Midwifery level-III

NTQF Level III

Learning Guide#14

Unit of Competence: - Apply Infection Prevention Techniques and Workplace OHS

Module Title: - Applying Infection Prevention Techniques and Workplace OHS

LG Code: HLT MDW3 M04LO3-LG14

TTLM Code: HLT MDW3 TTLM 0919V1

LO3. Assess and control risks and hazards

Instruction Sheet	Learning Guide #14

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

- Developing Organizational procedures for hazard identification, assessment and control of risks.
- Identifying of all hazards is made at the planning, design and evaluation stages of any changes in the workplace
- Developing and maintaining procedures for selection and implementation of risk contror measures in accordance with the hierarchy of control.
- Identifying Inadequacies in existing risk control measures in accordance with the hierarchy of control and provide promptly resources enabling implementation of new measures.

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

- Develop organizational procedures for hazard identification, assessment and control of risks.
- Identify of all hazards is made at the planning, design and evaluation stages of any changes in the workplace
- Develop and maintain procedures for selection and implementation of risk control measures in accordance with the hierarchy of control.
- Identify Inadequacies in existing risk control measures in accordance with the hierarchy of control and provide promptly resources enabling implementation of new measures.

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below 3 to 6.
3. Read the information written in the information “Sheet 1, Sheet 2, and sheet 3”
4. Accomplish the “Self-check 1, Self-check 2, and Self-check 3” **in page 82, 89, and 96.** respectively.

5. If you earned a satisfactory evaluation from the "Self-check" proceed to "Operation Sheet 1, Operation Sheet 2, operation sheet 2 and Operation Sheet 3 " **in page 52-54.**
6. Do the "LAP test" **in page – 55** (if you are ready).

Information Sheet-1	**Organizational policies and procedures for hazards**

Definition of terms

Hazard- is anything that may cause harm to an individual, such as chemicals, electricity, open drawers, and inadequate ventilation.

Risk- is the possibility that somebody could be harmed by these and other hazards and the indication of how serious the harm can be.

Policy- is a course of principle of action adopted or proposed by an organization or individuals**.**

Occupational Health and Safety

Occupational Health and Safety is the campaign and maintenance of the well-being of workers in every occupation. It talks about providing a safe working environment to achieve an injury-free workplace and a healthy atmosphere that protects every worker against illness. As an effect, it may also protect co-workers, family members, clients, and other members of the community who are affected by the workplace environment.

1.1 HAZARDS AND RISKS

Hazard is anything that may cause harm to an individual, such as chemicals, electricity, open drawers, and inadequate ventilation.

Risk is the possibility that somebody could be harmed by these and other hazards and the indication of how serious the harm can be.

Occupational Health and Safety

Occupational Health and Safety is the campaign and maintenance of the well-being of workers in every occupation. It talks about providing a safe working environment to achieve an injury-free workplace and a healthy atmosphere that protects every worker against illness. As an effect, it may

also protect co-workers, family members, clients, and other members of the community who are affected by the workplace environment.

Types of Hazards

1. **Physical hazards** are the most normal occurrences in workplaces. They are usually easy to detect, however, very often are neglected because people are too accustomed to them.

Another reason may be due to lack of knowledge or people do not see situations as hazards.

Examples of physical hazards that a caregiver may be exposed to:

- Electrical hazards: Even in day care institutions or nursing homes where care should be of utmost concern, improper wiring and frayed cords may still go unnoticed. Misuse of electrical equipment also happens in any type of work environment.
- Endless loud noise: If one is going to work in a nursing home, frequent noise from patients who are suffering from depression is definitely a hazard.
- Spills on floors or tripping hazards: There are times when even the caregivers themselves do not mind spills on floors. This, definitely, poses hazard to everyone.

Some of the Effects of Physical Hazards

- ✓ Fire
- ✓ Decreased efficiency
- ✓ Annoyance
- ✓ Falls

2. **Biological hazards** come from working with animals, people or infectious materials. This is, therefore, one of the most common hazards that a caregiver faces. If one is working in a day care, hospital, hotel laundry, nursing home, laboratories, he/she may be exposed to biological hazards.

