

**FIRST AID**

**MODULE EIGHT (8) ASSIGNMENT**



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**INTRODUCTION**

**1. DEFINITION OF FIRST AID**

First aid is the immediate care given to a person who has been injured or suddenly taken ill. It includes home care if medical assistance is not available or delayed. It also includes well selected words of encouragement, evidence of willingness to help, and promotion of confidence by demonstration of competence (American red cross, 1998).

**Help to Save Lives:** It’s true that having first aid skills undoubtedly helps save lives. That’s not all though; giving appropriate first aid immediately can help to reduce a person’s recovery time and make the difference between the patient having a temporary or long-term disability. First aid skills and knowledge will make you feel confident and comfortable and therefore more effective and in control when you need to be.

**It Enables you to Increase Patient Comfort:** Not all accidents, injuries or illnesses require a trip to the hospital but it doesn’t mean they don’t cause pain and suffering to the patient. A child crying because of a bruised elbow or with a fever is in pain and is suffering. By knowing how to act – even just by employing simple techniques such as applying an ice pack correctly, or utilising appropriate bandaging, you’ll help to relieve their discomfort. You’ll also provide emotional support by remaining calm and collected which will make them feel more secure and reduce their anxiety levels.

**It Gives You Tools to Prevent the Situation from Becoming Worse:** In the field of Public Health, you will always be exposure to so many incidents that needs first aid skill in order to help prevent the victims from further injuries and in some situations, if a patient doesn’t receive basic first aid care immediately their situation will deteriorate – often rapidly. By being able to provide basic care you can stabilize a patient until emergency medical services arrive. You’ll learn how to use basic household items as tools if a first aid kit is not available meaning that you’ll be able to cope with many situations.

You’ll also have skills in how to collect information and data about what happened and the patients’ condition. This information will be passed on to the emergency services, which saves them time – you will be a valuable link in the chain of survival.

**It Creates the Confidence to Care:** Having a basic first aid knowledge and skills means that you’ll be confident in your skills and abilities in relation to first aid administration. By having first aid skills in Public Health, it helps you to reflect on yourself and how you and others react in certain situations. Having this understanding will boost your confidence in a wide range of non-medical day to day situations.

**It Encourages Healthy and Safe Living:** As one of the Public Health aim and objectives, having first aid skills will make you look after yourself and ensure your own safety as a priority. It’s not being selfish, it’s being practical. Keeping yourself safe means, you are in a position to help others rather than needing help yourself. You will also learn about the importance of healthy living and how lifestyle habits and choices can increase or decrease your risks of developing problems such as coronary heart disease. Having this knowledge makes you more aware of your own health and alert to potential hazards posed by your surroundings.

**2. THE FOUR RESPONSIBILITIES OF FIRST AIDER**

**Preserve Life:** Your first aim is to preserve life by carrying out emergency first aid procedures. For example, opening a victim’s airway or performing cardiopulmonary resuscitation (CPR).

Preserving life should always be the overall aim of all first aiders. Remember though, this includes your own life! You should never put yourself or others in danger.

This is why the first stage in assessing a victim is to conduct a risk assessment and check for any dangers to yourself or bystanders.

If a situation is too dangerous to approach, you should stay back and call for professional help.

**Prevent Deterioration:** The second aim of first aid is to prevent the victim’s condition from deteriorating any further. For example, asking a victim with a broken limb to stay still and padding around the injury will prevent the fracture from moving and causing further injury or pain.

In addition, this aim includes preventing further injuries. You should attempt to make the area as safe as possible and removing any potential dangers.

If removing danger is not possible you should attempt to remove the patient from the danger or call for specialist help.

**Protect the Unconscious:** The third aim of first aid is to protect the unconscious person/victim’s condition from cold, or being harm with unsafe infections and germs from causing further complication to the victim’s condition.

Arranged for transportation and transfer of the victim’s from the scene of the incident to the nearest health facility or called for help in order to take the victim for proper or further treatment and assessment.

**Promote Recovery:** Finally, you can promote recovery by arranging prompt emergency medical help. In addition, simple first aid can significantly affect the long-term recovery of an injury. For example, quickly cooling a burn will reduce the risk of long-term scarring and will encourage early healing.

**3. TAKING UNIVERSAL PRECAUTIONS**

Once you know that the scene is safe, there are universal safety precautions you should take. Since you won’t know for sure, you should act with the assumption that all blood and bodily fluids contain disease-causing germs

**Personal Protective Equipment (PPE)**: Your first aid kit should include personal protective equipment (PPE) such as disposable gloves and goggles. These help to keep you safe from blood, saliva, and urine.

Some people have allergic reactions to latex, so non-latex gloves should be used if possible.

