Ministry of Health

Basic Occupational Safety and Health Training for Healthcare Workers in Kenya

Trainer's manual2015

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Contents

Acronyms

AFENET	African Field Epidemiological Network
AQM	Air Quality Monitor
BEI	Biological Exposure Indices
BSC	Biosafety Cabinet
CT	Computed Tomography
DOSHS	Directorate of Occupational Safety and Health Services
EMCA	Environmental managrment and Coordination Act
HAVS	Hand Body Vibration syndrom
HBV	Hepatitis B Virus
HCV	Hepatitis C Virus
HCW	Health care worker
HINI	Hemagglutinin Type 1 and Neuraminidase Type 1
HIV	Human Immunodeficiency Virus
HSA	Health Safety Authority
HTV	Hand Tranmitted Vibration
ICOH	International Commission of Occupational Health
ILO	International Labor Organization
MDR	Multi drug Resistance
MOH	Ministry of Health
MSDS	Material Safety Data Sheet
MSH	Management Sciences for Health
OEL	Occupational exposure limit
OSH	Occupational Safety and Health
OSHA	Occupational Safety and Health Act
PEP	Post Exposure Prophylaxis
PPE	Personal Protective Equipment
PTS	Permanent Threshold Shift
PVC	PolyVinyl Chloride
SARS	Severe Acute Respiratory Syndrome
SPHLS	Strengthening Public Health Laboratory Services

TTS	Temporary Threshold Shift
UV	Ultra Violet
VWF	Vibration -Induced White finger
WBV	Whole Body Vibration
WHO	World Health Organization
WHR	World Health Resolution
WIBA	Work Injury and Benefits Act

AKNOWLEDGEMENT

This curriculum represents the collective efforts of members of the occupational safety and health (OSH) technical working group who worked tirelessly towards its finalization.

Special acknowledgements go to the following institutions:

African Field Epidemiology Network (AFENET) for supporting the development of the Occupational Safety and Health Policy Guidelines for the health sector in Kenya upon which this curriculum is grounded. AFENET also supported development of draft OSH training materials and starting the pilot phase of the OSH trainings in 6 health facilities in Kenya. The insights obtained in these pilot trainings informed the content of this curriculum

Management Sciences for Health (MSH) through the Strengthening Public Health Systems (SPHLS) project for supporting development of this curriculum and finalization of the training materials for the course (Facilitators Guide and Participants Manual).

The efforts of these groups would not deliver these documents without the financial and technical support from CDC.

Finally I wish to commend all those who contributed to this document in one way or another and who have not been specifically mentioned here.

Dr. Nicholas Muraguri
DIRECTOR OF MEDICAL SERVICES

FORWARD

The Ministry of health and her partner organizations are mutually committed to assuring a safe and healthy workplace for our employees, clients and the general public. we recognize that it is only where a safe and secure work environment exists that employees can achieve their full career potential.

Employees can contribute substantially to achieving the goals of safety and health, but only if they have an awareness of recognized safety standards and the ability to identify unsafe and unhealthy situations. Therefore, we believe that the education and training of each employee is a primary factor in achieving a safe and secure workplace. Such education and training should also enable employees to identify mechanisms to eliminate identified hazards.

The risk assessment carried out in 100 public health facilities within the republic in 2011/2012 revealed that the level of awareness on occupational health and safety within the health sector was running low. The report further recommended development of Occupational health and safety minimum package for all levels of health care delivery system. further to that training was prioritized as a major activity to be undertaken for all health workers if their safety and health is to be ensured. it is in this regard that the curriculum, guidelines and training manual have been developed.

This training curriculum in conjunction with the manual represents a significant step in meeting our commitment to workplace health and safety. The training emphasizes the importance of identifying the root cause(s) of accidents and other work related diseases with a systems-based approach. With this knowledge, each trained employee will be better able to provide input to his/her department or unit and the management team as well as fulfilling Health and Safety requirements. By working with and through occupational health and safety committees, we can achieve results that would have been impossible if either management or the employees had worked alone.

We jointly hope that health workers will benefit from the training curriculum, and find it valuable in their everyday work environment.

Mr. James Macharia

CABINET SECRETARY

Introduction

Occupational Safety and Health (OSH) is an area concerned with protecting the safety, health and welfare of people engaged in work or employment. The goals of occupational safety and health programs include fostering a safe and healthy work environment. It is a multi-disciplinary activity targeting four basic aspects:

(1) The protection and promotion of workers health by preventing and controlling occupational diseases and accidents;

(2) The development and promotion of healthy and safe work and work environments;

(3) Promotion of physical, mental and social well-being of workers; and

(4) Enabling workers to conduct socially and economically productive lives and to contribute positively to sustainable development (WHO 2010).

A number of occupational diseases and injuries are rarely reported. The World Health Organization (WHO) estimates that sharps' injuries contribute 30% of new cases of HBV and 2.5 % of annual infections of HIV among health care workers in Sub-Saharan Africa (WHR 2002). Assessment done by MoH together with partners in 95 health facilities across Kenya between 2011 and 2012 suggests that OSH compliance is a problem that cuts across the public and private (for profit and not-for-profit) sectors. A further OSH baseline survey from 6 healthcare facilities indicated low awareness of OSH among health care workers (OSH Baseline Survey, 2014).

To respond to the call for improved implementation of OSHA, 2007, GOK and partners prioritized implementation of key aspects of OSH across various sectors. However, there are still challenges to mainstream OSH across the health sector especially training.

Background

The International Labour Organization (ILO) constitution includes "measures to be taken for protection of the worker against sickness, disease and injury arising out of employment". A safe and healthy work environment enhances work productivity and reduces loss of man hours and is a key element of worker human dignity (ILO, 2010). Occupational Safety and Health (OSH) has for decades dominated international agenda prompting continued support for the ILO to execute their mandate on behalf of the international community through regional and national governments. The World Health Organization (WHO) considers the improvement of working conditions an important factor in health protection and promotion. The WHO developed a nine-year (2008 to 2017) global plan of action on health workers OSH requirements.

In the developed economies access to OSH services by working population is over 90% whereas in emerging and some developing economies the access is below 10% (ICOH 2013).

In Kenya, the workers' health concerns date back to "The Factories ordinance 1950" and lately, "The Occupational Safety and Health Act, 2007". The Directorate of Occupational Safety and Health Services (DOSHS), in the Ministry of Labour, Social Security and Services is mandated to administer safety and health legislations. In 2012 Kenya had about 4% of the working population accessing the benefits of OSH service (ICOH 2013). The MOH is already working on WHO action plan (2008 to 2017) to ensure that Kenyan health worker OSH requirements are addressed. These include: Biosafety Biosecurity guidelines, National Infection Prevention and Control guidelines for health care services in Kenya among others.

Health care facilities are potentially hazardous workplaces that expose their workers to a wide range of hazards; biological, chemical, physical, psychosocial, ergonomic and mechanical. The

emergence of highly infectious diseases such as Severe Acute Respiratory Syndrome (SARS), the H1N1 Influenza and Ebola increase the infection risk dramatically among HCWs. Therefore measures should be put in place to ensure a safe and healthy working environment in line with the Kenya constitution 2010 and the Occupational Safety and health Act 2007.

The implementation of occupational health services will largely depend on training in occupational health. It is in this regard that this curriculum on OSH for HCWs has been developed to support OSH implementation.

Justification

HCWs have the responsibility to adhere to scientifically accepted standards of OSH in all health care settings. The curriculum has been developed based on the need to train health care workers on the importance of Occupational Safety and Health in the work place. This has been occasioned by: Low occupational Safety and Health awareness among HCWs, Minimal evidence of OSH implementation, High OSH risks identified in work environment, and most health care workers not trained on OSH.

Purpose

The purpose for this course is to promote a safe and healthy work environment in Kenya's health sector.

Objectives

The trainer is expected to:-

a) Describe the basic concept of occupational safety and health
b) Explain the Background of OSH
c) Describe the importance of OSH practice
d) Describe the legal aspects relating to OSH
e) Conduct OSH risk management (assessment/mitigation/communication) in the health facilities

Teaching and learning Methods

A variety of approaches will be adopted with the underlying assumption that participants are adult learners who will take responsible for their own learning. The focus will be on active learning and should emphasize on the key knowledge and skills needed for individuals who will

be working in the health sector. Sessions will include the following Teaching and learning Methods

- Lectures
- Group discussions
- Demonstrations
- Videos
- Practicals
- Field visits

Course Management and administration

Target Group

The participants will be health care workers (include but not limited to clinicians, para-medical staff, administrative, and support staff). Training may be in clusters according to management levels.

Course materials

A.Participantmanual

ParticipantswillreceiveaParticipant manual,whichservesastheprimarytextbookfor thiscourse.Itwasdevelopedtoenhancelearningandparticipationinthecourse.

FacilitatorsareexpectedtorefertotheParticipantmanualduringeachsession throughoutthetrainingcoursesothatparticipantscanfollowalong.

B. TrainersManual

ThisTrainers manual wasdevelopedtoenhanceteachingandeffectivefacilitationofthis course.It contains
copiesofPowerPointslideswithbackgroundinformationandfacilitatorinstructions

C. Equipments and materials

The training equipments and materials include fire extinguishers, fuel, PPE, First aid kit, laptop, LCD, extension cables, stationaries, flip charts and markers.

Ground rules and norms

To make the training both productive and enjoyable, some rules and procedures will be put in place for participants to follow. These are not meant to constraint participants but to contribute to a quality learning environment for everyone.
Itisimportantforcourseparticipantstoestablishandcommittotheirowngroupnormson thefirstmorningofthecourse

Expectations

Atthebeginningofthecourse,askparticipantswhattheyexpecttolearnfromthecourse. Recordthisinformationonflipchartpaperandkeepitdisplayedforthedurationofthe course.Identifywhichexpectationsarewithinthedescriptionofthecourseandwhichfall outside.Thiswillhelpparticipantsunderstandwhatthecoursewillandwillnotcover.

Course structure and duration

The training will take 30 hours. These include 24 contact-hours and 6 hours for workplan development, course evaluation and travel time for field visit.

	Unit/module	**Sub units**	**Duration**		
			Lecture	**Demo**	**Practical**
1	Overview of safety and health	Introduction and Importance of OSH Practice	30 min	0	0
		Global history of OSH	30 min	0	0
		Legal aspects of occupational safety and health- MOSHA, 2007	1 hr	0	0
		Legal aspects of occupational safety and health- WIBA, 2007 and other Laws/subsidiary legislation	1 hr		
		Legal aspects of occupational safety and health- Safety and Health Committee Rules	30 min		
2	Classification of Hazards and their Control	Hazards Categories	1 hr	0	0
		Prevention and control of hazards	1 hr		
		PPE	1hr	30 min	0
		Fire safety	1hr	1 hr	0
3	Safe work procedures	Risk Management	1 hr		
		Occupational accidents	1 hr		
		First Aid Management	1 hr		

		Waste management and disposal	1 hr		30 min
		Medical surveillance	1 hr		
		Workplace inspection/audit and hazard spotting	1 hr		3 hr
4	Safety Plant and Equipment	Safety Plant and Equipment	1 hr	0	0
		Safety video	0	30 min	0
5	Safety and health management in health facilities	Elements of OSH management	1 hr	0	0
		Documentation and reporting	1 hr	1 hr	1 hr

Course Assessment/Evaluation

The participant will be assessed before and after the training through pre-test and post-test.

Quizzes will be provided at the end of each module.

An evaluation of the course and the facilitators will be carried out at the end of the course.

Award of Certificate

To be awarded a certificate of participation, a participant must attend a minimum 100 of the classes and must participate in all practical and field visits.

Facilitators

Trainers should be health care workers with background on basic OSH and must have attended OSH TOT training. For Master trainers, they must also be members of the OSH technical working group

1.8. Training schedule

Day one				
Time	**Module**	**Topic**	**Duration**	**Facilitator**
8:00 AM		Participant registration	30 min	
8:30 AM		Opening remarks, introductions, and overall training objective	30 min	
9:00 AM		Pre- training test	30 min	
9:30 AM	Module 1	**Overview of occupational safety and health-,** Introduction and Importance of OSH Practice	30 min	
10:00 AM	Module 1	**Overview of Occupational safety and health-** historical developments in OSH	30 min	

10:30 AM		**Coffee Break**	**0:30**	
11:00 AM	Module 1	**Legal aspects of occupational safety and health -** OSHA, 2007	1hr	
12:00 PM	Module 2	**Classification of Hazards and control measures**- Hazards categories, Prevention and control	1 hr	
1:00 PM		**Lunch**	**1:00**	
2:00 PM	Module 2	**Classification of Hazards and control measures**- Hazards categories, Prevention and control	30 min	
2:30 PM	Module 3	**Safe work procedures**- Risk management	1hr	
3:30 PM		**Coffee Break**	**0:30**	
4:00 PM	Module 3	**Safe work procedures**- Occupational accidents	1 hr	
5:00 PM		**Adjourn**		
Day 2				
Time		**Topic**	**Duration**	
8:00 AM		Participant Registration	0:15Mins	
8.15AM		Recap of day 1	15Mins	
8:30 AM	Module 1	**Legal aspects of occupational safety and health -** WIBA, 2007 ,other Laws and Subsidiary Legislations	1 hrs	
9:30 AM	Module 2	**Classification of Hazards and their Control**- Personal Protective Equipment (PPE)	1 hr	
10:30 AM		**Coffee Break**	**0:30**	
11:00 AM	Module 2	**Classification of Hazards and their Control**- Demonstration/ video on PPE	30 min	
11:30 AM	Module 2	**Classification of Hazards and their Control**- Fire Safety	1 hr	
12:30	Module 2	**Classification of Hazards and their Control**- Demonstration on Fire Safety	30min	
1:00 PM		**Lunch**	**1:00**	
2:00 PM	Module 3	**Safe work procedures**-First Aid	1 hr	
3:00	Module 3	**Safe work procedures**- Medical surveillance	1 hr	
4.30pm	Module 3	**Safe work procedures-** Occupational diseases	30mins	
5:00 PM		**Coffee Break**	**30 mins**	
5:30 PM		**Adjourn**		