Examples of physical hazards that a caregiver may be exposed to:

- blood or other body fluids
- fungi
- bacteria and viruses
- contaminated wastes

Some of the Effects of Biological Hazards

- ✓ infections
- ✓ skin irritations
- ✓ allergy
- ✓ Tuberculosis
- ✓ AIDS

3. **Ergonomic hazards** occur when a caregiver's nature of work, body position and working conditions put pressure on his/her body. It is difficult to spot this type of hazard, because caregivers do not immediately notice the effect to their bodies. At first, sore muscles may be experienced. But long term exposure to this type of hazard can cause musculoskeletal problems.

Examples of ergonomic hazards that a caregiver may be exposed to:

- ✓ performing tasks that require lifting heavy loads
- ✓ too much bending and reaching
- ✓ standing for long periods of time
- ✓ holding body parts for long period of time
- ✓ awkward movements, especially if they are repetitive ,repeating the same movements over and over

Some of the Effects of Ergonomic Hazards

- ➢ pain in the shoulders
- ➢ back injury
- ➢ too much impact on wrist and hands
- ➢ numbness in some parts of the body
- ➢ muscle cramps

4. **Chemical hazards** are present when a worker is exposed to any chemical preparation in the in any form (solid, liquid or gas). There may be chemicals which are safe, but some caregivers who are sensitive to solutions may cause skin irritation, illness or breathing problems.

Examples of chemical hazards, may be exposed to:

- ➢ liquids like cleaning products

- disinfecting solutions

Effects of Chemical Hazards

- Lung diseases
- Difficulty in breathing
- Allergy

5. **Psychological Hazards** take place when a caregiver's work environment becomes stressful or demanding.

Examples of psychological hazards that a person may be exposed to:

- Burn out‖, fatigue and on call duty
- Unreasonable expectations from patients or clients
- Verbal abuse form dissatisfied clients
- Unreasonable expectations from supervisors and management

Some of the Effects of Psychological Hazards

- Depression
- Anxiety
- Loss of confidence
- Loss of concentration at work
- Deterioration of performance at work

Recognizing Hazards and Risks in the Workplace

Hazards and risks vary from one workplace to another. Even in day care or nursing homes where work routines may be the same, hazards will differ depending on the type of building the establishment is situated, and the attitudes of caregivers, clients, or employers.

The good news is hazards and risks can be prevented! However, before thinking about what control measures are needed, first a caregiver has to know whether there are health and safety problems in his/her workplace. So, how can someone identify the hazards in the workplace?

- **The following are some ways to determine health and safety problems:**

1. Observe the workplace.
2. Examine complaints from his/her co-workers.
3. Check accident records.
4. Examine chart on results of inspections done by the employers or private organizations.
5. Use checklists and inspect the workplace.
6. Study reports or any other vital information about the nursing home.

1.2 EVALUATING AND CONTROLLING HAZARDS AND RISKS

Once you recognize a hazard in the workplace, then you can proceed with risk assessment, that is focusing on the risks that really matter in the workplace. Evaluating hazards and risks is the process of determining the level of risk created by the hazard and the likelihood of injury or illness occurring. Most of the time, simple measures can be done, with no trouble, to control risks. An example of this is making sure that cabinet drawers are kept closed so that people do not trip.

Needless to say, the concern for control increases as the recognized level of risk increases.
A person identifying the risk of harm or injury from a hazard in a nursing home or day care should consider these questions:

- How likely it is that a hazard will cause harm;
- How serious that harm is likely to be;
- How often (and how many) workers are exposed.

It is a must that you have a record of every risk assessment done. If a certain accident or damage happens again, it might be that you will trace back the original records to check if the assessment overlooked a potential hazard. Assessing or evaluating the hazards and risks is crucial in making a decision on the mode of control to be used.

1.3 CONTROL HAZARDS AND RISKS

It is possible that workplace hazards can be controlled by a variety of methods. Of course, the very reason why hazards should be controlled is to prevent workers from being exposed to occupational hazards. Hazard control comes in different processes. But one method may be more effective than the others.

When we speak of controlling hazards and risks, it means settling on the measure that will solve the trouble most successfully.