**Actions for Universal Precautions**: Wear personal protective equipment whenever necessary. Protective gloves are to be used whenever you give first aid. Eye protection should be worn if the ill or injured person is bleeding.

Place any disposable equipment that has touched blood or bodily fluids in a biohazard waste bag. Dispose of the bag according to company policy

After removing your gloves, wash your hands thoroughly with soap and water for at least 20 seconds.



**Actions for Exposure to Blood:** You should wear PPE whenever you can. In the event that the person’s blood makes contact with your skin, or splashes in your mouth or eyes, follow these steps.

* Remove your gloves
* Immediately and thoroughly wash your hands, for 20 seconds
* Rinse your eyes, nose, or mouth with water if blood has made contact with any of these areas
* Contact a healthcare provider as soon as possible

**Properly Removing Protective Gloves:** In addition to wearing protective gloves, you will also need to know how to remove them, in order to protect yourself and others from potential infection. Disposing of protective gloves properly is an important step.

**To properly remove protective gloves:**

* Grip one glove on the outside near the cuff, and peel it down until it comes off inside out.
* Cup it with your other gloved hand.
* Place 2 fingers of your bare hand inside the cuff of the glove that is still on your other hand.
* Peel that glove off so that it comes off inside out with the first glove inside it.
* If blood or blood-containing material is on the gloves, put the gloves in a biohazard waste bag if you have one, or sealable plastic bag before disposing of it.
* Wash your hands thoroughly.



**Practice Good Hand Hygiene:** Wearing gloves is not enough. It’s still important that you wash your hands, just to be sure. It is one of the most important protections you have against infection.

**After removing protective gloves:**

* Wet your hands with clean running water (preferably warm) and apply soap
* Scrub all surfaces of your hands and fingers for at least 20 seconds
* Rinse hands with running water
* Dry your hands with a paper towel or air dryer
* Use a paper towel to shut off the faucet, if one is available

**4. PROCEDURES ON HOW TO CARRY THE CPR**

CPR is used when an adult is not breathing or when they are only gasping occasionally, and when they are not responding to questions or taps on the shoulder.  
In children and infants, CPR is used when they are not breathing normally and not responding.

**Check that the area is safe, then perform the following basic CPR procedure:**

* Call call or activated EMS or ask someone else to.
* Lay the person on their back and open their airways.
* Check for breathing. If they are not breathing, start CPR.
* Perform 30 chest compressions.
* Perform two rescue breaths.

Repeat until an ambulance or automated external defibrillator (AED) arrives.

Read on for more detailed descriptions of how to perform CPR in adults, children, and infants.

**CPR Procedures**

There are two main stages to CPR: the preparation stage and the CPR stage.

* Preparation procedure/steps

Before performing CPR on an adult, use the following preparation procedure/steps:

**Activating EMS:** In a life-threatening emergency, it is critical that someone activate EMS by calling EMS. Activating EMS will send emergency medical help on its way as quickly as possible. The sooner EMS personnel arrive, the higher the chances of a positive outcome.:

**Place the person on their back and open their airways**: Place the person carefully on their back and kneel beside their chest. Tilt their head back slightly by lifting their chin.

Open their mouth and check for any obstruction, such as food or vomit. Remove any obstruction if it is loose. If it is not loose, trying to grasp it may push it farther into the airway.

**Check for breathing**: Place your ear next the person's mouth and listen for no more than 10 seconds. If you do not hear breathing, or you only hear occasional gasps, begin CPR.

If someone is unconscious but still breathing, do not perform CPR. Instead, if they do not seem to have a spinal injury, place them in the recovery position. Keep monitoring their breathing and perform CPR if they stop breathing.

**Perform 30 chest compressions**: Place one of your hands-on top of the other and clasp them together. With the heel of the hands and straight elbows, push hard and fast in the center of the chest, slightly below the nipples.

Push at least 2 inches deep. Compress their chest at a rate of least 100 times per minute. Let the chest rise fully between compressions.

**Perform two rescue breaths**: Making sure their mouth is clear, tilt their head back slightly and lift their chin. Pinch their nose shut, place your mouth fully over theirs, and blow to make their chest rise.

If their chest does not rise with the first breath, retilt their head. If their chest still does not rise with a second breath, the person might be choking.

**Repeat**: Repeat the cycle of 30 chest compressions and two rescue breaths until the person starts breathing or help arrives. If an AED arrives, carry on performing CPR until the machine is set up and ready to use.

**Call (911, 111, 100) or give 2 minutes of care**: First, check the surrounding area for factors that could put you in danger. Next, check the child or infant to see whether they need help. For children, tap their shoulder and shout, "Are you OK?" For infants, flick the sole of their foot to see if they respond.