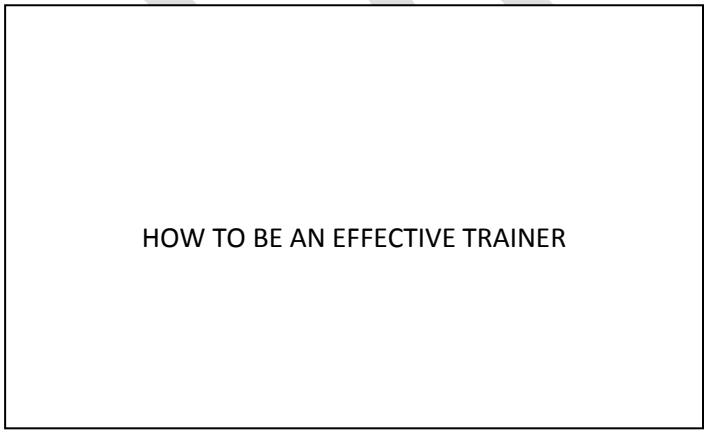
Day 3				
Time		**Topic**	**Duration**	
8:00 AM		Participant Registration	15Mins	
8.15AM		Recap of day 2	15Mins	
8:30 AM	Module 1	**Legal aspects of occupational safety and health -** Safety and Health Committee Rules	1 hr	
9:30 AM	Module 4	**Safety Plant and Equipment**	1 hr	
10:30 AM	Module 4	**Safety Plant and Equipment- video**	30 mins	
11:00AM		**Coffee Break**	**30mins**	
11:30 AM	Module 3	**Safe work procedures-** Workplace inspection and audit	30 mins	
12:00PM		**Safe work procedures** -Waste management discussion / video	1 hr	
1:00 PM		**Lunch**	**1hr**	
2:00 PM	Module 5	**Occupational safety and health management in health facilities-** Elements of OSH management	1 hr 30 min	
3:30 PM	Module 5	**Occupational safety and health management in health facilities-** Documentation and reporting	1 hr	
4:30 PM		**Coffee Break**	**30mins**	
5:00 PM		**Adjourn**		
Day 4				
Time		**Topic**	**Duration**	
8:00 AM		Participant Registration	0:30	
8.15AM		Recap of day 3	15Mins	
8:30 AM	Module 3	**Safe work procedures-** Preparation for site visit's walk-through survey	1 hrs	
9:30 AM		**Coffee Break**	**30 min**	
10:00 AM	Module 3	**Safe work procedures** Travel to the site	30 min	
10:30 AM	Module 3	**Safe work procedures-** Practical walk-through survey	2 hrs	
12:30 AM		**Safe work procedures** Travel back from site	30 min	
1:00 PM		**Lunch**	**1hr**	
2:00 PM	Module 3	**Safe work procedures-** Feedback for site visit's walk-through survey	1 hr	
3:00 PM	Module 5	**Occupational Safety and health management in health facilities-**	1 hr	

		Demonstration on statutory documentation and reporting		
4:00 PM		**Coffee Break**	**30 min**	
4:30 PM	Module 5	**Occupational Safety and health management in health facilities-** practicals on statutory documentation and reporting	1 hr	
5:30 PM		**Adjourn**		
Day 5				
Time		**Topic**	**Duration**	
8:00 AM		Participant Registration	15 min	
8.15AM		Recap of day 4	15Mins	
8:30 AM		Post test	30 min	
9:00 AM		Discussion and development of action plan	1 hr	
10:00 AM		**Coffee Break**	**30 min**	
10:30 AM		Presentation of action plan	1 hr	
11:30 AM		Training evaluation	30 min	
12:00 AM		wrap-up and Closing remarks	1hr	
1:00PM		**Lunch and departure**	**1 hr**	

Course content

Prerequisite module

Slide 1



Slide 2

Purpose

A train-the-trainer module will be used to assist trainers/trainees to develop and/or expand their skills to conduct effective trainings that are specifically related to OSH

Slide 2

Objectives

By the end of this module, the trainer should be able to:

- Impart skills on how to prepare for effective trainings
- Outline characteristics of an effective trainer
- Build an atmosphere of trust and rapport
- Manage challenging training situations

Slide 3

Preparing for an effective training session

- Know your audience and their needs
- Know your training content
- Introduce the goal and unit objectives
- Select methods for conducting introductions, reviewing expectations, and establishing group norms.
- Identify energizers to use throughout the course to raise the energy levels of the group.

Notes: Prepare and organise training materials.prepare the venue and arrive early to familiarise with yourself,Practice effective strategies for handling difficult training situations.Know the skills levels of the participants so as to know how to handle them.

Slide 4

Characteristics of an effective trainer

- Must be logical in presentations
- Must be audible with good communication skills
- Be able to apply adult Learning Principles to Past Experiences
- Maintain eye contact and be focused
- Must adhere to time schedules
- Relate the learning with the goals of participants

Notes: Must be confident, start with ice breakers, make topics memorable, be honest if you don't know answers, Be in control and flexible. bridge participants interests to your objectives.Use body language

Slide 4

Manage challenging training situations

- Be empathetic and non-judgmental
- Have back up plans
- Understand the training environment
- Know the challenges that the participants are facing
- Respond to concerns and not angers
- Refer to ground rules

Note: Conflict can be seen as a gift of energy where neither side looses, and a new dance is created T.Crum

Slides and Notes for Module 1

Purpose
This module introduces the participants to OSH concepts and the legal aspects to be implemented in the health facilities.

Slide 1	**Module 1: Overview of safety and health** **Unit 1**	Brainstorm on the participants knowledge on Safety and Health
Slide 2	**Objectives**: At the end of this module, the participant is expected to:- • Describe the concepts of occupational safety and health • Describe the background and importance of OSH • Explain the legal aspects relating to OSH	
Slide 3	**Definition of OSH** Occupational Health and Safety (OSH) is multi-disciplinary and targets four basic aspects namely; (1) The protection and promotion of workers health by preventing and controlling occupational diseases and accidents;	

	(2) The development and promotion of healthy and safe work, work environments and work organizations; (3) Enhancement of physical, mental and social well-being of workers; and (4) Enabling workers to conduct socially and economically productive lives and to contribute positively to sustainable development. **This is essentially *Fitting work to the worker and the worker to work***	
Slide 4	**Importance of occupational safety and health Practice** **Economic sense** When safety and health system is in place, productivity is enhanced. Reduced insurance premiums, reduced long term health care costs, reduced legal costs **Legal importance** Reduced litigations, reduced ambulance chasers (common law costs), cushion workers from exploitation by employers **Health implications** Reduced morbidity, mortality and fatality. **Organisational competitiveness** Improved public image employee satisfaction and employee retention.	
Slide 5	**Background and Global history of OSH** -The father of occupational health is considered to be Bernardino Rammazzini (1633-1714). -Rammazzini is credited with establishing the field of occupational medicine in his lifetime -He published the famous book called the "disease of the workers" in the year 1700. -The industrial revolution (1760-1840) was characterized by deplorable work conditions such as poor housing, overcrowding, lack of sanitation, physical and psychological hazards	
Slide 6	**History** -In response to these concerns, in 1802 Britain enacted the first law to	

	protect workers:- the Health and Morals Apprentices Act -In middle of 19th century, britain introduced measurement of occupational mortality -In 1898, britain appointed the first medical inspector of facories who dealt with notifications and reports from certifying surgeons. -In 1919 the International Labour Organization (ILO) was founded to adress conditions of labour that involved injustices and hardships	
Slide 7	**Early solutions**….. -The ILO constitution includes "measures to be taken for protection of the worker against sickness, disease and injury arising out of employment". -The Alma Ata, resolution No. 14 specifically urged the Director General (WHO) to give special attention to working people by the development of Occupational Health care.	The Alma Ata Declaration of 1978 on Primary Health Care expressed an urgent need for all Governments, Health and development workers and all community to protect and promote the health of all people
Slide 8	**WHO Constitution** The World Health Organization (WHO) mandate and interest in OSH derives from its constitution in which it is envisaged that:- "*the improvement of working conditions is considered an important factor in health protection and promotion*".	
Slide 9	**Kenya situation** In Kenya, the Directorate of Occupational Safety and Health Services (DOSHS), in the Ministry of Labour, Social Security and Services is mandated to administer safety and health legislations.	

	• Factories ordinance 1950, factories Act 1951 • Factories and Other places of work Act, 1990 • Occupational Safety and Health Act, 2007.	
Slide 10	**Way forward** -There is need to integrate this service into the Healthcare Delivery System in Kenya. -This will allow for comprehensive planning and implementation of the necessary programmes to achieve the objectives of occupational health and safety.	
Slide 1	**Unit 2** **LEGAL ASPECTS OF OCCUPATIONAL SAFETY AND HEALTH**	
Slide 2	**The Kenyan Constitution, 2010** Occupational safety and health is cited in the constitution in the following articles:- • Article 35: access to information required for the exercise of protection of any right • Article 41: reasonable working conditions for all workers in Kenya • Article 42: a clean and healthy environment • Article 43: Right to the highest attainable standard of health. • Article 70: compensation for any victim of a violation of the right to a clean and healthy environmentrespectively.	
Slide 3	**Occupational Safety and Health Act, 2007** The Act applies to all workplaces where any person is at work, whether temporarily or permanently**.**	Excluding the Kenya defense forces

Slide 4	**Duties of occupiers (employers/manager)** • Ensure safety, health and welfare at work of all his employees. • *Registration of workplaces:* All occupiers shall register their premises as workplaces • *Renewal of registration certificate:* The certificate of registration shall be renewed every year. • Prepare a written safety and health policy statement.	An Occupier is the person in charge of a workplace an may represent the employer. May be a manager e.g. of a branch.
Slide 5	**Duties of occupiers (employers/manager)** • Carry out *risk* assessments in relation to the safety and health of persons employed. • Not make any deduction from an employee's salary or other benefits for anything provided under the Act. • *Safety and health audits* - ensure that a safety and health audit of the workplace is carried out at least once every year byan approved safety and health adviser.	
Slide 6	**Duties of self-employed persons** • Take all necessary precautions to ensure his own safety and health and that of any other person who may be affected by his activities.	
Slide 7	**Duties of employees** • Take care of his own safety and health and that of other persons who may be affected by his acts or omissions at work. • Co-operate with his employer in discharge of any requirement imposed by the Act. • Use at all times protective equipment or clothing provided by the employer for the purpose of preventing risks to his safety and health. • Reportto the immediate supervisor any situation which he believes presents imminent or serious danger to his safety or health. No person shall wilfully interfere with or misuse anything provided for	*If an employee contravenes his/her duties, he can be taken to court as an individual.*

	safety, health and welfare	
Slide 8	**Safety and health committees** An employer with twenty or more regular employees shall establish a workplace safety and health committee whose membership shall comprise both the workers and management	*For those with less than 20 employees, the in charge of the facility is responsible of safety matters.* *When determining whether a workplace has 20 employees, it is mandatory to include contractors, casuals, interns and volunteers*
Slide 9	**Accidents, diseases and dangerous occurrences notification** • *Notice of accidents and dangerous occurrences:* - Notify the nearest occupational safety and health office within 7 days. • In the case of a fatal accident the notice must be given *within twenty-four hours*. • *Notification of occupational diseases:*- Every medical practitioner shall notify the Director of any occupational disease he encounters while attending a patient within 7 days.	*Doctors who do not report occupational diseases are liable to a fine of Ksh. 50,000*
Slide 10	**Enforcement of the Act** • *Inspections* – Occupational Safety and Health Officers have powers to inspect every workplace by day or by night. Any person obstructing such an officer is liable to a penalty. • *Improvement notices and prohibition notices* – These are issued	

	when contraventions recur and no action for improvement is taken. • *Prosecution:* for fresh and repetitive contraventions	
Slide 11	**General Health Provisions** • Cleanliness: No accumulation of dirt • Overcrowding: minimum $10m^3$ space for each person • Ventilation: Adequate free flow of fresh air • Lighting: Adequate & suitable for different occupations • Drainage of Floors: well drained floors • Sanitary Accommodation: sufficient for each gender	
Slide 12	**Machinery safety** • *Safe use of Plant machinery and equipment:* - designed for and be operated by a competent person. • *Fencing*. – Every part of the transmission machinery and every dangerous part of other machinery must be securely fenced. *Cranes, Hoists and other lifting equipment, pressure vessels and refrigeration plants* – Must be thoroughly examined periodically according to the law by a person approved by DOSHS.	
Slide 13	**General Safety Provisions** • *Safe means of access:* Floors, passages, gangways, steps, stairs and ladders must be soundly constructed and properly maintained, and handrails must be provided for stairs. • *Removal of Dust or Fumes* –workers must be protected against inhaling, and where practicable, localized exhaust ventilation must be provided and maintained. *Meals in Certain Dangerous Trades*. - A person must not partake of food or drink in workrooms where there are hazardous dusts or fumes	*Participants to discuss areas where eating is prohibited in Health facilities.* *What are the remedies?*
Slide 14	**General Safety Provisions** • *Protective Clothing and Appliances*. – Suitable protective clothing and appliances must be provided and maintained for the use of workers employed in any process involving exposure to	

	wet or to any injurious or offensive substance. • *Confined spaces*. – Adequate precautions should be taken for work in confined spaces where persons are liable to be overcome by dangerous fumes. • *Explosions of Inflammable Dust or Gas.* – Precautions should be taken against explosions for welding or soldering on containers, which have held any explosive or inflammable substance. (such containers must be washed thoroughly before welding.)	
Slide 15	**General Safety Provisions** • *Protection of Eyes*. – Goggles or effective screens must be provided in certain specified processes. • *Training and Supervision of Inexperienced Workers.* – A person must not work at any dangerous machine or process unless he has been fully instructed as to the dangers and precautions, and has received sufficient training in the work or is under adequate supervision. • *Fire*. - Adequate and suitable means for extinguishing fire must be provided in every workplace.	
Slide 16	**General Safety Provisions** • Adequate fire exits must be provided and marked. All doors affording a means of exit from the workplace must be sliding doors or made to open outwards. • *Fire Safety Audit*: Every occupier shall carry out a fire audit of the work place once every twelve months by a person approved by DOSHS. • *Evacuation procedures*: - Every occupier of a workplace shall design evacuation procedures to be used during any emergency.	
Slide 17	**Chemical safety** ***Handling of hazardous substances****:* Any person supplying, distributing conveying or handling hazardous substances shall ensure that they are packaged, conveyed, handled and distributed in a safe manner.	