There are **five major categories of control measures:**

1. Elimination
2. Substitution
3. Engineering controls
4. Administrative controls
5. Personal protective equipment.

1. ***Eliminating*** a hazard means removing it completely.
2. ***Substitution*** is replacing or substituting a hazardous agent or work process with a less dangerous one.
3. **An *engineering control*** may mean changing a piece of machinery (for example, using proper machine guards) or a work process to reduce exposure to a hazard.
4. **An administrative control** may mean working a limited number of hours in a hazardous area is an example of an administrative control (for example, job rotation)
5. ***Personal Protective Equipment*** includes ear and eye protection, respirators and protective clothing.

Obviously, the best method of controlling hazards and risks is through elimination. That is to take away or to get rid of the hazard. However, more often than not, this is not possible. So, employers make use of any of the remaining control measures. The general rule is that the use of personal protective equipment (PPE) should be the last alternative in controlling hazards and risks in a workplace. Although it is said that the best method of control measure is through elimination of hazards, a very good technique for a safe and healthy environment is through the utilization of a combination of methods.

PRACTICAL WAYS TO PREVENT HAZARDS AND RISKS

A Closer Look at Electricity

- ✓ As common sense dictates, you have to ensure that all electrical equipment you use is in good condition.

- ✓ Check electrical cords and make sure they are not frayed.
- ✓ Your hands should be dry before attempting to use any electrical equipment.
- ✓ Do not attempt to change fuses unless you know what you are doing.
- ✓ Do not turn on all appliances at the same time just because you want to save time.

Use of Personal Protective Equipment

Caregivers should religiously abide by the following to prevent biological hazards from happening:

- Wear gown that is long enough to cover your clothing. Because the outside of the gown is considered contaminated, this should not be touched when it is removed. A gown that is wet is, of course, considered contaminated also. A caregiver should wear a clean gown every client care. In case the gown is not available, apron should be worn to mask clothing during client contact.
- Masks should fit comfortably over the nose and mouth. The same with a gown or apron, a wet mask is considered contaminated. The front of the mask is also contaminated. Masks should not be worn around the neck. For each client contact, a clean mask should be used.
- Gloves should be used when issue on contamination is present. Also, when a
- caregiver has open wound on the hands, it is a must that he/she use gloves. The outside of the gloves should not be touched when removed as this is considered contaminated.

Disposal of Health Care Wastes

In order to reduce the burden of disease, health care wastes should be managed appropriately. Whether a caregiver is working in a hospital, a day care, or even at home, proper discarding of medical wastes should be of great consideration.

Human waste products. Obviously, these wastes should be flushed down the toilet without delay and should not be discarded in the street or in any public places.

Blood and bloody fluids. These must be removed right away. It is best if they can be directly flushed down the toilet. If clothes are contaminated, they should be washed separately using hot water and should be dried. Dressings with blood need to be double-bagged in plastic and disposed of based on existing community or local rules.

Needles (sharps). Sharps should be kept in a container which is not easy to pierce like metal (coffee can). Some items may be kept while some should be discarded right away. It is advisable to discuss with the supervisor for the best disposal method.

Medical equipment. If the equipment is contaminated, it should be thrown away. It is ideal that the equipment be double-bagged and disposed of based on the existing regulations in the community. Also, this should be discussed with the immediate supervisor as to whether or not the said equipment can be kept or should be disposed of already.

Proper Hand washing

As you touch people, tables, chairs, books, sinks, handrails, and other objects and surfaces, there is a possibility that you contaminate your hands. The germs that have accumulated when touching things may be the means for you to get sick and spread illness to others. The importance of hand washing comes in. It is by far the best and simplest way to prevent germs from spreading and to keep the people around you from getting sick. Though it is said that hand washing is the first line of defense against the spread of illnesses, you should be aware of the proper way of doing it. Otherwise, you may just be wasting your time doing it because you do not really wipe out what should be eliminated.

The following steps will help you in performing proper hand washing to rid yourself of germs in no time.