If you are alone with the child and they are not responding, give them 2 minutes of care and then call (911, 111, 100). If there is a bystander, ask them to call (911, 111, 100) while you give 2 minutes of care.

If possible, ask a bystander to go and search for an AED machine. Offices and other public buildings tend to house these.

If the child does respond, call (911, 111, 100) to report any life-threatening conditions.

**Place them on their back and open their airways**: Place the child or infant carefully on their back and kneel beside their chest. Tilt their head backward slightly by lifting their chin.

Open their mouth. Check for any obstruction, such as food or vomit. If it is loose, remove it. If it is not loose, do not touch it, as this may push it farther into their airways.

**Check for breathing**: Place your ear next to their mouth and listen for around 10 seconds. If you do not hear breathing, or you only hear occasional gasps, begin to administer CPR.

Changes in an infant's breathing patterns are normal, as they usually have periodic breathing.

Keep monitoring their breathing and perform CPR if they stop breathing.

**Perform two rescue breaths**: If the child or infant is not breathing, perform two rescue breaths with their head tilted backward and their chin raised.

For a child, pinch their nose shut and place your mouth over theirs. Breathe into their mouth twice.

For an infant, place your mouth over their nose and mouth and blow for 1 second to make their chest rise. Then, deliver two rescue breaths.

If they are still unresponsive, begin chest compressions.

**Perform 30 chest compressions**

Kneel beside the child or infant.

For a child, use one of your hands. Place the heel of the hand at their sternum, which is in the center of the chest, between and slightly below their nipples. Press down hard and fast around 2 inches deep, or one-third the depth of the chest, at least 100 times per minute.

For an infant, use two fingers. Place your fingers in the center of their chest, between and slightly below the nipples. Perform 30 quick compressions around 1.5 inches deep.

**Repeat**: Repeat the cycle of rescue breaths and chest compressions until the child starts breathing or help arrives.

**When to use CPR and when not to:** Performing CPR when a person is not breathing can help prevent brain damage.

Use CPR when an adult is not breathing at all. For a child or infant, use CPR when they are not breathing normally. Always use CPR if the adult or child is not responding when you talk to them or tap them.

If someone is not breathing, giving CPR can ensure that oxygen-rich blood reaches the brain. This is important, as without oxygen, someone can sustain permanent brain damage or die in [under 8 minutes](https://kidshealth.org/en/parents/cpr.html).

A person might need CPR if they stop breathing in any of the following circumstances:

* a cardiac arrest or [heart attack](https://www.medicalnewstoday.com/articles/151444.php)
* choking
* a road traffic accident
* near-drowning
* suffocation
* poisoning
* a drug or alcohol overdose
* smoke inhalation
* electrocution
* suspected sudden infant death syndrome

Only perform CPR if the adult is not breathing, or in children and infants, when they are not breathing normally, and their blood is not circulating. This is why it is important to ensure that the person does not respond to verbal or physical calls to attention before starting the CPR process.

**Summary**

CPR is a life-saving first aid procedure. It can significantly improve someone's changes of surviving if they suffer a heart attack or stop breathing following an accident or trauma.

The steps vary depending on whether the person is an infant, child, or adult. However, the basic cycle of chest compressions and rescue breaths will remain the same.

Only use CPR when an adult has stopped breathing. Check the person to see whether they respond to verbal or physical stimuli before starting CPR.

**5. BRIEFLY EXPLANATION OF FIRST AID PROCESS IN MANAGING/TREATING THE FOLLOWING**

Sometimes you won’t be able to wash your hands immediately. In these cases, you should use a waterless hand sanitizer. Rub it into your hands, thoroughly, before letting them air dry. You should properly wash your hands with soap and water as soon as you can.

**FIRST AID TREATMENT FOR AN OPEN FRACTURE**

**Stop any bleeding**: This may require pressure around the injury if the bone is still exposed. If you have access to bandages then place one either side of the exposed bone to apply pressure around the injury and stop the bleeding. If possible, cover any exposed bone with a sterile dressing to reduce the risk of infection.

**­Immobilise the injured part**: Any further movement could cause the injury to worsen. If you are trained then apply a splint to the injured limb. If untrained you can immobilise a limb using your hands. Support the injury from above and below.

**Monitor the patient**: If they lose a significant amount of blood then **shock** can develop. Monitoring the casualty’s pulse and respiratory rate can help you pick up the early signs of shock.

**Nil by mouth**: The casualty may require an emergency operation on arrival at hospital. Therefore, do not give them anything to eat or drink.