	***Material Safety Data Sheets**:* Manufacturers, importers, suppliers and distributors of chemicals shall make available to employers material safety data sheets for chemicals and other hazardous substances**.**	
Slide 18	**Welfare Provisions** *Drinking Water*. – An adequate supply of wholesome drinking water must be provided. *Washing Facilities*. – Adequate and suitable washing facilities must be provided and maintained *Accommodation for clothing*. - Adequate and suitable accommodation for clothing not worn during working hours must be provided.	*Discuss the various provisions of washing facilities in the participants facilities. Showers, washing basins, sinks etc.* *Changing rooms and different lockers for home clothes, PPE.*
Slide 19	**Welfare Provisions(2)** • *Facilities for Sitting*. – Suitable facilities for sitting must be provided for all workers whose work is done standing, sufficient to enable them to take advantage of any opportunities for resting. • *First-aid*. –a first-aid box or cupboard of the prescribed standards must be provided and should be under the charge of a trained first-aider. • *General Register*. – The occupier must keep a general register in the prescribed form. Information kept in the register includes cases of accidents, occupational diseases and dangerous occurrences**.**	*General Register is a legal document, bought from DOSHS for each premises.* *Participants may be informed that they will practice filling data in to the register in the documentation*

		and reporting unit.
Slide 20	**Safety and Health Regulations** The Cabinet Secretary in charge of labour matters, may make rules under this Act to deal with any hazardous exposures at workplaces.	*Facilitator to mention a few examples: e.g. Safety and Health committee rules, first aid rules, medical examination rules etc.*
Slide 21	**Penalties** • Not using provided PPE KShs. 50,000/3mths • General contravention of any section – 300,000/3mths • If contravention is not rectified after conviction – KShs. 10,000 each day it is continued • If accident causes death and occupier has knowledge of the causative agent – KShs. 1million/12mths	*Supervisors to follow HR regulations in disciplinary procedures. After warning letters then request to DOSHS to prosecute the employee for not using PPE can be made.* *Where accidents are due to the occupier not addressing already spelt out hazards, then penalties are higher.*

Slide 1	**Unit 3** **WORK INJURY BENEFITS ACT, 2007**	*Was Workmen Compensation Act before 2007.* *Is under review and will be known as Work Injury Compensation Act.* *Reason: The word benefit confuses people including KRA requesting for taxes.*
Slide 2	**Objective of the act** To provide compensation to employees for work related injuries and diseases contracted in the course of employment. **Application** Act applies to all employees including those employed by the Government except Kenya Defense Forces.	
Slide 3	**Obligations of Employers** Employer to have an insurance policy with approved insurer for any	

	liability. Every Employer must— • Register with DOSHS. • Keep a register of earnings and other prescribed particulars for minimum of *six years* from date of last entry. • Produce register on demand for inspection by DOSHS.	
Slide 4	**Right to Compensation** Employee involved in an accident resulting in disablement or death is entitled to compensation. An employee is not entitled to compensation if an accident not resulting to serious disablement or death is caused by his/her deliberate misconduct except in the case of serious disablement (40% or more) or death.	*Accidents due to negligence but employee gets 40% or more incapacity are compensable.*
Slide 5	**Compensation may be denied if:** • Employee has *falsely denied* suffering from a medical condition which has aggravated injury or disease • Death or injury is caused, prolonged or aggravated by unreasonable refusal or wilful neglect of an employee to submit to medical aid for present or previous accident or disease • If the accident is not reported within 1 year of occurrence.	
Slide 6	**Reporting of Accidents** • Fatal accident to be reported toemployer with copy to DOSHS within twenty-four hours • Other accidents to be reported to DOSHS within seven days in the prescribed form (DOSH 1) • Accident to be reported even where an employer denies it arose	*Emphasize the importance of reporting and documenting accidents that happen despite being*

	out of and in the course of employment.	*very minor.*
Slide 7	**Settling claim** If an employer fails to report an accident or provide information as required by the director, the Director may conduct investigations at the cost of the employer	
Slide 8	**Compensation** • Temporary total disablement; due to an accident for three or more days. *A periodical payment equivalent to his/her earnings for a period not exceeding 12 months*. • Compensation for permanent disablement is calculated on the basis of ninety six months earnings as set out in the Third Schedule • 'Employee's earnings': Monthly rate at which one was being paid by the employer at the time of accident: Earnings; salary/Wage, Allowances *paid regularly*, Any overtime payment or special payment of *a regular nature*	*Emphasize that compensable accidents keep employees out of work for three or more days.*
Slide 9	**Medical Aid** • Employers are required to provide and maintain appliances and services for rendering of first aid. Failure is an offence. • Conveyance of injured workers to hospital or medical facilities and residence is the responsibility of the employer. • Employers shall settle expenses reasonably incurred by his employees as a result of an occupational accident or disease.	
Slide 10	**Medical expenses include** • dental, medical, surgical or hospital treatment • skilled nursing services,	

	• supply of medicine, supply of surgical dressing, • traveling and • supply, maintenance, repair and replacement of artificial limbs, crutches and other appliances and apparatus used by persons with disabilities.	
Slide 11	**Other related Legislation** • Public Health Act • Radiation Protection Act • Pharmacy and Poisons Act • Pest Control Products Act • Environmental Management and Coordination Act	
Slide 12	**Public Health Act, Cap. 242** • Touches on various cross cutting occupational health issues eg • Notification of infectious diseases, • by-laws for sanitation and housing, inspection of premises	
Slide 13	**Radiation Protection Act, Cap 243** • Before authorization of a new or modified practice, the Board shall require, as appropriate, and review supporting documents from the applicant that show the design criteria and design features- ✓ relating to the exposure and potential exposure of workers in all operational states and accident conditions ✓ Of the appropriate systems and programs for monitoring of workers for occupational exposure in all operational states and accident conditions.	

Slide 14	**Radiation Protection Act** • Every employer shall be responsible for the protection of workers against occupational exposure. • Every employer shall ensure that protection and safety is optimized and that the dose limits for occupational exposure are not exceeded.	
Slide 15	**Radiation Protection Act** • For workers who are engaged in activities in which the workers are or may be subject to radiation exposure every employer shall be responsible for- ✓ the protection of workers against occupational exposure; ✓ the compliance with other relevant requirements of the Act. ✓ A person who contravenes this section commits an offence	
Slide 16	**Pharmacy and Poisons Act, Cap 244** • Gives clear guidelines on handling, storage, transportation and custody of drugs and poisons. • Only authorised personnel are allowed to handle these substances.	
Slide 17	**Pest Control Products Act** • The Act safeguards Human Health and the Environment from Pesticide Risks by:- ➢ Promoting adoption of cleaner technologies in the pesticide life cycle. ➢ Benchmarking and implementing pesticide guidelines and procedures to regional treaties and international conventions to which Kenya is	

	a party. ➢ Increasing collaboration, benchmarking and enhanced risk assessment with leading pesticides registration /regulators internationally.	
Slide 18	**Environmental Management Coordination Act, 1999** • EMCA, 1999 provides for improved legal and administrative co-ordination of the diverse sectoral initiatives in order to improve the national capacity for the management of the environment. • It compels persons responsible for the environmental degradation to restore the degraded environment as far as practicable to its immediate condition prior to the damage. • A number of regulations touching on safety and health of workers ….	

Slide 19	**Waste management regulations LN 121/2006**
	• Approval of biomedical waste generating facility.
	  • Any person who generates biomedical waste shall ensure that generating facility has been approved by the appropriate agency and Local Authority.
	• *Segregation of biomedical waste*
	  • Any person who generates biomedical waste shall at the point generation and at all stages thereafter segregate the waste accordance with the categories provided under the Seventh Schedule to these Regulations
	• *Treatment of biomedical waste*
	  • Any person who generates waste shall treat or cause to be treated all biomedical waste in the manner set out in the Ninth Schedule to these Regulations, before such biomedical waste is stored or disposed off	

Slide 20	**Subsidiary Legislation under OSHA** 1. Safety and Health Committees Rules, 2004. L.N. No. 31 2. First – Aid Rules, 1977 L.N. 160 3. Fire Risk Reduction Rules, 2007 L.N. No. 59 4. Hazardous Substances Rules, 2007 L.N. No. 60 5. Medical examination Rules, 2005. L.N. No. 24 6. Protection of eyes Rules, 1977 L.N. No. 44 7. Noise prevention and control Rules, 2005. L.N. No. 25 8. Electric Power Rules 1979 L.N. 340 9. Building Operations and works of Engineering Construction) Rules, 1984 10. Woodworking machinery Rules. L.N. 431/1959 11. Docks Rules. L.N. 306/1962 12. Cellulose Solution Rules L.N. 231/1957, L.N.87/1964 13. The Government Financial Management (Occupational Safety And Health Fund) Regulations, 2011.	*Mention that though all these are under the Act. Only the first few will be discussed.*
Slide 21	**SAFETY AND HEALTH COMMITTEES RULES, 2004** Rules regulate occupational safety and health activities in workplaces by the owners for all workplaces which regularly employ twenty or more employees. How? • By establishment of safety and health committees, • The committee will be made of safety representatives from management and workers.	
Slide 22	**Formation of safety committee** Workplaces employing • Between 20 and 100 regular employees should have not less than 3 safety representative each from the management and workers; • Between 100 and 1000 regular employees should have not less than 5 safety representative each; • 1000 and more regular employees should have not less than	*Emphasize on these being the minimum requirements but the committees may be larger depending of number of*

	7safety representative each.	*sections in the organization.* *For workplaces with less than 20 employees, the facility in-charge will be responsible of OSH matters.*
Slide 23	**Organization of the Committee** • Management representative will be appointed by occupier. • Workers representative will be elected by workers and the occupier will be the overseer • Consideration to be made during appointment of safety representatives	*representation from different departments/ units/sections* *Representation reflecting gender parity*
Slide 24	**Basic training** Every member of the committee shall undergo a basic course in occupational safety and health training within a period of six months from the date of appointment or election.	*The course is 30 hours offered through the DOSHS. Refresher course required from time to time.*
Slide 25	**Terms of Service** Members will be eligible for three years and May be re-elected for one further term**.**	

Slide 26	**Functions of the Committee** • Establish a schedule of inspection of the workplace for each calendar year; • Conduct safety and health inspections at least once in very three months; • Investigate and make recommendations to the occupier immediately any accident or dangerous occurrence takes place; • Identify occupational hazards and cases of ill health among workers	
Slide 27	**….Functions** • Compile statistics of accidents and cases of ill-health as primary data for providing remedial measures; • Investigate complaints on health, safety and welfare at the workplace • Advise on the of safety and health measures for hazardous work or activities;	
Slide 28	**...Functions** • establish effective communication between the management and the workers • organize contests or activities on occupational health and safety • conduct seminars on safety, health and welfare at the workplace	
Slide 29	**Roles of the Chairman** • Preside over all committee meetings at which he is present; • Keep the members informed of the safety and health policy of the organization; • Assist the Committee in setting its objectives and its scope of activities; and • Assign responsibilities to members.	

Slide 30	**Role of the Secretary** • Arrange and co-ordinate Committee meetings in consultation with the chairman • Take minutes at Committee meetings; • Maintain an up to date record of the activities of the Committee; • Obtain and analyse statistics for Committee meetings; • Co-ordinate and monitor occupational safety and health programmes;	
Slide 31	**...Role of the Secretary** • disseminate safety and health information to members; • draw up safety and health inspection schedules; • ensure that all reports are availed to the Committee	
Slide 32	**Role of the members** • Attend all Committee meetings; • Provide feedback to their departments on issues raised in the meetings. • Set good examples of safe and healthy work practices;	
Slide 33	**…Role of the members** • Undertaking training in health and safety; • Provide written recommendations to the occupier on areas and issues requiring action. • Monitor compliance with safety and health rules in theirrespective departments or units;	
Slide 34	**The duties of the occupier (employer/manager)** • Provide a venue for holding meeting;	

	• Allow members to attend the meetings and other functions of the Committee without loss of earnings; • Ensure members have undertaken the statutory trainings;	
Slide 35	**…The duties of the occupier** Provide the Committee with – ❑ Statistics of accidents, dangerous occurrences, and incidents of occupational diseases; ❑ All the necessary and relevant information on hazardous substances; ❑ Safety and health reference material or facilities;	
Slide 36	**…The duties of the occupier** ○ cause the monitoring and evaluation of hazards and risks identified by the Committee; ○ develop a clearly defined safety and health policy and bring it to the notice of all employees at the workplace; ○ facilitate the implementation and review of the workplace safety and health policy; ○ Section 7, OSHA, 2007: Employer to prepare a policy.	
Slide 37	**…The duties of the occupier** • make available to the Committee legislation on occupational safety and health; • make a report to the director on all accidents as required under the principal Act; • chair meetings, and, in his absence delegate the function to a senior member of the management;	
Slide 38	**…The duties of the occupier** • cause to be maintained a record of the proceedings of Committee meetings and reports of the audit referred to in these rules; and • ensure that all matters set out in these Rules are	

	complied with;	
39	**OTHER OSH SUBSIDIARY LEGISLATION** Other than the Safety and Health committee rules, the following rules are briefly discussed • First Aid Rules • Fire risk reduction rules • Hazardous substances rules • Medical Examination rules • Noise prevention and control rules • Eye protection rules	
Slide 40	**First aid rules, 1977** • These Rules apply to workplaces, and require the occupier to put in place appropriate measures to ensure that those injured at work receive necessary medical attention. The Rules specify the contents of the first-aid box in accordance with the number of workers, and the training of first-aiders.	
Slide 41	**Fire risk reduction rules, 2007** • The Rules are intended to provide guidelines on fire prevention and control at the workplaces. • Rules required occupiers to carry out a fire safety audit at least once in 12 months using services of an approved fire safety auditor.	
Slide 42	**Hazardous substances rules, 2007** • Provide occupational exposure limits (OEL) and Biological exposure indices (BEI) for Hazardous substances and Biological determinant respectively.	