1. Prepare your materials before washing your hands: paper towel, bar or liquid soap.

2. Turn on the faucet and wet wrists and hands thoroughly. Use a generous amount of soap.

3. Rub your hands together and between fingers. Be sure to use friction when washing as this helps in cleaning your hands. Do not forget the surface of your hands, palms, the spaces within the fingers and above the wrists. Do this process for at least 20 seconds.
You might want to sing ―happy birthday‖ twice slowly to make sure you attained the minimum number of seconds in washing your hands.

4. Clean your nails by rubbing the soap later through them. If your nails are long (it is advisable that health care workers do not grow their nails long), use a soft stick or the nails of the other hand to remove the dirt under them.

5. Rinse your hands thoroughly under running water. Remember to rinse from above the wrist down to the fingers.

6. Use a paper towel to dry hands and discard immediately.
7. Use a new paper towel to close faucet being careful not to contaminate your hands. This paper towel should be discarded right away.

Put a Stop to Ergonomic Hazard

Efficient control measures are now being utilized by employers to avoid ergonomic hazards among health care workers. Manual handling of patients, for example, has become less stressful due to some paraphernalia being used that facilitate the task. Adjustable height work stations, improved tool design, and adjusted work pace are now part of a worker's life.

Unfortunately, ergonomic hazard effects continue to happen. Why? At times, the workers themselves invite these hazards due to the wrong way they do their tasks. Conscious or not, they have to examine their work routine and consider these simple rules:

- Avoid twisting the body.
- Bend knees if it is needed.
- Avoid too much stretching when reaching for something.
- Use a ladder when reaching for hard-to-reach materials or objects.
- Ask for help from someone if the task cannot be done by one person.

Self-Check -1	**Written Test**

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What is elimination?
2. List types of hazards?
3. List five major categories of control measures

Note: **Satisfactory rating – 7> points** **Unsatisfactory - below 7 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Question

Information Sheet-2	Workplace hazards

2.1 Introduction to occupational hazard

What is a hazard?

HAZARDS AND RISKS

- **Hazard** is anything that may cause harm to an individual, such as chemicals, electricity, open drawers, and inadequate ventilation.

- **Risk** is the possibility that somebody could be harmed by these and other hazards and the indication of how serious the harm can be.

Types of Hazards

Physical hazards are the most normal occurrences in workplaces. They are usually easy to detect, however, very often are neglected because people are too accustomed to them. Another reason may be due to lack of knowledge or people do not see situations as hazards.

Examples of physical hazards that a caregiver may be exposed to:

- **Electrical hazards:** Even in day care institutions or nursing homes where care should be of utmost concern, improper wiring and frayed cords may still go unnoticed. Misuse of electrical equipment also happens in any type of work environment.

- **Endless loud noise:** If one is going to work in a nursing home, frequent noise from patients who are suffering from depression is definitely a hazard.

- **Spills on floors or tripping hazards:** There are times when even the caregivers themselves do not mind spills on floors. This, definitely, poses hazard to everyone.

Some of the Effects of Physical Hazards

- Fire
- Decreased efficiency
- Annoyance
- Falls

Biological hazards come from working with animals, people or infectious materials. This is, therefore, one of the most common hazards that a caregiver faces. If one is working in a day care, hospital, hotel laundry, nursing home, laboratories, he/she may be exposed to biological hazards.

Examples of physical hazards that a caregiver may be exposed to:

- blood or other body fluids
- fungi
- bacteria and viruses
- contaminated wastes

Some of the Effects of Biological Hazards

- infections
- skin irritations
- allergy
- Tuberculosis
- AIDS

- **Ergonomic hazards** occur when a caregiver's nature of work, body position and working conditions put pressure on his/her body. It is difficult to spot this type of hazard, because caregivers do not immediately notice the effect to their bodies. At first, sore muscles may be experienced. But long term exposure to this type of hazard can cause musculoskeletal problems.

Examples of ergonomic hazards that a caregiver may be exposed to:

- ✓ performing tasks that require lifting heavy loads
- ✓ too much bending and reaching
- ✓ standing for long periods of time
- ✓ holding body parts for long period of time
- ✓ awkward movements, especially if they are repetitive, repeating the same movements over and over

Some of the Effects of Ergonomic Hazards

- ✓ pain in the shoulders
- ✓ back injury
- ✓ too much impact on wrist and hands
- ✓ numbness in some parts of the body
- ✓ muscle cramps

Chemical hazards are present when a worker is exposed to any chemical preparation in the in any form (solid, liquid or gas). There may be chemicals which are safe, but some caregivers who are sensitive to solutions may cause skin irritation, illness or breathing problems.