**Remove the victim’s cloth.** The victim clothes must be removed from the fractured area or wound to avoid contamination of the injury and so that it should not complicate the injury.

**Do not attempt to cleanse the wound and push a protruding bone back.** When carrying the first aid to the victim the first aider should not attempt to cleanse and push the wound or protruding one back to its normal place, because it will further complicate the injury.

**Call for emergency medical help**: Open fractures require expert emergency medical help. Do not delay in calling for assistance!

**A CLOSED FRACTURE**

**Rescue if necessary and protect against further injury**. Ask for the person/victim consent and help him/her from any further injuries from happening

**Open Airway.** Maintain an open-air way and apply artificial respiration if indicated. The injured person or victim should be given enough space for him/her to breather and receive fresh air.

**Call for an ambulance or medical assistance if indicated.** This is because closed fracture required emergency medical help to avoid further complication of the fractures or injuries

**Prevent movements of the injured parts and the adjacent joint**. Tell the victim or patient to stay stable not moving any part of his body

**Elevate involved extremities if possible, without disturbing the suspected fracture.** Try to maintain the injured position without being disturb in order to avoid complication of the injuries to the fracture area

**POISONING BY INGESTION**

Without placing yourself in danger, **ventilate** the area to remove the CO and/or remove the casualty from the area.

**Conscious casualty** - place in **semi-sitting position** and **rest** (to make breathing easier.

**Unconscious casualty** - Carry out **primary survey** and **monitor them in a recovery position.**

**Mild poisoning** - the casualty may recover spontaneously over time, but they should be seen by EMS as a precaution.

**Severe poisoning** - The casualty **must be evacuated**. If available, 100% should be given

**Call Emergency If the Person Is:**

Having [trouble breathing](https://www.webmd.com/lung/breathing-problems-causes-tests-treatments)

**Get Help Immediately or call emergency**

Call the medical help for Ingestion (collect, if necessary) or Poison Control, or go to your local emergency department.

If possible, identify the kind of gas or chemical.

In most cases, you will be advised to get an X-ray immediately.

**Keep the Person Safe**

Do not induce [vomiting](https://www.webmd.com/digestive-disorders/digestive-diseases-nausea-vomiting).

Do not let the person eat or drink until an X-ray has been done.

**Follow Up**

The next steps depend on the X-ray results.

If the X-ray shows the battery is in the [esophagus](https://www.webmd.com/digestive-disorders/picture-of-the-esophagus), it will be removed immediately with an endoscopy.

If it shows the battery is in the [stomach](https://www.webmd.com/digestive-disorders/picture-of-the-stomach), the person may not need medical treatment. The battery should pass through their stool. However, if they are back home and develops fever, [abdominal pain](https://www.webmd.com/pain-management/guide/abdominal-pain-causes-treatments), [vomiting](https://www.webmd.com/children/ss/nausea-vomiting-remedies-treatment), or [blood](https://www.webmd.com/heart/anatomy-picture-of-blood) in the stools, go to the emergency room immediately.

An X-ray may be needed after 48 hours or more if there was no immediate treatment.

**UNCONSCIOUS VICTIM**

Before giving first aid to the unconscious victim, look at your surroundings and make sure the scene is safe. Next, check to see if the victim is responsive.

**For an adult or child**, gently tap or move the shoulders and ask, "Are you Okay?" Look for any movement, including breathing. Adult responsiveness and child responsiveness.

**For an infant,** gently tap the feet, never shake an infant. Look for any movement, including breathing.

**Breathing status of the victim.** If the victim is not breathing begin the steps for CPR. Ask someone to call 911 and request an automated external defibrillator (AED)

**Victim can Breathe.** If the victim is breathing but unconscious, he/she cannot tell you where the problem is, so you'll need to look for clues. Begin by looking for obvious signs such as bleeding, a bone protruding from a wound or a gunshot wound.

**Physical checking of the Victim (Assessment of the victim condition).** Then check the victim from **head to toe**and look for anything out of the ordinary. Also, check for a medic alert bracelet or medications. Ask bystanders if they know the victim or how the accident or incident happened.

**SPINAL INJURY**

**If you suspect someone has a spinal injury:**

**Get help.** Call an emergency number or emergency medical help.

**Keep the person still.** Place heavy towels or rolled sheets on both sides of the neck or hold the head and neck to prevent movement.

**Avoid moving the head or neck.** Provide as much first aid as possible without moving the person's head or neck. If the person shows no signs of circulation (breathing, coughing or movement), begin CPR, but do not tilt the head back to open the airway. Use your fingers to gently grasp the jaw and lift it forward. If the person has no pulse, begin chest compressions.

**Keep helmet on.** If the person is wearing a helmet, don't remove it. A football helmet facemask should be removed if you need to access the airway.