	• They require every workplace where hazardous substances are used. The employer shall ensure that measurements of the substances in the air are carried out at least once in every 12months by a certified Air Quality Monitor (AQM)	
Slide 43	**Medical examination rules, 2005** • Requires that every employer shall ensure that all persons employed in specified occupations involving risk to health undergo both pre-employment and periodic medical examination by designated health practitioners (DHP).	*DHP is a medical doctor that have been approved by DOSHS to carry out medical examination on workers.*
Slide 44	**Noise prevention and control rules, 2005** • Requires measurement of noise at workplaces at least once in every period of twelve months in order to determine the prevailing noise conditions. • Also requires competent persons in the area of safety and health matters to carry out measurements of noise to determine the prevailing noise conditions. **Eye protection rules, 1977** • These Rules apply to workplaces, and require the occupier to protect their employees against exposure that is injurious to the eyes.	
Slide 45	**Policies and Guidelines** • The National OSH Policy, 2012 • OSH Policy Guidelines for the Health Sector in Kenya, 2014 • National IPC Guidelines for Healthcare Services in Kenya, 2010 • National Policy on Injection Safety and Medical Waste Management, 2007 • Laboratory Biosafety & Biosecurity policy Guideline 2013 • Safe Phlebotomy Training for health Care workers in Kenya,	

	2013 • Other relevant policies and guidelines within the health sector	
Slide 1	**Module 2** **classification of hazards and their control measures**	
Slide 2	**Objectives:** Define term "hazard" Categorize hazards and their effects Describe sources and exposure State prevention and control measures	
Slide 3	**Hazard Definition** ◦ *Hazard - P*otential source of harm or adverse health effect on a person or persons' ◦ Exposure to a hazard may produce immediate (acute), medium or long- term (chronic) effects ◦ Some occupational diseases may take long to manifest e.g. Mesothelioma due to asbestos	*Hazard is potential to cause harm whereas **Risk** is the probability of occurrence of an adverse event (from the hazard) .*
Slide 4	**Hazard Categories** 1. Biological 2. Chemical 3. Physical 4. Ergonomic 5. Mechanical 6. Psychosocial	*This is a list of hazard the next slides will explain each in detail.*

Slide 5	**Biological Hazards** Biological hazards (biohazards)-are substances that pose a threat to the health and safety of humans, animals and environment. E.g. medical waste or body fluids containing microorganism, or toxin (from a biological source)	*Others sources include, soiled linen, used medical equipment, etc*

Slide 6	**Mode of Exposure and Effects**
	
	• Contact (direct or indirect): touching a person or contaminated surface, sexual contact.
	  • Examples : haemorrhagic fever virus, enteric pathogens, Ebola, HIV, HBV
	• Droplet: infected droplets come into contact with eyes, nose or mouth.
	  • Examples : influenza and rubella viruses, corynebacterium diphtheria	

Slide 7	**---Mode of Exposure and Effects**
	
	• Airborne: residue from infected droplets or contaminated dust particles remain in the air for long periods of time and enter the body through the respiratory tract.
	  • Examples : TB including MDR TB, chicken pox, and measles
	• Fecal-Oral route: organisms infect the digestive system through contaminated food or water.
	  • Examples : salmonellosis, cholera, typhoid fever, hepatitis A	

Slide	**---Mode of Exposure and Effects**	

8	• Vector: capable of transmitting disease, such as, mosquitoes, and fleas.
	  • Examples : malaria, yellow fever, dengue fever.
	• Percutaneous: (needle stick/sharp injuries) and Mucocutaneous route: splash of body fluids into the eyes, nose or mouth.
	  • Examples: human immunodeficiency virus (HIV), hepatitis B (HBV) and hepatitis C (HCV).	

Slide 9	**Prevention and Control of Biological Hazards** • Implementation of Standard Precautions (hand hygiene, handling of sharps, decontamination of instruments) • Immunization against hepatitis B, influenza, yellow fever, typhoid, • Proper management of waste materials • Provision of appropriate and proper use of PPE • Post Exposure Prophylaxis (PEP)	*Ask the participants to explain: Standard Precautions and hand washing procedure.*
Slide 10	**Summary - Control of biological hazards in healthcare settings**	*OSH is keen to promote awareness of infection control and require that all are involved in proactive prevention.* *Accurate*

		Record Keeping relates to documentation (eg. Accident and Incidence reporting) and training. Refer to Infection prevention and Control, Laboratory Biosafety and Biosecurity policy guidelines
Slide 11	**Examples of Biological Hazard Signage** 	
Slide 12	**Chemical Hazards** • Are substances that can cause harm or damage to the body, property or the environment. • Can be either natural or man made. • Classified as solids, liquids, gases, – Health care environment houses a vast array of chemicals. – Examples: formaldehyde, ethylene oxide, phenol, and peracetic acid; anaesthetics gases, laboratory reagents	*1. Ask the participant to name some of the chemicals they use in their work areas* *2. These chemical agents include metals, acids, alkali, and solvents,*

		asphyxiants, cleaning detergent, disinfectants and narcotics among others
Slide 13	**Mode of Exposure and Effects** • Inhalation: gases, dust, vapour, fumes, aerosols or mists. • Examples: xylene, formaldehyde, acetone • Ingestion/swallowing: via contaminated foods or drinks, touching mouth with contaminated hands, or inhaling airborne particles • Topical (skin) – chemicals such as acids or alkalis can corrode or burn the skin. • Example: organic solvents can penetrate through the skin causing systemic damage. Others cause allergic reactions.	
Slide 14	**Mode of Exposure and Effects** • Ocular (eye): Splash, contact – irritation, ulceration, loss of eye sight. • Injection: sharp objects contaminated with chemicals can penetrate the skin and cause damage. • Chemical exposure can have severe effects to other body systems. • Examples: respiratory, nervous, skin and reproductive etc. other effects include cancers, tumors and mutations**.**	
Slide 15	**Prevention and Control of Chemical hazards** • Availability and use of Material Safety Data Sheet {MSDS} • Availability of chemical Safety Policies and SOPs • Provisison and Appropriate use of PPE • Management of exposures and first aid • Emergency shower and Eye wash station	*1 Explain to the participants that MSDS has all information on*

		the particular chemical: use, safety, storage and disposal among other. Every chemical in the work should have a MSDS. *2. Chemical list is required (should be updated)*
Slide 16	**Examples for Chemical Signage** 	

Slide 17	**3. Physical hazards**
	
	• Are conditions or situations that can cause the body physical harm or intense stress
	  • Can either be natural and/or human made.
	• Example: extreme temperature and pressure, noise, vibration and radiation (ionizing and non-ionizing) that can be harmful to workers if not properly controlled.
	
	Mode of Exposure and Effects
	
	• Thermal Conditions
	  1. Heat-come about when temp and/or humidity are unusually high or exposure to high radiant heat
	  2. Effect
	  3. Heat stroke.
		Most can be found in excess in some health care settings. Other physical agents such as electrical energy, or other forms of radiation used on patients can be harmful if not properly

	4. Heat exhaustion 5. Heat rash 6. Heat cramps **7.** Decreased work morale and inability to concentrate	*controlled.* ***Extremes of temperatures-*** *Both very cold and very hot temperatures could be dangerous to health.* *Excessive exposure to heat is referred to as heat stress whereas heat strain is the response both physiological and behavioural resulting from the applied heat stress. . Prolonged exposures to mildly hot environment may cause discomfort, irritability, lassitude, decreased morale, increased*

		anxiety and inability to concentrate. Increased exposure to heat can result in heat rash, heat cramps, heat exhaustion and finally heat stroke, in order of severity. Other consequences of extreme heat include cataracts, and aggravation of other medical conditions like cardiovascular and endocrinal disorders. Examplle Boilers rooms, kitchen etc
Slide 18	**Mode of Exposure and Effects** 2. Cold When the temp are usually low and when high wind speed in background of low temp. – Effects: – Hypothermia – frostbite	*At very cold temperatures, the most serious concern is the risk of hypothermia*

	– cold burns – Reduces sensitivity of the fingers Extremes of Pressures - Caison's syndrome or decompression diseases	*or dangerous overcooling of the body. Another serious effect of cold exposure is frostbite or freezing or cold burns of the exposed extremities such as fingers, toes, nose and ear lobes. Example; cold rooms, morgue,* *Extremes of pressure arise in very high and very low altitudes eg deep sea diving and mountain climbing.*
Slide 19	**Mode of Exposure and Effects** • Noise- Unwanted sound • Effects: 1. Acoustic trauma: Very high sound eg. Bomb Blasts, – Sudden hearing damage caused by short burst of extremely loud noise such as a gun shot.	*The effects of noise exposure are determined by the noise level and frequency, duration of exposure and individual*

	2. Tinnitus: Ringing or buzzing in the ear 3. Temporary hearing loss: Temporary Threshold Shift (TTS) occurs immediately after exposure to a high level of noise.	*susceptibility. High noise levels with long exposure duration can result in noise-induced hearing loss. Damage can be due to rupture of the ear drum or injury to the sensory hair cells of the inner ear.*
Slide 20	**Mode of Exposure and Effects** 4. Permanent hearing loss: – Permanent Threshold Shift (PTS), 5. Interferes with communication 6. Sleep disturbance and fatigue	*Noise can also interfere with communication resulting in nervous fatigue, distract attention and concentration, mask perception of verbal safety warnings, signals and alarms hence an increased risk of occupational accident and injury.*

Slide 21	**Mode of Exposure and Effects**
	
	Vibration
	
	• Mechanical oscillation of a surface around its reference point.
	  • Whole body vibration (WBV) -tractor, lorry
	  • Segmental vibration-eg hand transmitted vibration-vortexing, drilling
	• Effects; Disorders in musculoskeletal (Tendons, muscles and joints) and the nervous system
	• Hand-Arm Vibration Syndrome (HAVS).
	  • The symptoms of VWF are aggravated when the hands are exposed to cold.
	--Mode of Exposure and Effects
	
	• Workers affected by HAVS commonly report:
	  • attacks of whitening (blanching) of one or more fingers when exposed to cold
	  • tingling and loss of sensation in the fingers
	  • loss of light touch
	  • pain and cold sensations between periodic white finger attacks
	  • loss of grip strength
	  • bone cysts in fingers and wrists
		Whole-body vibration exposure occurs when the body is supported on a surface that is vibrating e.g. on trucks, tractors and other transport vehicles, and when working near vibrating industrial machinery. Hand-transmitted vibration exposure results from various processes in which vibrating tools or work pieces are grasped, pushed by the hands or fingers.

Slide 22	**Prevention and Control of Vibration** • Proper installation and maintenance of machines • Remote operation of equipment • Correct handling and use of hand tools • Proper adjustment of seating and working positions • Early reporting of symptoms	*Workers exposed to significant vibration hazards should be trained about*

		the hazards and risks in use of vibrating tools, effects of vibration and control measures especially those within their control which can minimize risk e.g. proper adjustment of seating and working positions, correct handling and use of hand tools, and encourage early reporting of any symptoms.
Slide 23	**Mode of Exposure and Effects** **Radiation** **-** is the emission or transmission of energy in the form of waves or particles through space or through a material medium. – Ionising radiation- Source are x-ray machines, fluoroscope and CT Scan, radioactive drugs, Machines used in radiotherapy – Non- ionising e.g. Ultraviolet - Sun light, Fluorescent lamps, Electric arc welding, Germicidal lamps	

Slide 24	**Mode of Exposure and Effects** • Effects ; – Reaction in the skin to produce Vitamin D that prevents rickets – High dose of UV causes - sun burn – increased risk of skin cancer – Pigmentation that results in suntan – Suntan lotions contain chemicals that absorb UV radiation – Strongly absorbed by air – thus the danger of hole in the atmosphere	*Reaction in the skin to produce Vitamin D that prevents rickets, this is a positive effect but prolonged exposure and high intensity is harmful.*
Slide 25	**Mode of Exposure and Effects** • LASER - Light Amplification by the Stimulated Emission of Radiation Used as reference lines in – Surveying – Instrumentation – Alignments – As a heating agent in welding – As a cutting instrument in micro electronics and microsurgery – functions in communications – in military.	
Slide 26	**Mode of Exposure and Effects** • Effects - mutation, cancers, burns, • Non-ionising Radiation - UV -cataracts • Light- glare eye strain • Electrical energies- electrocution, electric fog	
Slide 27	**Signage for Radiation**	

		
Slide 28	**Mode of Exposure and Effects** **Electrical Hazards** The major hazards associated with electricity are electrical shock and fire. The severity and effects of shock depend on: • Pathway through the body • The amount of current • The length of time of the exposure • Whether the skin is wet or dry. Effects The effect of the shock may range from a slight tingle to severe burns to cardiac arrest. Sparks can serve as an ignition source for flammable or explosive vapors or combustible materials	
Slide 29	**Prevention and Control** • Inspection of wiring of equipment • Replacement of damaged or frayed electrical cords immediately. • Information of specific location shut-off switches and/or circuit breaker panels. • Limit the use of extension cords, • Multi-plug adapters must have circuit breakers or fuses. • Minimize the potential for water or chemical spills on or near electrical equipment.	*The hazards caused by electricity can be prevented and controled by insulation, guarding, grounding, and electrical protective devices. The following*

		measures can be taken to promote safety while using electricity and elictrical equipment:- *Inspection of wiring of equipment before each use. Replacement of damaged or frayed electrical cords immediately.* *Provision of information of specific location and how to operate shut-off switches and/or circuit breaker panels.* *Limit the use of extension cords. Use only for temporary operations and then only for short periods of time. In all*

		other cases, request installation of a new electrical outlet. *Multi-plug adapters must have circuit breakers or fuses.* *Place exposed electrical conductors (such as those sometimes used with electrophoresis devices) behind shields.* *Minimize the potential for water or chemical spills on or near electrical equipment.*
Slide 30	**Prevention and control of Physical Hazards** • Noise – noise minimization through muffling, use of acoustic materials and signage. – Noisy equipment should be appropriately sited and isolated. Hearing conservation programme for noisy areas. • Ionising Radiation – time, distance, shielding, monitoring • Light	*Regular servicing and maintenance of equipment, and documentation* *Safety culture practices are*

	– adequate and avoid glare	*necessary, eg use of headphones in the work place.*
Slide 31	**Prevention and control of Physical Hazards** • **Extreme hot temperatures** – PPE, time (shifts), personal clothing (cotton, light and loose fitting), rehydration (water avoid beverages), ventilation (spot cooling fans, air conditioning), monitoring, permit to work • **High Pressures** – decompression camps, permit to work • **Low Pressures** - time • **Electrical energies** – Earthing, fusing, de-energize equipment, circuit breakers, appropriate wiring, insulation, PPE, permit to work	*Equipments; require servicing (Establish, Avoid overloading power sockets and use of power extensions cables.*
Slide 32	**Ergonomic Hazard** An ergonomic hazard is a physical factor within the environment that harms the musculoskeletal system. • Ergonomic hazards include themes such as repetitive movement, manual handling, workplace/job/task design, uncomfortable workstation height and poor body positioning.	*Ergonomics is the study of how a workplace, the equipment used there and the work environment itself can best be designed for comfort, efficiency, safety and productivity. Often we can improve our levels of comfort and productivity with relatively*

		simple changes.
Slide 33	**Mode of Exposure and Effects** • Healthcare personnel are exposed to many ergonomics risk factors due to the nature of their work. • Examples of risk factors are found in jobs requiring repetitive, forceful, or prolonged exertions of the hands; frequent or heavy lifting, pushing, pulling, or carrying of heavy objects; and prolonged awkward postures	