Examples of chemical hazards, may be exposed to:

- ✓ liquids like cleaning products
- ✓ disinfecting solutions

Effects of Chemical Hazards

- ✓ Lung diseases
- ✓ Difficulty in breathing

Psychological Hazards take place when a caregiver's work environment becomes stressful or demanding.

- ✓ Examples of psychological hazards that a person may be exposed to:
- ✓ Burn out‖, fatigue and on call duty
- ✓ Unreasonable expectations from patients or clients
- ✓ Verbal abuse form dissatisfied clients
- ✓ Unreasonable expectations from supervisors and management
- ✓ Some of the Effects of Psychological Hazards
- ✓ Depression
- ✓ Anxiety
- ✓ Loss of confidence
- ✓ Loss of concentration at work
- ✓ Deterioration of performance at work
- ✓ Allergy

Recognizing Hazards and Risks in the Workplace

Hazards and risks vary from one workplace to another. Even in day care or nursing homes where work routines may be the same, hazards will differ depending on the type of building the establishment is situated, and the attitudes of caregivers, clients, or employers.

The good news is hazards and risks can be prevented! However, before thinking about what control measures are needed, first a caregiver has to know whether there are health and safety problems in his/her workplace. So, how can someone identify the hazards in the workplace?

The following are some ways to determine health and safety problems:

1. Observe the workplace.
2. Examine complaints from his/her co-workers.
3. Check accident records.
4. Examine chart on results of inspections done by the employers or private organizations.
5. Use checklists and inspect the workplace.

6. Study reports or any other vital information about the nursing home.

The Occupational Health and Safety Regulation 2001 defines a hazard as 'anything (including work practices or procedures) that has the potential to harm the health or safety of a person'.

Hazards can be grouped into five broad areas:

- Physical e.g. noise, radiation, light, vibration
- Chemical e.g. poisons, dusts
- Biological e.g. viruses, plants, parasites
- Mechanical/electrical e.g. slips, trips and falls, tools, electrical equipment
- Psychological e.g. fatigue, violence, bullying.

Hazards can arise from:

- the work environment
- the use of machinery and substances
- poor work design
- inappropriate systems and procedures
-

Examples of workplace hazards include:

- manual handling e.g pushing, pulling, carrying, lifting
- work environment e.g. floor surfaces, noise, temperature
- machinery
- heat e.g. burns and scalds
- electricity e.g. electrocution
- harassment e.g. bullying and/or violence
- hazardous substances e.g. chemicals, fumes
- biological waste
- skin penetrating injuries e.g. knife or syringe injuries
- noise
- confined space

Recognising the hazards in a workplace and taking steps to eliminate or control the hazard ensures the safety and well being of all employees. It is easier and more effective to eliminate or control the hazard before serious injuries result.

The Occupational Health and Safety Regulation 2001 states that an employer must eliminate any reasonably foreseeable risk to the health and safety of employees and others in the workplace and if this is not practicable must control the risk.

Hazards can be dealt with by:

- eliminating the hazard
- changing the equipment or materials
- changing work methods
- using personal protection equipment (PPE) (as a last resort)

Hierarchy of hazard control

1. **Eliminate** the hazard or task if the risks outweigh the potential benefits.
2. **Substitute** the hazard with something less hazardous eg., substitute a toxic substance with another that is non-toxic.
3. **Isolate** the hazard by using barriers or distance eg., put insulation around noisy equipment.
4. Use **engineering** controls, such as local exhaust ventilation to remove dust/fumes, or automate the process.
5. **Minimise** the size or volume of the hazard and the duration of exposure to the hazard.
6. **Rearrange** the work area and work flow eg., have deliveries made to the end-point to avoid re-handling, intersperse repetitive activity with different tasks to avoid overuse injuries etc.
7. Establish **safe work practices**, such as restricting access to the area, keeping the area free of clutter, being prepared for emergencies e.g., spills, and prepare and use safe work method statements for hazardous tasks.
8. Provide **training and supervision** appropriate to the level of expertise of the personnel involved. As a minimum, this would include familiarisation with local hazards and their control, safe work methods and emergency procedures.