**Don't roll alone.** If you must roll the person because he or she is vomiting, choking on blood or because you have to make sure the person is still breathing, you need at least one other person. With one of you at the head and another along the side of the injured person, work together to keep the person's head, neck and back aligned while rolling the person onto one side.

**6. HOW TO MANAGE THE FOLLOWING CONDITIONS AS A FIRST AIDER**

**ASTHMA ATTACK**

In an asthma attack, the muscles of the air passages in the lungs go into spasm. As a result, the airways become narrowed, which makes breathing difficult.

Sometimes, there is a recognized trigger for an attack, such as an allergy, a cold, a particular drug, or cigarette smoke. At other times, there is no obvious trigger. Many sufferers have sudden attacks.

People with asthma may be treated, depending on the severity of their condition, with rescue inhalers or nebulizers on a regular basis. They can usually deal with their own attacks by using their inhaler at the first sign of an attack, but may need help and encouragement.

**MANAGEMENT OF ASTHMA**

**Keep calm and reassure the casualty.** Get him/her to take her/his usual dose of her/his inhaler; use a spacer if he/she has one. Ask him/her to breathe slowly and deeply.

**Sit her down** in the position he/she finds most comfortable; do not let her lie down.

**A mild attack should ease in a few minutes.** If it does not, ask the casualty to take another dose from him/her inhaler.

**Call/activate emergency help.** if the attack is severe andany of the following occur: theinhaler has no effect; thecasualty is getting worse;breathlessness makes talkinghard; he/she becomes exhausted.

**Help the casualty.** use her inhaler as required. Monitor her vital signs—level of response, breathing, and pulse until help arrives.

**Monitor and record.** the casualty’s vital signs—level of response, breathing, and pulse—until she recovers or help arrives. Help her use her inhaler as required. Advise the casualty to seek medical advice if she is concerned about the attack.

**STROKE**

Understanding what to do or how to manage when someone suffers a stroke can make a significant difference to their chances of survival or recovery.

**MANAGEMENT OF STROKE**

Help them get in a comfortable position on their side, make sure they are resting.

* + Activate the ambulance.
  + Reassure them that help is on the way.
  + Keep them warm with a blanket.
  + Do not give them anything to eat or drink.

Notes**:** It is extremely common for people to ignore the warning signs of a stroke. Unfortunately, this is one reason why so many people die from this disease – because they don’t get help soon enough. As a first responder, it is your job to activate the ambulance as soon as possible. Sometimes a stroke is called Cerebral Vascular Accident (CVA). Mini stroke is a condition where the casualty experiences similar warning signs as that of a stroke, but these warning signs go away on their own. This is a warning sign that a serious stroke may occur and the person needs medical help immediately. This condition is sometimes called Transient Ischemic Attack (TIA).

**Follow the DRSABCD Action Plan**

St John Ambulance Australia recommends you follow the ‘DRSABCD Action Plan’ in every emergency. It helps you determine whether someone has a life-threatening condition and what first aid is needed.

**D — check for DANGER**

* To you.
* To others.
* To the affected person.

**R — check RESPONSE**

Ask the person their name. If someone has had a stroke, they may not be able to talk, so grasp both their hands and ask them to squeeze — they may respond by squeezing one of your hands.

Does the person respond? If so, they are **conscious**: follow the directions at the end of the page while you wait for help to arrive.

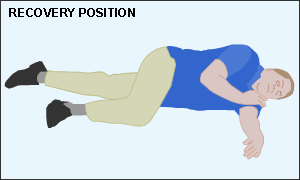
If the person does not respond, they are probably **unconscious**.

**S — SEND for help**

Phone for an ambulance or ask someone else to make the phone call.

**A — check AIRWAY**

* Is the airway open?
* Open the mouth and check that the upper airway that is visible to you is clear of foreign material.
* If the airway is not clear, turn the person into **recovery position.**
* Kneel beside the person.
* Put their arm that’s farthest from you out at right angles to their body.
* Place their nearer arm across their chest.
* Bend their nearer leg up at the knee; the other leg should be straight.
* While supporting their head and neck, roll the person away from you.
* When they are on their side, keep their top leg bent at the knee, with the knee touching the ground.



Then tilt the head slightly backwards and downwards to let anything that’s in the airway (such as vomit) drain out, and clear the airway with your fingers.

**B — check for BREATHING**

* Tilt the head back by lifting the person’s chin.
* Look — is the person’s chest rising and falling?
* Listen — can you hear the person breathing?
* Feel — can you feel their breath on your cheek?

If the person is not breathing, proceed to the next step: cardiopulmonary resuscitation (CPR).