Slide 34	**Prevention and Control in Ergonomic Hazards**
	• Mechanization (equipment and assist devices), proper work station design, use of appropriate tools, proper lifting procedures, adequate staffing, training
	  • The application of ergonomic principles to workstation design can result
	  • In increased effectiveness,
	  • work quality,
	  • health and safety,
	  • job satisfaction
		The adaptation of the workstation design and work tools to suit the individual performing a particular job function reduces the effects of ergonomic hazard. The application of ergonomic principles to workstation design can result in increased effectiveness, work quality, health and safety, and job

		satisfaction
Slide 35	**---Prevention and Control in Ergonomic Hazards** • DO: – Push rather than pull. – Keep a good grip. – Maintain clear vision between the object and your destination. – When lowering an object, try and keep the natural curve of your back. – Place the load on the edge (tailgate) and push it back. • DON'T: – Lift above shoulder height. – Catch falling objects.	
Slide 36	**5. Mechanical Hazards** A mechanical hazard is any hazard involving a machine or process. • Equipment used in healthcare facilities if not properly installed and maintained may pose mechanical hazards. • Compressed gases or liquids can also be considered a mechanical hazard.	
Slide 37	**Mode of Exposure and Effects** • Dangers in machinery are divided into – Continuing danger – the danger that occur during the normal operation of the machinery such as dust, heat, fumes etc – Contingent danger - the danger which is as a result of failure of a guard or a safety device.	*Contingent failure- When a guard or device fail, it must "fail safe" This implies that when a guard or a device does not function, the machinery should not be*

		forced to start.
Slide 38	**Mode of Exposure and Effects** Effects • being trapped between fixed and moving parts of machines • entanglement • struck by moving parts • striking fixed/and or moving parts – being struck by ejected flying particles – Friction (abrasion) – Cutting – Shearing – Crushing – Puncture	
Slide 39	**Prevention and Control** • Training of operators to get competent persons • Incorporating machinery safeguardsin design • improvisation/modification where necessary • Maintenance of machines • Use of suitable PPE	
Slide 40	**7. Psychosocial Hazards** Psychosocial hazards include but aren't limited to stress, violence and other workplace stressors. • Examples; • unsatisfactory work environment such as "work overload, lack of control over one's work, non-supportive supervisors or co-workers, limited job opportunities, role ambiguity or conflict, rotating shift work, and machine-paced work." • However, may be anything that conflicts with an employee's social and mental well-being. • Workplace violence	
Slide 41	**Mode of Exposure and Effects**	

	Stress Stress is the "wear and tear" our minds and bodies experience as we attempt to cope with our continually changing environment – *lead to fight or flight* • NEGATIVE STRESS It is a contributory factor in minor conditions, such as headaches, digestive problems, skin complaints, insomnia and ulcers • Excessive, prolonged and unrelieved stress can have a harmful effect on mental, physical and spiritual health	
Slide 42	**Mode of Exposure and Effects** • POSITIVE STRESS Stress can also have a positive effect, spurring motivation and awareness, providing the stimulation to cope with challenging situations. Main causes of stress at work are • shift work • work overload/underload (Quantitative and Qualitative) • lack of task control/role ambiguity • working alone • drug and alcohol abuse • Violence	
Slide 43	**Mode of Exposure and Effects** **-------Main causes of stress at work are** • Working with terminally ill • Poor work relationships • Unfair management (bossy) • Financial and economic factors • Conflict between work, family roles and responsibilities • Lack of opportunity for growth and promotion • Bullying • Sexual harassment	
Slide	**Mode of Exposure and Effects**	

44	**Effects:** • Burnout • Irritability • Depression • Anxiety • Absenteeism/Presenteeism • Insomnia, headache, stomach upsets, loss of appetite, • high blood pressure, ulcers, neurosis, stroke	
Slide 45	**Prevention and Control of Psychosocial Hazard** • Work Schedule should be compatible with demands and responsibilities outside the job. When schedules involves rotating shifts the rate of rotation should be stable and predictable • Work load: demands should tally with the capabilities and resources of individual • Contents: jobs should be designed to provide meaning, stimulation and an opportunity to use skills	*When staff takes leave they should take time to rest and recuperate.*
Slide 46	**---Prevention and Control of Psychosocial Hazard** • Participation and control: workers should be given the opportunity to have input on decision that affect their jobs • Work roles: roles and responsibilities at work should be well defined • Social environment: opportunities for personal interactions both for purposes of emotional support and help as needed in accomplishing assigned tasks (sports club, family fun days, open events)	
Slide 47	**Prevention and Control of Psychosocial Hazard** • Job future : career development and job security – counselling, – psychotherapy – developing employees assistance programme – Seek medical advice – relaxation, yoga, meditation, massage, Aromatherapy,	

	Floatation, Homeopathy – Use of the "Right Based approach"	
Slide 48	**Examples of Signage**  • Emergency Information Signs • These signs indicate the location of, or directions to emergency related facilities (exits, first aid, safety equipment, etc). Feature a white symbol and/or text on a green background	
Slide 49	**Examples of signages**  **Prohibition Signs** • These signs that specify behaviour or actions which are not permitted. The annulus and slash is depicted in red over the action symbol in black. Sign wording, if necessary, is in black lettering on a white background**.**	
Slide 50	**Examples of Signage**	

		• **Danger Signs** These signs provide warning when a hazard or a hazardous condition is likely to be life threatening. The word Danger is featured inside a red oval inside a black rectangle.	
Slide 51	**Examples of Signage**  **Warning Signs** These signs warn of hazards or a hazardous condition that is not likely to be life-threatening. The hazard symbol is black on a yellow background and a triangle is depicted around the hazard symbol. Sign wording, if necessary, is in black lettering on a yellow background		
Slide 52	**Examples of Signage**		

		General Information Signs • They communicate information of a general nature and often refer to Housekeeping, Company Practices and Logistics	
Slide 53	**Examples of Signage**  **Mandatory Signs** These signs specify an instruction that must be carried out. Symbols (or pictograms) are depicted in white on a blue circular background. Sign wording, if necessary, is in black lettering on a white background		
Slide 1	**Module 2.2** **PERSONAL PROTECTIVE EQUIPMENT (PPE)**		
Slide 2	**PERSONAL PROTECTIVE EQUIPMENT (PPE)** Objectives • Define and State various types of PPE • Explain the benefits of use and consequence of not using PPE • Explain the role of management and Employee in PPE		
Slide 3	**Definition of PPE** • Personal protective equipment is a device that is worn by a worker in order to prevent any part of his body from coming into contact with hazards present at his/her place of work. • The material of PPE's chosen must be able to withstand		

	the specific hazard prevailing in a given work place. • PPE is the last means of hazard control • Must be carefully selected • Good fit is important • Does not make wearer invincible • Only works if worn correctly	
Slide 4	**TYPES OF P.P.E** • There are various types of P.P.E depending on the type of hazards prevailing in any given place of work. • P.P.E act as barriers between the worker and the hazard and include;- • Head gear(helmets and caps • Ear protectors or defenders (ear muffs and ear plugs) • Face shields • Goggles • Safety spectacles	
Slide 5	**----TYPES OF P.P.E** ◦ Masks (dust, fluids) ◦ Respirators ◦ Safety shoes/boots ◦ Gloves/Mittens ◦ Aprons ◦ Overalls ◦ Dust coats ◦ Safety harnesses ◦ Safety belts	
Slide 6	**PROTECTION OF THE VARIOUS PARTS OF THE BODY** • HEAD PROTECTION • NB: Although workers should be encouraged to use their heads to absorb knowledge, they should not use them to absorb blows. • The head is protected by use of head gears. • ROLE OF HEADGEARS INCLUDES:-	

	• Protects the head from injury on impact by falling objects. Here helmets (hard hats) are used. • Prevents the entanglement of hair in machinery. Here fabrics cap (soft caps) are used • Prevents foodstuffs from contamination by hair and dandruff • Protects the head from splashes of corrosive chemicals. Here plastic or P.V.C caps are used.	
Slide 7	**Helmet and a Cap**  	
Slide 8	**EYE AND FACE PROTECTION** • The eyes are protected by use of eye protectors which include:- • Clear plastic or glass goggles with side shields for protecting the eyes from flying objects • Safety spectacles with toughened lenses and side shields for workers with eyes defects and who are exposed to flying objects. • The eyes and face are protected by use of:- • Clear or transparent plastic face shields or visors for protecting persons from corrosive chemical splashes. • Tinted (darkened) glass goggles or face shields for protecting persons from harmful radiation(light) emitted by welding processes	
Slide 9	**Goggles**	

Slide 10	**EAR PROTECTION**
	• The ears are protected by use of ear defenders or protectors
	• The ears are protected from dangerously high noise levels
	• There are two types of ear protectors
	  • Ear muffs
	  • Ear plugs	

Slide 11	**Ear muffs and Ear plugs**  	

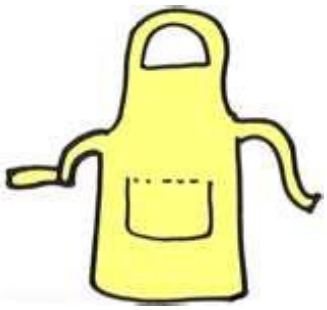
Slide 12	**RESPIRATORS**
	• The objective of respiratory system protection is to prevent contaminated air from getting into the respiratory system.
	• Air contaminants include dusts, vapours, gases and fumes
	The respiratory system is protected by use of respirators
	• **TYPES OF RESPIRATORS**
	  • Air-Purifying Respirators
	  • Air-Supplying Respirators	

Slide 13	**Air purifying respirators** Forces contaminated air through a filtering element. Examples include; ▫ Disposable Respirators (includes N95, N100) ▫ Powered Air Purifying Respirator (PAPR)	
Slide 14	**Respirator and Dust mask**  A half face respirator  A dust mask  N95 respirator  Powered air purifying respirator(PAPR)	***Dust masks*** *are not NIOSH* approved disposable filtering face pieces. They can be worn for comfort against non-toxic nuisance dusts during activities like mowing, gardening, sweeping and dusting. These masks are not respirators and do not offer protection against hazardous dusts, gases or vapors.* *Dust masks can be mistaken by NIOSH*

	Photo Credit:CRANSTON RI 2005 - North	*approved N-95 respirators. How can you tell the difference? Look for a NIOSH label printed on the box and/or mask. Also the use of the word "respirator" on the box may indicate it it's a NIOSH aproved respirator.*
Slide 15	**---TYPES OF RESPIRATORS** • AIR- SUPPLYING RESPIRATORS • A respirator that supplies the respirator user with breathing air from a source independent of the ambient atmosphere, and includes supplied air respirators (SARs) and Self-contained breathing apparatus (SCBA) units. • Are used where a person has to work in an oxygen deficient environment e.g. • During fire fighting • Carrying out repairs in confined spaces • Research in space and under water • Carrying out research operations (rescuing drowning people or people in a burning building)	
Slide 16	**Example of Air- supplying respirators**	

	 *Photo credit Attilis and associates*	
Slide 17	**HAND/ARM PROTECTION** • The hand and arm is protected by use of gloves • There are various types of gloves depending on the type of hazard at a given place of work TYPES OF GLOVES • Heavy duty gloves: thick rubber gloves for handling contaminated instruments equipment patients and other items. These can be reused after cleaning. • To make selecting the right medical glove even more interesting they are also available in powdered, non-powdered, sterile, nonsterile, textured, coated	
Slide 18	**Gloves and Mittens** 	

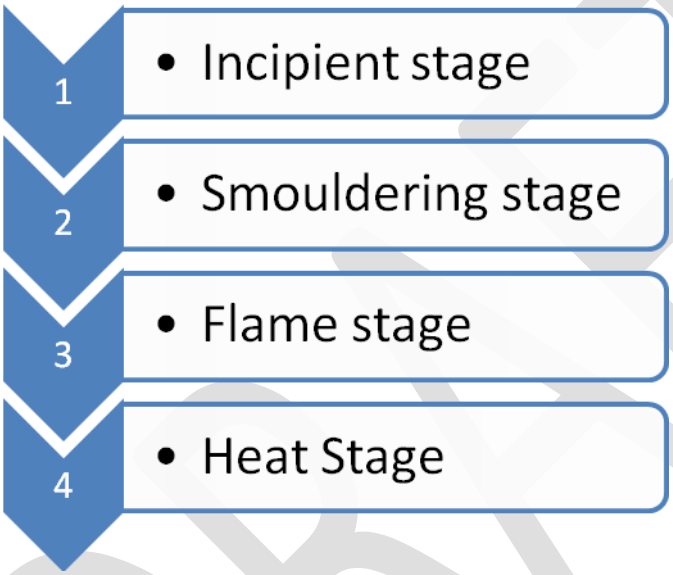
Slide 19	**FOOT PROTECTION** ◦ Various types of footwear are used depending on the prevailing hazard at a given place of work • TYPES OF FOOTWEAR ◦ Safety shoes or boots fitted with metal toe caps for use when exposed to falling objects ◦ Safety gumboots for use when exposed to wet and corrosive chemicals ◦ Safety shoes/boots with oil resistant or heat resistant soles for use when exposed to organic compounds or when working on hot floors	
Slide 20	**Safety Boots and shoes**  	
Slide 21	**MAIN BODY PROTECTION** • The main body is protected by use of overalls, dustcoats and aprons. • Overalls, dustcoats and aprons protect the wearer's home clothes against contamination by work place hazards such as dusts, dirt, chemicals etc. • Overalls minimize the risk of entanglement of home clothes by machinery • The material of the overall will depend on the nature of hazard at the work place eg • For corrosive chemicals (use plastic or P.V.C type) • For cold environments (cold rooms) use Eskimo suits • For hot environments use asbestos overalls or leather type	

Slide 22	**Apron, Dust Coat and Overall,**   	*Emphasise that dust coats should be of appropriate size, long sleeved with elastic on the cuffs to prevent infections* *Staff uniforms are not PPE*
Slide 23	**Benefits and consequence** • Reduced insurance premiums, reduced long term health care costs, reduced legal costs • Reduced morbidity, mortality and fatality. Consequences • Non use of PPE could lead to disciplinary action • Continue Non use of PPE could lead to dismissal.	
Slide 24	**PERSONAL HYGIENE** • A worker is supposed to leave work as clean and free from work place contaminants as when he or she arrived for work • Workers should therefore wash and change before leaving for	

	home to avoid taking work place contaminants to their dependants back home.	
Slide 25	**ROLE OF MANAGEMENT** • Management must provide free of charge the correct P.P.E by taking into account the nature of hazard at their premises • demonstrate how to use the P.P.E • inspect P.P.E regularly before and after use • ensure P.P.E are cleaned dried and stored in a clean place after use. • issue the P.P.E individually and ensure that no sharing takes place. • Ensure PPE is not taken home	
Slide 26	**ROLE OF MANAGEMENT** Employers are required to train each worker required to use personal protective equipment to know: • When it is necessary • What kind is necessary • How to properly put it on, adjust, wear and take it off • The limitations of the equipment • Proper care, maintenance, useful life, and disposal of the equipment	
Slide 27	**ROLE OF EMPLOYEES** • Must make full use of P.P.E provided • Must report to the management the loss or damage of or any defect in P.P.E • Must take reasonable care of the P.P.E and not wilful misuse them.	