9. Wear **personal protective equipment** such as robust footwear, gloves, laboratory coats, safety glasses, ear plugs/muffs, dust masks etc., as a secondary measure to supplement the other agreed risk controls.

Self-Check -2	**Written Test**

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Define what is hazard?
2. List the heiararchy of hazards control?
3. Mention some examples of work place hazards?

Note: **Satisfactory rating – 8> points** **Unsatisfactory - below 8 points**

Answer Sheet

Score = _____
Rating: _____

Name: _____ Date: _____

Short Answer Question

Information Sheet-3	**Risk control measures**

3.1 definitions of terms

Risk: is the possibility that somebody could be harmed by these and other hazards and the indication of how serious the harm can be

Control: is a set of method by which firms evaluate potential losses and take action to reduce or eliminate such treats. It is a technique that utilizes finding rom risk assessment which involves identifying potential risk factors in company operations.

Control the risks

Establish suitable risk control measures for the highest priority risks with reference to the risk assessment. For example, if the assessment finds that poor lighting in the area is a risk factor, then the lighting should be improved as a risk control.

When considering risk control options, it is essential that supervisors and managers consult with workers directly involved in the process. These experienced people typically have good, practical ideas about suitable risk control measures. Gaining their ownership and commitment to the chosen risk controls is also essential to attaining acceptance for the use of the control measures.

The following range of risk control measures should be considered. Known as the "hierarchy of hazard control", these are listed in priority order ie., the most effective is listed first, with less effective options listed lower. The highest practical levels of risk control should be chosen. A combination of higher and lower level risk controls is usually desirable.

How risk control works the core concepts of risk control include:

- ✓ **Avoidance:** is the best method of loss control. For example after discovering that a chemical used is manufacturing company goods is dangerous for the workers; a factory owned finds a safe substitute chemical to protect the workers' health.
- ✓ **Accept risk:** loss prevention but attempts to minimize the loss rather than to eliminate.
- ✓ **Separation; involves dispersing key assets so that catastrophic events at one location affect the business only at that location.**
- ✓ **Duplication; involves creating a back up plan, often by using technology.**

Hierarchy of hazard control

10. **Eliminate** the hazard or task if the risks outweigh the potential benefits.
11. **Substitute** the hazard with something less hazardous eg., substitute a toxic substance with another that is non-toxic.

12. **Isolate** the hazard by using barriers or distance eg., put insulation around noisy equipment.
13. Use **engineering** controls, such as local exhaust ventilation to remove dust/fumes, or automate the process.
14. **Minimise** the size or volume of the hazard and the duration of exposure to the hazard.
15. **Rearrange** the work area and work flow eg., have deliveries made to the end-point to avoid re-handling, intersperse repetitive activity with different tasks to avoid overuse injuries etc.
16. Establish **safe work practices**, such as restricting access to the area, keeping the area free of clutter, being prepared for emergencies e.g., spills, and prepare and use safe work method statements for hazardous tasks.
17. Provide **training and supervision** appropriate to the level of expertise of the personnel involved. As a minimum, this would include familiarisation with local hazards and their control, safe work methods and emergency procedures.
18. Wear **personal protective equipment** such as robust footwear, gloves, laboratory coats, safety glasses, ear plugs/muffs, dust masks etc., as a secondary measure to supplement the other agreed risk controls.

The chosen risk control measures should be implemented as soon as possible. Assign responsibility to an appropriate worker and set a due-by date for implementation.

The person responsible for implementing the risk control measures should inform those who were consulted during the decision making process about any subsequent changes to plans and progress towards completion.

Sometimes, the most ideal risk control options may be prohibitively expensive and need to be planned for in the longer term, e.g. in next year's budget. In these cases, short term and medium term

risk control measures (implemented within one week and 3 months respectively) should be established for the interim period.