If the person is breathing, follow steps below under ‘while waiting for help’.

**C — give CPR**

* Turn the person onto their back.
* Kneeling beside the person, give 30 chest compressions on the lower half of the breastbone. Use 2 hands with the fingers interlocked.
* Then tilt the head backwards, lift the chin and give 2 mouth-to-mouth breaths while pinching the nose shut.
* Keep alternating between 30 compressions and 2 breaths until the person shows signs of life or medical help arrives.

**D — DEFIBRILLATION**

If the person does not respond to CPR, apply defibrillator (if available) and follow the voice prompts.

## While waiting for help

If the person is **conscious**:

* lie the person down with their head and shoulders raised and supported (use pillows or cushions);
* keep them at a comfortable temperature;
* loosen any tight clothing;
* wipe away any secretions from the mouth;
* make sure the airway is clear and open;
* assure the person that help is on the way (they may be able to communicate by squeezing your hands if they can’t speak) and;
* do not give them anything to eat or drink.

If the affected person becomes **unconscious**, put them in the recovery position as described above to prevent anything (blood, saliva, or their tongue) from blocking the windpipe and choking them. Continue to monitor their airway and breathing, and be ready to resume the DRSABCD plan as necessary.

Even if the symptoms are short-lived — a ‘mini-stroke’ or transient ischaemic attack (TIA) — call an ambulance and ensure the person seeks immediate medical help, as these symptoms can be a warning sign of a future stroke.

**HEART ATTACK**

The leading cause of death in the world is heart disease, which accounts for over 17 million deaths per year. If someone shows signs of a heart attack, it is important to phone for help or emergency call as soon as possible, even if they refuse help or don’t want you to call. Treatments for heart attacks are more likely to be successful if they are used quickly, so the first minutes of the attack are the most important.

**Identify the signs:** the person may have persistent vice-like chest pain, which may spread to their arms and neck

**Call for emergency or help:** by call the emergency or help it will help you get some of instruction on how to stabilize the condition of the person or the victim and also its transportation to the help facility for further checkup or assessment of the problem or condition

**Ensure they are sitting down:** the person must be sited by him/herself when administering the process if he/she is conscious.

* Make sure the person stays calm and rests. Call, or have someone else call 9-1-1. Have someone get a first aid kit and AED if available. If the person does not have an aspirin allergy, serious bleeding and shows no signs of a stroke, have them chew and swallow one adult, or two low dose aspirins
* If the person becomes unresponsive, be prepared to give CPR

**MANAGEMENT OF HEART ATTACK**

* Help them get in a comfortable position, make sure they are resting.
* Activate the call for the ambulance or emergency call.
* Reassure them that help is on the way.
* Check for medical history of a similar problem, as they may have medication (but

only assist, do not administer medication).

* If they have Angina (see following page).
* If they wish, they may take one Bayer Aspirin, as this may prevent further damage
* to the heart muscle. Note, if they have asthma, they may be allergic to aspirin – ask first!
* Do not give them anything to eat or drink.
* Stay with them all the time and comfort them.

**Notes:** It is extremely common for people to ignore the warning signs of a heart attack. Unfortunately, this is one reason why so many people die from this disease because they don’t get help soon enough. As a first aider it is your job to activate the ambulance as soon as possible.

**Prevention**

Adults should take steps to control heart disease risk factors whenever possible.

**If you smoke**, quit. Smoking more than doubles the chance of developing [heart disease](https://medlineplus.gov/ency/article/007115.htm).

Keep blood pressure, cholesterol, and [diabetes](https://medlineplus.gov/ency/article/001214.htm) in good control and follow your health care provider's orders.

**Lose weight if**[**obese**](https://medlineplus.gov/ency/article/003101.htm)**or overweight.**

Get regular exercise to improve heart health. (Talk to your provider before starting any new fitness program.)

**Eat a heart-healthy diet. Limit saturated fats, red meat, and sugars.** Increase your intake of chicken, fish, fresh fruits and vegetables, and whole grains. Your provider can help you tailor a diet specific to your needs.

**Limit the amount of alcohol you drink.** One drink a day is associated with reducing the rate of heart attacks, but two or more drinks a day can damage the heart and cause other medical problems.

**7. IS THERE NEED FOR CONTINUED RESEARCH IN PUBLIC HEALTH? SUPPORT YOUR ANSWER WITH APPROPRIATE EXAMPLES**

Yes because, Public Health Research System is the bedrock of health systems to improve population health, system responsiveness, and equity. An international concern, referred to as the 10/90 gap, is that less than 10% of global funds are devoted to diseases or conditions that account for 90% of the global disease burden, particularly in developing countries. Palestinian health research is progressing, but it is not sufficiently investigated, with a remarkable knowledge gap on its conceptualisation, stewardship, stakeholders, and capacity and resources. The aim of this study was to understand the Palestinian public health research system by investigating challenges related to the system components that need to be strengthened.