Slide 30	**VIDEO ON PPE – 1O MINUTES**	
Slide 31	**DEMONSTRATION ON PUTTING ON AND REMOVING PPE 30 min**	
Slide 1	**MODULE 2.3** **FIRE SAFETY AND MANAGEMENT**	
Slide 2	**Objectives** ◦ Classify Fire and Extinguishing Agents ◦ Describe fire risk evaluation ◦ Explain fire prevention strategies ◦ Explain evacuation procedure in fire management ◦ Formulate fire safety and management program	
Slide 3	**FIRE SAFETY** Fire is a process of combustion in which energy is released in form of Heat and Light. Fire Triangle • There are three elements of a fire;  Fuel Heat at a minimum temperature' Oxygen-Usually air	

Slide 4	**Classification of Fires and Extinguishing agents** • Class 'A' Fires: It involves fires that occur in materials such as wood, paper, lags and rubbish. **Extinguishing agent – large quantity of water**. • Class 'B';This involves fires that occur in vapour mixture of flammable liquids. G.G. Gasoline, oil, grease, paints and Thinners. **Extinguishing agent – dry chemical, Carbon dioxide, very fine water spray.**	*It is important to read the label of the fire extinguishers to make sure the correct one is bought and/or used and not depend on the color coding only. The people charge with procurement because wrong extinguishers are bought.*
Slide 5	**Classification of Fires and Extinguishing agents** • Class 'C' it involves types of fires caused by energized electrical equipments. Extinguishing agent – dry chemical, Carbon dioxide, very fine water spray. • Class 'D' it is the type of fires that involves burning of metals e.g. potassium, titanium, Zirconium, Lithium, Potassium and Sodium. Extinguishing agent-dry powder.	

Slide 6	**Fire Hazard** • When fire is uncontrollable or unwanted it is referred as a hazard, and may result to one/and or all of the following consequences: – Loss of life – Personal injury – Loss or damage to property	
Slide 7	**Stages of fire Development** 	*It is easy to fight a fire in the earlier stages of development.* ***Stages of Fire Development*** ***Incipient****-No visible smoke or flame or significant heat, but there is a condition generating combustion particles through chemical decomposition – not visible to human eye and develops over extended period* ***Smouldering****-Particles start to become visible as*

		"smoke" ***Flames-*** *Ignition point has occurred and infra-red energy is given off by flames – visible smoke level decreases and more heat is developed* ***Heat-****This last stage develops very quickly from stage 3, with large amounts of heat, flame, smoke and toxic gases produced.*
Slide 8	**Suppression of Fire** • To suppress fire one of the three components that support fire must be removed or eliminated by:- ❑ Cooling – removing heat by lowering temperature ❑ Smothering – separating oxygen from fuel and heat. ❑ Starvation – removing fuel.	
Slide 9	**Color Coding of Extinguishers** • Water - Red • Foam – Cream • Carbon dioxide - Black	

	• Dry chemical powder - Blue • Vaporizing liquid – Green • NB: Currently all are colored RED with writing on	
Slide 10	**Positioning and mounting of Extinguishers** • Should be not too near or too far from the danger. Not more than 30 metres • could be on a raised ground in a battery, as in a petrol station • On the wall, they should be at least 60 cm above the ground • Weight be of a maximum of 23kg • In a storey building, be at the same position – all the floors	
Slide 11	**How to operate an extinguisher** • Remove it on the wall • Confirm if it has the extinguishing agent • Lift it to the fire area. • Be safe. Make sure that you can escape in case the fire becomes out of control • Check the wind/smoke direction	

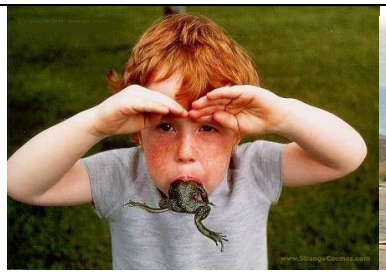
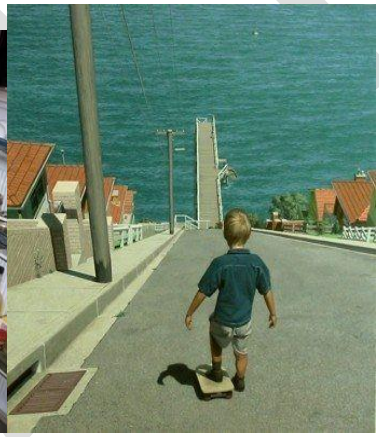
Slide 12	• **Use PASS** ❑ **P - Pull the pin** ❑ **A - Aim the nozzle at the base of fire** ❑ **S- Sweep the handle/trigger** ❑ **S – Sweep the extinguishing agent from you side toward the fire. Make sure there is no obstacle behind you**	
Slide 13	**Fire Risk Evaluation** • It may be considered in three major groups:- • Recognition of hazards and potential dangers • Evaluate the hazards and expected loses. • Evaluate the preventive measures required. • In doing that take into account of the situation of premises, site, building construction, content, management factors, people, fire protection systems and follow up after fire.	
Slide 14	**Factors that contribute to most fires** This includes; electrical, torching {Behaviour}, smoking, hot surfaces, friction, overheated material, cutting and welding, open flames, spontaneous ignition, combustion sparks, molten substances, static sparks, chemical action and lightening. **Fire Detection** ◦ There are two major facilities: ◦ Human observer and ◦ Automatic fire detection systems	
Slide	**Fire Prevention**	

15	◦ Survey the premises or workplace to establish and record the following observations for the purpose of instituting remedial measures: - ◦ Fire Load ◦ Fire hazards ◦ Firefighting equipment ◦ Building fire protection facilities • Fire Fighting Team ◦ Establish a fire fighting team with well-defined responsibilities in case of fire.	
Slide 16	**Fire Preparedness** • The main objective is to prevent, control and manage fire disaster in the workplace. This may be achieved through: - • Fire prevention by controlling fire hazards. • Establishing evacuation procedures incase of fire. • Establishing a team to extinguish fires at early stages.	
Slide 17	**Evacuation procedures** • On hearing the fire alarm sound, the following steps are necessary to observe; ◦ Stop machine and switch off power. ◦ Close the doors and windows behind you. Do not lock the doors. ◦ Leave the building through the marked fire exists. ◦ Do not use lifts. ◦ Use corridors, staircases and external routes. ◦ Do not panic and do not make unnecessary noises.	

Slide 18	**---Evacuation procedures** • Assist visitors, customers, patrons by leading them through the fire exists. • Do not allow people to come back to the building. • Do not stop to collect personal belongings unless clear escape is obvious. • Join the firefighting team if you are a member and render any necessary assistance. • Proceed to the assembly point for roll-call.	
Slide 19	**Fire Safety Programmes** • Fire Safety Programmes must be established to include inspection, fire drills, training, management procedures and communication. • Fire drill is an important exercise for instilling skills on evacuation procedures in event of fire. • Remember that fire consequences are completely avoidable if safety requirements are observed.	
Slide 20	**Heavy-Duty Emergency Rescue & Evacuation Signs - Exit with Right Arrow**  	
Slide 21	**Fire Alarm Signs with Downward Facing Arrow**	

		
Slide 22		
Slide 21	**Fire drill** • Fire Drill explanation • And Or Fire Drill Video	*Facilitator to explain what a fire drill is, or show a video*
Slide 1	**DEMONSTRATION -LIVE FIRE SUPPRESSION 15 MIN DEMO AND 30 MIN PRACTICAL'S**	
Slide 1	**MODULE 3** **SAFE WORK PROCEDURES**	
Slide 2	**Broad Objectives** At the end of this module, participant should be able to: ▪ Identify and manage risks at workplace ▪ Describe first aid procedures	

	▪ Explain the importance of medical surveillance ▪ Outline occupational diseases ▪ Describe how to carry out workplace safety and health inspections	
Slide 3	**Module Outline** • Risk management • Occupational accidents • First aid • Medical surveillance • Occupational accidents • Workplace safety and health inspection • Waste management	
Slide 4	**MODULE 3.1** **Risk Management**	
Slide 5	**Outline** • Objectives of the session • Basic principles, concepts, definitions • Introduction to risk management • Risk identification • Risk assessment • Risk communication	
Slide 6	**The Learner is expected to** • Define key risk management terminologies • Categorize occupational risks in their work areas	

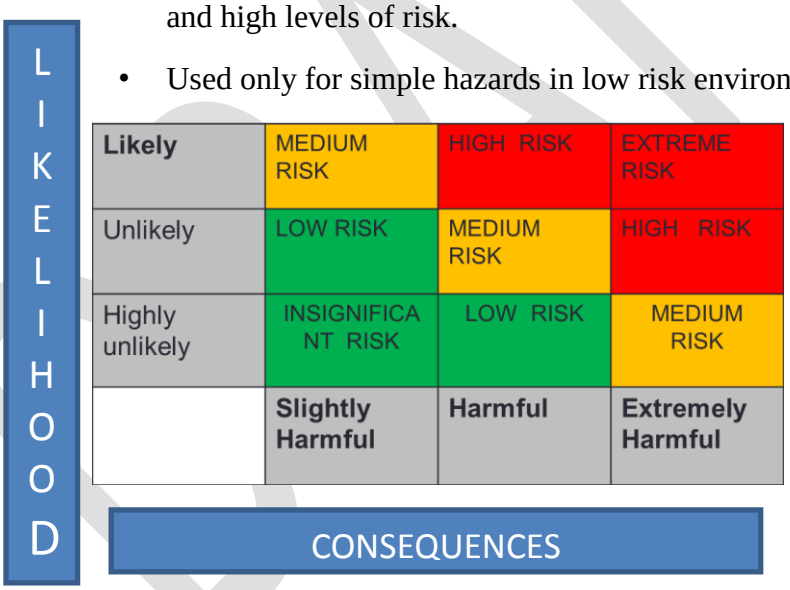
	• Explain Risk Assessment process and be able to use the available checklist • Identify risk control and communication measures in specific work areas	
Slide 7	     *Photo credit: Corrine Berinten,BPT,MBA,MHSC,CFI Health audit Service teams* *Ontario International Audit Division*	
Slide 9	**Definitions** • Hazard is a situation that poses a level of threat to <u>life</u>, health, property, or environment. • Risk is the probability of occurrence of an adverse event from a substance on a worker or the environment combined with the magnitude of the consequence of that adverse effect	

	• Work areas - Office work, clinical areas, production processes, transportation and other specific work areas (eg. kitchen, stores, workshops etc).	
Slide `10	**Introduction** • The process of risk management includes hazard identification, assessment ,communication and control. • The overall level of organizational risk is dependent on the interaction between hazards, operations and people. .	
Slide 11	**Risk Factors**  *Photo credit: Corrine Berinten,BPT,MBA,MHSC,CFI* *Health audit Service teams* *Ontario International Audit Division*	

Slide 12	**Categories of Risks** • Occupational Health and Safety risks – manual handling, noise, dust etc • Health risks – Malaria, Ebola etc • Environmental risks – global warming, air pollution, water contamination etc • Financial risks – currency exchange rates, share value, interest rates etc • Quality risks – product standards, delivery schedule, production costs etc • Recreational risks –mountain climbing, swimming etc	
Slide 13	**Risk identification and Job Safety Analysis** • Risk identification is the process of identifing the probability of occurrence of an adverse event (risk) ,categorising and documenting • A Job Safety Analysis (JSA) is one of the risk assessment tools used to identify and control workplace hazards.	
Slide 14	**Four basic stages in conducting a JSA** i. selecting the job to be analyzed ii. breaking the job down into a sequence of steps iii. identifying potential hazards in the workplace iv. determining preventive measures to overcome these hazards	
Slide 15	**Factors to be considered in setting a priority for analysis of jobs include:** • Frequency and severity of accident • Potential for severe injuries or illnesses • Newly established and Modified jobs • Infrequently performed jobs	
Slide 16	**Hazard identification Process** • Once a job is chosen for analysis, the next stage is to break it into steps.	

	• Most jobs can be described in less than ten steps. If more steps are required, divide into two segments, each with its separate JSA, or combine steps where appropriate • Once the basic steps have been recorded, potential hazards must be identified at each step. Based on observations of the job, knowledge of the accident, injury cause, and personal experience, list the things that could go wrong at each step.	
Slide 17	**The job analyst may use questions such as;** • Do tools, machines, or equipment present any hazards? • Can the worker slip, trip, or fall? • Can the worker suffer strain from lifting, pushing, or pulling? • Is the worker exposed to extreme heat or cold? • Is excessive noise or vibration a problem? • Is there a danger from falling objects? • Is lighting a problem?	
Slide 18	**Risk Assessment** • Risk assessment is a process of making a determination of how safe a situation is, and then making jugdement of the acceptability of the risk. • The aim of the risk assessment process is to remove a hazard or reduce the level of its risk by adding precautions or control measures, as necessary. By doing so, you have created a safer and healthier workplac**e**	

Slide 19	**Assessment Techniques**
	• The technique chosen must take into account
	  • the hazards involved,
	  • the number of workers who may be affected, and the size of the organization.
	• Simple hazards may be assessed by means of simple qualitative techniques and complex hazards by thorough quantified or semi quantified techniques.	