HIERARCHY OF HAZARDS CONTROL

To ensure a safe workplace, hazards must be controlled using a range of methods. The hierarchy of hazard controls is a list, in order of preference, which can be considered in hazard control. It emphasizes controlling a hazard at the source. This is done by giving preference to the use of the 'engineering controls' as listed below.

Where possible, the ideas listed below should be used because they are less likely to be affected by human failure and because they are less disruptive and uncomfortable for people working in the area. Whichever method is used, the effectiveness of the control measure used should be monitored regularly.

Engineering Controls

- **Design**. Try to ensure that hazards are 'designed out' when new materials, equipment and work systems are being planned for the workplace.
- **Remove** the hazard or **Substitute** less hazardous materials, equipment or substances.
- **Adopt a safer process** alteration to tools, equipment or work systems can often make them much safer.
- **Enclose or isolate the hazard** through the use of guards or remote handling techniques.
- **Provide effective ventilation** through local or general exhaust ventilation systems.

Administrative Controls

- **Establish** appropriate **Administrative Procedures** such as:
  - job rotation to reduce exposure or boredom, or timing the job so that fewer workers are exposed
  - routine maintenance and housekeeping procedures
  - training on hazards and correct work procedures.

Personal Protective Equipment

- **Provide** suitable and properly maintained **Personal Protective Equipment** (PPE) and training in its use.

Examples of common hazards

The table below shows examples of typical problems created by workplace hazards and some injuries and illnesses that can result. Individual workplaces may have hazards other than those listed below.

HAZARD	TYPICAL PROBLEMS	TYPICAL INJURY/ILLNESS REQUIRING FIRST AID
Manual handling	Overexertion/Repetitive movement	Sprains, strains, fractures
Falls	Falls from heights, slips and trips on uneven surfaces	Fractures, bruises, cuts, dislocations, concussion

Electricity	Contact with electrical current	Shock, burns, loss of consciousness, cardiac arrest
Plant	Being hit by projectiles, striking objects, being caught in machinery, overturning vehicles	Cuts, bruises, dislocations, fractures, amputation, eye damage
Hazardous substances	Exposure to chemicals. E.g. solvents, acids, hydrocarbons	Dizziness, vomiting, dermatitis, respiratory problems, burns to skin or eyes
Temperature, UV radiation	Effects of heat or cold from weather or work environment	Sunburn, frostbite, heat stress, heat stroke, hypothermia
Biological	Allergens, needle stick, exposure to infectious agents	Severe allergic reaction, injuries, skin rash, infection
Occupational violence	Intimidation, conflict, physical assault	Nausea, shock, collapse, physical injuries

The working environment

Employers also have obligations in relation to the working environment. The requirements relate to:

- **Working space**
  - provide sufficient working space to allow people to work safely
  - ensure that floors and surfaces are constructed and maintained to minimize the possibility of slips, trips and falls
  - ensure that people are able to move about a place of work safely and unhindered.

Lighting

- provide adequate lighting to allow workers to work safely, move safely, and enter and exit the workplace safely (including from emergency exits)
- ensure that there is not excessive glare or reflection
- ensure that lighting allows persons who are not workers to move safely within the place of work.

- **Hot and cold working environments**
  - provide adequate ventilation and air movement in indoor environments that may become hot
  - provide adequate access to heated or sheltered areas and warm clothing or other personal protective equipment if employees are exposed to cold
  - provide appropriate work and rest regimes relative to physical fitness, general health, medication taken and body weight appropriate for both hot and cold working environments.
- **Noise management**
  - It is not allow exposure to noise levels that exceed an eight-hour noise equivalent of 85 dB(A) or peak at more than 140 dB(C).
- **Other obligations**
  - fire prevention, electricity, confined spaces, manual handling, atmosphere ventilation, working at heights.

Self-Check -3	**Written Test**

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Define what is risk?
2. Define what is control?

3. What is noise management?

Note: **Satisfactory rating – 8> points** **Unsatisfactory - below 8 points**

Answer Sheet

Score = _____

Rating: _____

Name: _____ Date: _____

Short Answer Question

Prepared By

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1	Masresha Leta	Midwifery	A	Harari	Harar HSC	masreshaleta3@gmail.com	0911947787
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