may relate to:
    - ✓ Time you were advised of the incident
    - ✓ Time of your arrival at the scene
    - ✓ Date
    - ✓ Location of the incident
    - ✓ Name of casualty or casualties
    - ✓ Time professional medical help or emergency services were called and name of person who called them

✓ Time professional assistance arrived on scene and name of emergency services or professional help that responded

✓ Description of the casualty when you arrived position, vital signs, original diagnosis and reasons for same

✓ First aid action taken detailing what was done and the sequence in which it was done

✓ Details of any action taken as a result of the understanding the casualty was in danger and there was a need to move the person

✓ Details of any action taken to mitigate further injury, or injury to other persons

- Record what happened to the casualty – „Taken by ambulance to XYZ hospital"

Assist the employer by:

✓ Identifying what you believe may have been the cause of the such as "Casualty appears to have slipped on wet floor in toilet", or "Casualty was burned as a result of touching top of *bain marie* in dining room"

✓ Making suggestions as to what could be done to prevent a recurrence of the incident

- Sign and date the report providing your contact details.

The Reports should be:

Completed as soon as possible after the incident same day is essential

- Completed individually reports should be made by each staff member involved without discussion between those staff members
- Completed in writing a verbal de-brief may also occur but there should always be a written report
- Forwarded to designated managers or officers (first aid supervisors, Occupational Health and Safety officials, insurers) by the designated time
- Filed for future reference.

Self-Check -3	Written Test

Directions I. Write true or false :(each 2 points)

_____1. change the vital sign giving rise to the injury.

_____2. professional medical assistance must have communicated all knowledge about the causality

_____3. emergency service telephone operator will not want the number of causality, the age and gender

Directions 2. Fill in the blank space

1. List fact records reports
2. Describe the important obtaining professional medical assistance
3. List the objective professional help

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