Slide 20	**Qualitative Approach in Risk Assessment** • Normally descriptive in nature. ▪ Used in low hazard environment areas eg offices ▪ Steps in qualitative approach include identifying; – tasks – hazards associated with the task – people affected by the hazard – control measures in place – further recommended actions.	
Slide 21	**Quantitative Approach in Risk Assessment (Risk** Matrices) 3x3 matrix is the simplest version and least quantifiable • Provides very little differentiation between low, medium and high levels of risk. • Used only for simple hazards in low risk environments 	
Slide 22	**Risk Levels** • Insignificant-Acceptable risk. No further action required • Low- Tolerable risk but look for areas of improvement • Moderate-Improve risk control measures within 3 months • high-Stop operation and make immediate improvements	

Slide 23	**When is risk assessment done?** • Any time there is new or redeployed / transfer of staff/ equipment/ method • Any time there is an accident/ incident or near miss • At scheduled annual risk assessments • During maintenance activities. • During disposal of equipment	
Slide 24	**Carrying out risk assessment** • Use risk assessment tools. • Identify the area to assess • Spot the gaps. • Analyze the data generated. • Determine if the risk is high, moderate or low. • Develop preventive and control plans.	*Consider whether to carry out the assessment for the whole facility/ department/ machinery or specific procedure* *Prepare a budget in advance as a planning mechanism*
Slide 25	**Risk assessment can be conducted by;** • OSH committee at different facility level • Sub County OSH representative. • COSH Focal person. • DOSHS approved auditors.	
Slide 26	**Risk Control** ▪ On identification and assessment of risks,the following categories may be used Avoid, Control, Accept, or Transfer (ACAT). ▪ Determine the nature and severity of the risk, who is affected	

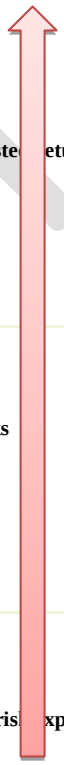
	and the frequency of the risk.	
Slide 27	**Methods to prevent and control the risks** • Eliminate the hazard. • Substitute the hazard. • Isolation. • Engineering controls. • Administrative controls. • Personal protective equipment (PPE)	*Elimination: The process of removing the hazard from the workplace.* *Substitution: Means using a less toxic substance to replace one that is more hazardous.* *Isolation: Separates the worker from the source of hazards* *Engineering controls: Are methods that are built/modified into the design of a plant, equipment or process to minimize the hazard* *Administrative controls: Limit workers' exposures by reducing duration, job*

		rotation and work rest schedules. *Personal protective equipment (PPE): Equipments used to protect the worker against health or safety risks at work place.*
Slide 28	**Risk communication** • It is the dissemination of information to stakeholders about the likelihood and consequences of adverse effects • Risk communication seeks to; a. Promote the establishment of appropriate prevention and control actions b. Establish appropriate emergency response mechanisms c. Develop risk communication plans	*Facilitator should inform the participants of the considerations in risk communication including :message-target-audience* *Sensitivity and confidentiality of the risks* *Communicator -Good speaker, identify with audience* *Social, religious,*

		cultural, political and economic aspects associated with a certain area, as well as the concerns of the affected population. *Dissemination should be through appropriate channels*
Slide 29	**Monitoring risk control program and methods** • Monitor both the hazard and the control method to ensure the control is effective and that the hazard is reduced or eliminated. • Tools include; -physical inspection-feedback/input testing, -exposure assessment, -observations -injury and illness tracking -employee occupational health assessment.	
Slide 30		

Measure and report RM implementation progress

Excellent	**Advanced capabilities to identify, measure, manage all risk exposures within toleran** **Advanced implementation, development and execution of ERM parameters** **consistently optimizes risk adjusted returns throughout the organization**
Strong	**Clear vision of risk tolerance and overall risk profile** **Risk control exceeds adequate for most major risks** **Has robust processes to identify and prepare for emerging risks** **Incorporates risk management and decision making to optimize risk adjuste eturn**
Adequate	**Has fully functioning control systems in place for all of their major risks** **May lack a robust process for identifying and preparing for emerging risks** **Performing good classical "silo" based risk management** **Not fully developed process to optimize risk adjusted returns**
Weak	**Incomplete control process for one or more major risks** **Inconsistent or limited capabilities to identify, measure or manage major ris xpos**



Source: Standard & Poor

Slide 31	**Evaluation of Risk control methods** • Be sure to answer the following questions: i. Have the controls solved the problem? ii. Is the risk posed by the original hazard contained? iii. Have any new hazards been created and controlled? iv. Are monitoring processes adequate? v. Have workers been adequately informed about the situation?	
Slide 32	**ERM/IRM can be complex and messy**  *Photo credit: Corrine Berinten,BPT,MBA,MHSC,CFI* *Health audit Service teams* *Ontario International Audit Division*	

Slide 33	**TAKE SMALL BITES……. IRM IMPLEMENTATION**  *Photo credit: Corrine Berinten,BPT,MBA,MHSC,CFI* *Health audit Service teams* *Ontario International Audit Division*	
Slide 34	**Questions**  *Photo credit: Corrine Berinten,BPT,MBA,MHSC,CFI* *Health audit Service teams* *Ontario International Audit Division*	

Slide 1	**Module 3.2** **OCCUPATIONAL DISEASES**	
Slide 2	**Objectives** • Define occupational diseases • Describe the elements of occupational diseases • Explain the importance of identifying occupational diseases • Discuss the factors influencing occurrence of occupational diseases • Describe prevention and diagnosis of occupational diseases	*After introducing the objectives, the facilitator asks the participants to list examples of occupational diseases and record in a flip chart*
Slide 3	**Impact of Occupational diseases** • An estimated 2.34 million people die each year from work-related accidents and diseases. • Of these, the vast majority -an estimated 2.02 million- die from a wide range of work-related diseases. • Of the estimated 6,300 work-related deaths that occur every day, 5,500 are caused by various types of work-related diseases. • The ILO also estimates that 160 million cases of non-fatal work-related diseases occur annually • ILO 2011	

Slide 4	**ILO Definitions**
	• … "occupational disease" covers any disease contracted as a result of an exposure to risk factors arising from work activity
	  • Protocol of 2002 to the Occupational Safety and Health Convention, 1981 (No. 155)
	• "…. diseases known to arise out of the exposure to substances and dangerous conditions in processes, trades or occupations as occupational diseases."
	  • The ILO Employment Injury Benefits Recommendation, 1964 (No. 121), Paragraph 6(1)	

Slide 5	**Kenya – Definition** • "occupational diseases" means any departure from health occasioned by exposure to any factor or hazard in the workplace. • THE FACTORIES AD OTHER PLACES OF WORK ACT (MEDICAL EXAMIATION RULES), 2005	

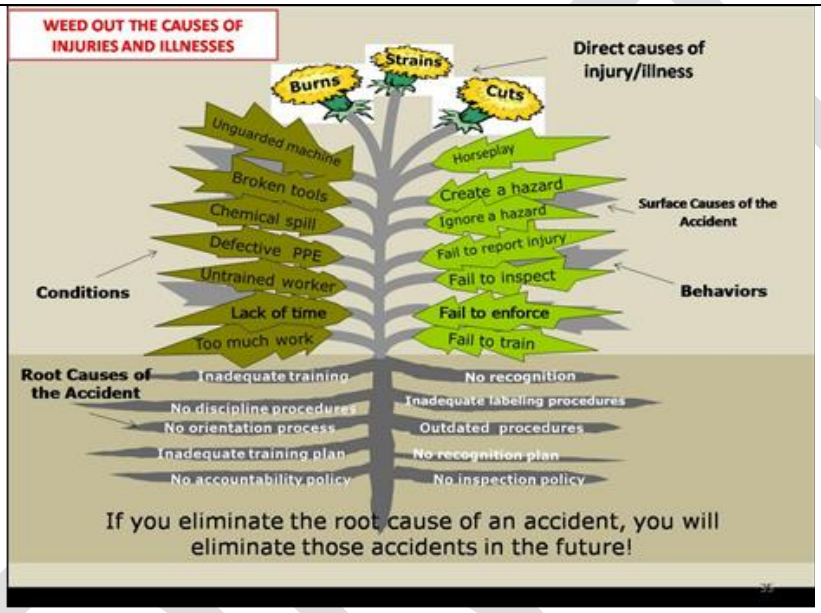
Slide 6	**An Occupational disease** ➢ An acute, recurring or chronic health problem caused by work conditions or practices ➢ Any departure of health occasioned by exposure to any factor or hazard at the workplace ➢ Any work related diseases are those with multiple causes where factors in the work environment may play a role in their progression	
Slide 7	**Elements in occupational disease** Two main elements are present in the definition of an occupational disease 1. The causal relationship between exposure in a specific working environment or work activity and a specific disease; and 2. The fact that the disease occurs among a group of exposed persons with a frequency above the average morbidity of the rest of the population.	
Slide 8	**Classification of Occupational diseases** 1. According to causative agent(s) 1. chemical agents- mercury, beryllium, lead 2. physical agents – noise, vibration, radiation 3. Biological agents- brucellosis, Hepatitis, HIV, TB, Anthrax 2. According to target organ systems 1. Respiratory 2. Skin 3. Musculoskeletal	

	4. Mental and behavioural disorders 3. Occupational cancers 4. Others	
Slide 9	**Reasons for identifying occupational diseases** • For prevention and control • For Compensation • To improve on health surveillance of workers	
Slide 10	**Factors influencing occurrence of occupational diseases** a) Individual susceptibility (b) Age/Sex (c) Personal characteristics and social culture factors (d) Amount of exposure (Dose) (e) Duration of exposure (Time) (f) Extent and type of exposure (inhalation, ingestion , Skin) (g) Nutritional status (h) Prevailing health status	*Participants to brainstorm on the factors above i.e.* ***individual susceptibility*** *people with sickle cell anemia don't get malaria,2)* ***Age*** *–old or very young people have low immune*
Slide 11	**Occurrence of occupational diseases cont….** • Work-related diseases are multifactorial and often occur among the general population • Examples: • hypertension, • ischaemic,	*Ischaemic-shortened blood supply to the tissues*

	• heart diseases, • asthma, • chronic non-specific respiratory diseases • peptic ulcers • These may be aggravated/accelerated by workplace exposures (e.g. noise, chemicals heavy workload, dust, stress etc) and may impair working capacity	
Slide 12	**Examples of Occupational Diseases** 1. Skin disorders - Allergic and irritant contact dermatitis, anthrax (2) Respiratory disorders- Asthma, Silicosis, pneumonitis, TB (3) Neurological disorders – encephalopathy, neuritis (4) cardio-vascular - disorders (5) Reproductive disorders (6) Occupational Cancers – mesothelioma, leukaemia, (7) Psychosocial factors - Stress at work	*Facilitator to compare the occupational diseases listed by the participants in the flip chart*
Slide 13	**Prevention of Occupational diseases** **(1)** Elimination of hazards by substitution or redesign. (2) Total/partial enclosure of process. (3) Ventilation including Local exhaust ventilation (4) Segregation of process e.g. Noise, radiation, engineering control. (5) Limitation of exposure – time factors	*Facilitator to refer to the hierarchy of controls in module 3 unit 1(Risk management)*

Slide 14	**…Prevention** (6) Cleanliness of workplaces and personal hygiene. (7) Appropriate personal protective equipments. (8) Environment/Biological monitoring of peoples at greatest risk. (9) Medical examinations (10) Health Promotion	*Facilitator to give examples of environmental risks (heat, dust, humidity, pressure) and biological risks(HBV,TB,HIV, Tetanus etc)*
Slide 15	**Diagnosis of occupational diseases** **(**1) Occupational history (2) Thorough medical exam (3) Investigations should be carried out as appropriate e.g -Lung function • Blood • Patch testing (skin test) • sweat, saliva • Urine • Stool • x-ray, etc (4) Literature search (5) Appropriate referral	*Emphasize on the need for medical examinations and documentation depending on work placement i.e if working in a welding department, eye checks are important*
Slide 1	**MODULE 3.3** **OCCUPATIONAL ACCIDENTS**	

Slide 2	**Outline** • objectives • Definition • Causes of accidents • Accident investigation and prevention techniques • Evacuation and emergency response • First aid • Reporting of accidents	
Slide 3	**Objectives** The learner should be able to • Define terminologies used in occupational accidents • Describe causes of occupational accidents • Explain accident investigation, reporting prevention techniques • Perform hazard spotting exercise • Explain evacuation and emergency response • Describe first aid procedures	*After introducing the objectives, the facilitator asks the participants to list examples of occupational diseases and record in a flip chart*
Slide 4	**Definition** • **Accident:** An unforseen and undesired event that results in harm to people, damage to property, loss to process or damage to the environment. • It usually implies a generally negative outcome which might have been avoided or prevented had **circumstances** leading up to the accident been recognized, and acted upon, prior to its occurrence	

Slide 5	**Causes of accidents** • **Unsafe conditions** Mechanical, physical or environmental (hazardous) situations, causing accidents independent of employees.eg mechanical failure • **Unsafe Acts and Omissions** An act or omission by the injured or another person(or both) which causes the accident eg unguarded machinery, defective flooring	
Slide 6	 **Source Dr.Keitany**	

Slide 7	**Effects of accidents**
	
	• Injury
	  • Including disability,pain and suffering.
	• Damage
	  • To equipment, machinery, building and market.
	• Loss
	  • Including loss of life, earnings, output, image, time
	• Emotion
	  • This may happen following injury, pain, death.
		For Accident prevention , facilitator should refer to hierachy of controls

Slide 8	**Accident investigation techniques** i. PLANNING:Decide a plan for the investigation, who will assist you, priorities for activity and note on your timetable. ii. INTERVIEWS: Immediately conduct in a confidential environment. iii. Physical evidence:photos, block diagrams, ,arrangement of testing material or equipment. iv. ANALYSIS:It is a process of determining the causes of accidents and ways of preventing re-occurrence	
Slide 9	**Accident investigation techniques cont.....** v. REPORT: Present completed report to management for any further comments before circulating it to the S&H Committee. vi. RECOMMENDATIONS: Make recommendations and take necessary actions **vii.** FOLLOW-UP: Establish an action plan for the implementation of recomendations showing who,what,where,when,why and how.	
Slide 10	**Recommendations upon investigation** • Outline a course of action designed to minimize or eliminate the problem. • Tie recommendations to the causes of accident/incident identified • Follow up on implementations with set timelines • Investigations provides employees with opportunity to actively participate	