Here is why there is need to continued research in Public Health due to the following reasons.

**Unfinished and new research agendas:** The need to continue expanding the quantity and quality of research that focuses on the health problems of poorer countries and marginalized populations, including research that is done in and by these countries themselves, is driven by a combination of old and new problems:

* The persistence of communicable diseases continues to be a heavy burden in many low- and middle-income countries. This includes, in particular, diseases such as malaria that have ceased to be significant public health problems in high-income countries; a range of other vector-borne tropical parasitic diseases such as leishmaniasis, schistosomiasis and trypanosomal infections, which cause sleeping sickness in Africa and Chagas disease in Latin America; dengue, another mosquito-borne infection which is expanding its impact mainly in developing countries and for which there is, as yet, no preventive vaccine; some infections like tuberculosis (TB) that were once well controlled but are now resurging due to the evolution of multidrug-resistant forms; and new global health threats posed by recently emerging diseases such as HIV/AIDS, severe acute respiratory syndrome (SARS) and avian influenza.
* While the list of such diseases is long and includes viruses, bacteria and parasites, some directly transmitted between human beings and some indirectly via animal hosts, they share a number of important features. In particular, for this group of diseases, few effective tools exist in the form of vaccines and drugs. The tools that are available are often failing due to the emergence of resistant forms

**Understanding the Cultural Perceptions of Disease & Healthcare Through Research:** Research is also needed in order to take an interdisciplinary approach to global health problems, which are multi-faceted in nature. Health is a broad concept that is influenced by various social, economic and political determinants.  While disease is caused by microorganisms, disease is also linked to certain “inherently global health issues,” such as water shortages, deforestation, greenhouse gas emissions, increasing poverty, financial instability, trade, war and conflict etc. For instance, a singular focus on HIV/AIDS ignores the many other dimensions of the disease:

*“The HIV/AIDS pandemic, particularly in Africa, affects several vulnerable groups, particularly women. Poverty, war and conflict, and ecological degradation are all important co-factors. Liberalization, structural adjustment programs, and the aid policies of wealthy nations, which constrain taxation revenue and equitable access to health services, are also determinants. Trade agreements underpinning the HIV/AIDS pandemic relate to intellectual property rights (patents) and accessibility of drugs, as well as the decline in “special and differential” exemptions that poorer countries can invoke to protect their still developing domestic economies to ensure greater growth and fairer distribution of its benefits. No single research project on HIV/AIDS should be expected to incorporate all of these elements. A singular focus on HIV/AIDS, however, obscures the important role of these and other co-factors of inherently global health issues.”*

**Global Health Metrics:** Research is not only needed to uncover best practices and eliminate barriers to care, it is also needed to measure impact.  This is important because unprecedented amounts of resources are invested in public health and healthcare worldwide. Data from 2000 to 2004 showed a continuation of this trend, with donor funding for global health approaching $14 billion in 2004.  Because of the vast amounts of resources going into global health, funders are beginning to demand performance data in return for their financial assistance.  “This global commitment is now coming under intense scrutiny”. Donors want to know results regarding health and health-system performance in the countries in which they are investing and they want to set goals and standards for those countries to meet. Thus, it is in the mutual interest of the developing and industrial worlds to invest in research for the collection of health information.

*“Sound information on financial and human resources invested in health, health interventions delivered to people in need, and the impact of these efforts on people's health is critical for planning health systems, implementing programs, epidemic response, allocating budgets for research and development, monitoring progress, and evaluating what works and what does not.”*

The availability of health information to inform decisions can ensure funding and further the efficacy of global health interventions. Research that defines indicators and collects health metrics is an integral part of results-based accountability in global health.  For example, output and outcome indicators enable decision makers and donors to assess progress toward intended goals and best practices.

**The Safety and effectiveness of drugs and other therapies:** Clinical research is an essential aspect of public health. Through clinical research, the safety and effectiveness of drugs and other therapies is gained and innovative scientific advances have come about due to the participation of clinical research volunteers. Clinical trials have led to many breakthroughs in disease prevention and treatment and have saved the lives of millions.

For instance, over 600,000 school children participated in a randomized trial of the Salk polio vaccine which led to the approval of the first preventive treatment for polio. Now, with the addition of an oral vaccine, polio has been almost eliminated in the US. Also, clinical trials contributed to the scientific foundation for tuberculosis policies which are still followed today. Randomized, controlled clinical trials originated within the study of Tuberculosis. This program was the model for standardized treatment and standardization in clinical practice, and eventually for the development of clinical guidelines

**Financial Support:** Carrying out high quality research by healthcare institutions leads to financial support for this work from health charities (e.g. Cancer UK, USAID), the pharmaceutical companies and the universities. Finance is a major issue: typically, it costs £1.15 billion to do all the research and development necessary before a new medicine can be licensed for use

**Conclusion**

As discussed, Public health research is necessary to remove the various social, cultural, and logistical barriers that confound the well-intentioned efforts of many global Public health programs. Research must focus on concerns raised by developing countries, closing not only the gap in health disparities within countries, but also the gap in knowledge between the developed and developing world.

Furthermore, research is needed to establish and collect health metrics which are essential for public health action and form the foundation for policy making, planning, programming, and accountability.  Unfortunately, high quality health information is not widely available in developing countries, and outcomes are frequently not measured by organizations.   As the field of global Public health research continues to grow, these gaps make it clear that student researchers have the potential to make important contributions.

**8. AS A PUBLIC HEALTH PRACTITIONER, HERE ARE SOME OF THE CHALLENGES THAT MY COUNTRY FACED WITHIN THE HEALTH SECTOR IN TERMS OF RESEARCH?**

**Findings:** The health research system is not well structured, whereas public health research is promising but probably without regulated national policies. Most experts emphasised that governance is not clearly framed in managing research functions, whereas public health research activities are most likely scattered and individually driven. There is a consensus that the concept of the health research system is misunderstood and that the system is underperforming because of various problems such as resource insufficiency. Research is also not fundamentally at the heart of the political agenda or itemised in central budgets. Besides workforce scarcity with poor incentives and infrastructure, priorities in public health research are inconsistent and efforts are uncoordinated with poor multidisciplinary research.

Dissemination and application of the public health research agenda among stakeholders are lacking. The research culture seems to be insufficiently cultivated. The international support to the public health research system is inconspicuous although some initiatives have been successful. The overall environment in the occupied Palestinian territory formed one of obstacles of the public health research system. Precious opportunities are proposed to strengthen public health research system synergistically through best strategies.

**Lack of Scientific Training:**The research methodology is not systematic. Many Public Health researchers undertake research work without having actual knowledge of the research methods. Even the guides do not have a thorough knowledge of the various methodologies. Before undertaking research projects, researchers should be well equipped with all the methodological aspects.

**Lack of communication with the supervisor:**A university/institute professor is a busy person. It is important to have guidance on a research project. Poor communication gets on the way of the progress of the research.It is important to communicate with the supervisor to clarify the doubts regarding the research topic, to know what the supervisor expects from you and to learn more about your research topic.

**Time management:**Spending ample time in learning the skills and practical implementation consumes a lot of time. In such a scenario, taking out time for intense research and to draft a top-notch research paper becomes impossible.

**Not having a definite deadline:**Deadlines are stressful. But not having a deadline can be troublesome during the Ph.D. journey. Deadlines help you get closer to your goals. Many times, Universities fail to implement a due date to submit the research paper, leading to confusion and improper time management among the scholars.

**A quantity of literature:** It can be difficult to deal with the quantity of literature that one might have accessed. The literature review is iterative. This involves managing the literature, accessing data that supports the framework of the research, identifying keywords and alternative keywords, as well as constantly looking for new sources.

**Implementing quality of writing within the literature review:** A literature review has to go beyond being a series of references and citations. You need to interpret the literature and be able to position it within the context of your study. This requires careful and measured interpretation and writing in which you synthesize and bring together the materials that you have read.

**Insufficient data:** Insufficiency of data is a potential problem. Most of the business establishments are of the opinion that researchers may misuse the data provided by them. This affects the purpose of research studies for which that particular data may be of utmost importance.

**Lack of confidence:**Lack of confidence is one of the most common problems among Public Health researchers. Public Health Researchers with low self-esteem feel less motivated thereby affecting the quality of the work.

**Concern that your focus is either still too broad or too narrow:** This concern is inevitable. Be prepared to adapt your research as you look through the literature. This might require you to either increase its focus or narrow down so that the research is manageable. A broad focus for research might be narrowed down by adding an appropriate context or by looking for another variable within the research question or by focusing upon a theoretical viewpoint.

**Library management:**Library management and functioning is not satisfactory in many Universities; A lot of time and energy is spent on tracing appropriate books, journals, reports etc. Also, many of the libraries are not able to get copies of new reports and other publications on time.

Research demands immediate action on the part pf the concerned authorities or personnel at national levels, so as to transform these challenges into major opportunities.

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