Slide 11	**Content of an accident report**
	• Introduction and Purpose
	• Body of the report contains;
	  • Information gathered
	  • Persons interviewed or contacted
	  • Details of the accident / incident /near-miss
	  • Details relevant to the accident / incident /near-	

	miss • Observations and Interpretations • Conclusions / findings – Identify each conclusion separately and offer explanations if necessary	
Slide 12	**Key considerations for recommendations** • Should be based on the conclusions of the report • Achievable and realistic • Statements should be supported with documentation i.e statements of interviees • Might include drawings, pictures, etc	
Slide 1	**Unit 4** **First Aid** AID Before 	
Slide 2	First aid Initial care and treatment given to the ill or injured. NB: Should continue until medical assistance is available. **The aims Of First Aid** • Preserve life • Prevent deterioration of injury or illness • Promote recovery, and Protect the unconscious	
Slide 3	**1.Preserve Life** • Check, clear, maintain airway. • Check, clear, maintain breathing	

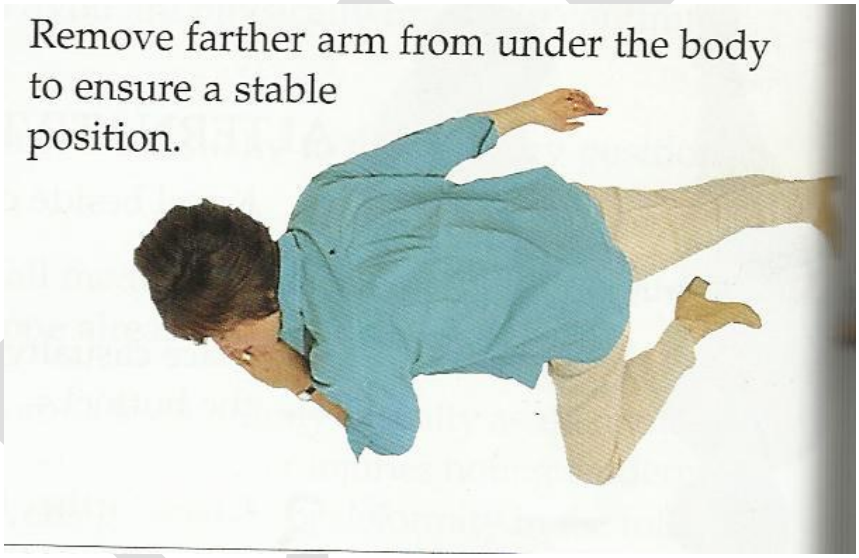
	• Check, restore and maintain circulation • Control bleeding (haemorrhage) • Treat shock	
Slide 4	**2. Prevent deterioration of injury or illness** • Cover wounds. • Immobilise fractures • Check for other injuries	
Slide 5	**3. Promote recovery & protect the unconscious** • Relieve pain. • Reassurance • Gentle handling • Protection from the elements (weather) • Position casualty in lateral position	
Slide 6	**Rules of first aid** • Be calm, confident and determine whether casualty is conscious. • If conscious, ask what happened • Examine the casualty for any injuries i.e. shock, bleeding • Keep casualty lying down with head level. • Reassure the casualty and keep warm & comfortable • Do not give anything by mouth • Do not move the casualty unless - rescuer and casualty are at risk from further injury or it is required for 1st aid to occur.	*Facilitator should emphasize to participants not to administer first aid beyond their capabilities*

Slide 7	**Medical Immediate Action (I.A)** **Evaluate the following:** • D - Danger- To yourself, others and the casualty • R – Response- Determine conscious state of casualty • A – Airway- Check, clear and maintain • B – Breathing- Check, if absent initiate Expired Air Resuscitation (EAR). • C – Circulation- Check for Pulse, if absent initiate External Cardiac Compression (ECC). The acronym DR. ABC is used for these actions	
Slide 8	**What a first aider should do** • Assess the situation quickly • Identify the nature of the injury or illness as far as possible • Manage the causality promptly and appropriately • Arrange for emergency services to attend • Stay with the causality until able to hand over to a health care professional • Give further help if necessary	
Slide 9	**In an Emergency, You can always do something to Help** • Ensure safety of yourself, casualty and bystanders • Be alert to possible dangers • Call 999 or 112 • Gather information from the causality, bystanders and any one else who can help	

	• Provide necessary information to emergency personnel • Organise bystanders to call 999 or 112 • Ensure safety of the accident scene • Redirect traffic or warn oncoming traffic if a road accident has occurred • Comfort the casualty • Help obtain necessary supplies	
Slide 10	**First Aid in the Field** Treatment of the casualty involves four phases; • Self aid - Treatment that the injured gives to him/herself. • Buddy aid - Care the injured receives from colleagues before treatment • Emergency treatment –immediate intervention for accidents or medical conditions requiring immediate care and treatment before definitive medical • Initial wound surgery - first operative treatment given to a casualty by a trained HCW	
Slide 11	**Priorities For Evacuation** • Priority 1 - (Urgent) Life itself is threatened. Rapid evacuation, urgent resuscitation and / or surgery are required. • Priority 2 - (Priority). Life or limb is in serious jeopardy. Evacuation to allow early resuscitation and / or surgery is required. • Priority 3 - (Routine) Neither life nor limb is in serious jeopardy. Evacuation should be as soon as practicable	
Slide	**First Aid Requirements**	*Facilitator to name contents*

12	• Provision of complete First Aid kit as per the first aid rules • Labeling of First Aid Boxes and Cupboards • Trained personnel with valid first aid certificate should always available • First Aid Room in facilities with many employees to be provided. • Five hundred employees and above - Presence of a nurse • Rules should be applicable all the time • There are penalties for failure to comply to first aid rules	*of first aid kit* *Composition of trained personnelTwo for every fifty employees at all times* *Facilitator to familiarise himeslf with first aid rules*
Slide 13	**A few examples of cases**	
Slide 14	**Management of Fainting** 1. Follow DRABC 2. Loosen any tight clothing 3. Ensure plenty of fresh air 4. When casualty is conscious, lie on back and raise and support legs 5. Treat any injury resulting from a fall	
Slide 15	**Management of Nosebleeds** 1. Ask casualty to breathe through mouth and not blow nose 2. Sit casualty up, head slightly forward 3. Apply finger and thumb pressure on soft part of	

	nosrtils below bridge of nose for at least 10 minutes 4. Loosen tight clothing around neck 5. Place cold wet towels (or ice wrapped in a wet cloth) on neck and forehead 6. If bleeding persist, seek medical aid	
S;ide 16	**Management of Choking – Adult** Partial blockage a. Encourage casualty to relax and breathe deeply b. Ask casualty to cough c. If unsuccessful, bend casualty well forward d. Give 4 sharp blows between shoulder – blades e. If blockage has not cleared, place casualty on side on floor f. Call 999 or 112	
Slide 17	**Management of Choking – Adult cont** Total blockage a. Ask casualty if he/she is choking (If yes (verbal) – then Not choking) b. Bend casualty forward from the waist and give 4 sharp blows between shoulder – blades c. If blockage has not cleared, place casualty on side on floor	

	d. Give lateral chest thrust by placing your hands on the side of casualty's chest below armpit and give 4 quick downward thrusts e. Or let the casualty while standing and not facing you, hold your hands around him or her and thrust the abdomen to create air to push the object f. Call 999 or 112 g. Follow DRABC	
Slide 18	**Best Recovery position**  **Source: St. John Ambulance – Australia, 1999 pp 40**	
Slide 1	**Module 3. 5** **MEDICAL SURVEILLANCE** **Objectives** • Define medical surveillance	

	• Explain the objective and purpose of medical surveillance • Describe the elements of medical surveillance • Explain the importance of vaccination	

Slide 2	**Medical surveillance**
	• Definition:
	  • This is a planned programme of periodic examination.
	  • It may include clinical examinations, biological monitoring, biological effect monitoring or medical tests.
	  • It should be carried out by a designated health/occupational medical practitioner (OSHA 2007 section 2)
		Facilitator to inform the participants to refer to the medical examination rules under the OSHA 2007 for further reading

Slide 3	**Main objective of medical surveillance** To minimize adverse health effects in workers exposed to hazardous situations.	
Slide 4	**Purpose of medical surveillance** To ascertain the health status of the employees; ➢ At pre-employment, during and after employment ➢ before transfer to another work area ▪ To determine the job placement within an organization ▪ To ensure that those who have had occupational medical conditions or exposures are attended to early enough to prevent any complication ▪ To provide information that would help in determining and justifying worker compensation	

Slide 5	**Components of Medical Surveillance** • Pre-employment and pre-placement medical examination • Periodic Occupational Health surveillance • Return to work/ post sickness absence examination • Exit medical examination	
Slide 6	**Pre-employment and pre-placement medical examination** • This examination is to ensure that the employee is fit to undertake the job without risk to himself or his colleagues. • The baseline medical examination conducted at the start of employment defines the initial health status • Subsequent examinations are used to evaluate the evident health effects of the work environment and other working conditions	
Slide 7	**Periodic Occupational Health surveillance** • This consists of examinations conducted periodically to identify vulnerable groups among the staff • This has immense value for prevention of occupational diseases • The frequency and types of examinations is determined for each vulnerable group based on nature of work, ages and sex of the group members	*The facilitator should be aware of the periodic legal and institutional requirements i.e food handlers should be examined every 6 months, dosimeter readings for workers working in radiation areas should be done*

		monthly etc
Slide 8	**Return to work/ post sickness absence examination** • This is to ensure that an employee who has been absent with a medical condition for a considerable length of time is fit to resume duties. • This facilitates the rehabilitation or temporary / permanent resettlement of those who are not fit to return to their usual occupations	*Facilitator to insist on proper documentation i.e. duly filled sick sheets*
Slide 9	**Exit medical examination** • It provides data on employees at the point of exit from a particular occupation or workplace • This provides the opportunity for employees with ailments which have a causal relationship to any factor in the work environment to continue to receive assistance for managing it after they have left the employment or moved on to another schedule	
Slide 10	**Vaccination** • Where there is risk of infection from immunizable diseases,employees must be provided with prerequisite vaccinations. • Some of the vaccinations include Hepatitis B and Tetanus • Other diseases occupationally relevant should be considered	*The facilitators should brainstorm on other types of vaccinations i.e TB,Meningitis, TAB(Typhoid and paratyphoid A&B)*
Slide	**Vaccination cont……..**	*Participants to brainstorm on*

11	• Employee not vaccinated at childhood (e.g. by virtue of their country of origin/religion), vaccination against tuberculosis and Poliomyelitis are required • This requires a robust arrangements for record keeping and recall for boosters • Vaccination should be carried out at pre-employment and as required for the work area	*reasons for non vaccination or specific antigens*
Slide 12	**Guidelines for vaccination** • Determine if the employee had received the primary vaccinations • Avail and administer the prerequisite vaccinations depending on work area requirement • The COSH focal person should identify the vaccination centers for the employees and ensure they are manned by qualified medical staff with training in vaccination • The employees should be sensitized on where, when,why and what vaccines are provided • Document the vaccination history	*the employee has right to decline the vaccination but that should be documented*
Slide 13	**Occupational health surveillance** • …is much more than identification and reporting of occupational diseases; it is the ongoing systematic collection, analysis, interpretation and dissemination of data for the purpose of prevention (ILO, 1998) • includes epidemiological surveillance, worker health surveillance including health monitoring and screening, and work environment and exposure surveillance**.**	
Slide 1	**MODULE 3.6** **Workplace safety audit and health inspection**	
Slide 2	**Objectives**	*Ask participants what they*

	• Define work place audit • Describe the statutory requirement of health and safety audit • Define work place inspection • Describe the procedure for workplace inspection	*understand by workplace audit*
Slide 3	**What is a workplace audit?** • Is a systematic, documented, periodic, and objective evaluation of working environment and organizational management systems for prevention of accidents, occupational diseases, ill health and damage to property • It is a proactive approach to improving safety at work and will give institution/business the opportunity to ensure compliance with Workplace Health & Safety Legislation. • Audits can be: internal or external	*Ask participants to differentiate between internal and external audits* *Give examples of external (statutory) and internal (in house audits)*
Slide 4	**Important procedures in Audit** • Initial review of operations, structure, existing safety system, and training of employees. • Walk through audit of workplace. • Discussion of results and recommendations to achieve legislative compliance. • Documented report to client.	
Slide 5	**Statutory requirements of Health and safety audit** • These are external audits by a registered health and safety advisor. • Every workplace should be audited at least once in every period of twelve months • The report of the audit shall be kept by the occupier. • A copy of the same shall be submitted to DOSHS by the auditor within a period of thirty days following the audit.	*Internal audits should be done in a similar way but for internal consumption, and can be done after an*

		event
Slide 6	**What is workplace inspection?** • Workplace inspection is a planned event in which the workplace is inspected to identify potential hazards • It is the best way of proactively identifying hazards before they have the ability to cause an injury	
Slide 7	**Why inspection?** Inspections are necessary to: • identify aspects of the working environment and work tasks that could contribute to injury/damage - and thus allow unacceptable conditions or conduct to be addressed; • review workplace standards in accordance with legal and company requirements; and • provide a systematic means, for those who are at risk of injury, to help control the working conditions.	
Slide 8	**Health and safety inspection** NOTE: Inspections on their own **will not guarantee** that a workplace is free from hazards that may cause injury(Hazards are **identified, assessed, fixed or reported**)	
Slide 9	**…Inspection** Complemented by other activities that include- • plant and equipment audits; • task analysis and introduction of safety procedures; • control and monitoring of materials;	

	• employee training; and consultative procedures.	
Slide 10	**Procedure of a workplace inspection** 1. Planning 2. Implementation: Workplace inspection procedure 3. Follow-up and monitoring	

Slide 11	**Planning**
	• Determine frequency of inspections. The frequency of workplace audits is determined by;
	  • Past accident/incident records
	  • Number and size of different work operations
	  • Type of equipment and work processes--those that are hazardous or potentially hazardous may require more regular inspections
	  • Number of shifts and the activity of every shift may vary
	  • New processes or machinery
	• Identify areas subject to workplace inspection: identify areas within the workplace that are to be subject to regular inspections
	• Establish a workplace inspection team
		Ask them to identify areas that require regular inspections in their workplaces

Slide 12	**Implementation: Workplace inspection procedure** • Identify the risks and the levels of those risks within the workplace • Identify strengths and weaknesses in your safety procedures • Assess whether your safety procedures are legally compliant • Compare current documentation and practices against best practice and legal obligations • Recommend improvements in your safety procedures	

Slide 13

...Workplace inspection procedure

- Ensure that there adequate resources available to manage OSH; and
- Ensure that the resources devoted to health and safety are being utilised effectively
- Corrective/Preventive action
    - Corrective/preventive actions of potential/ non-conformities should be identified and implemented

Slide 14

1. Environment	dust, gases, fumes, sprays, lighting, noise, ventilation
2. Buildings	windows, doors, floors, stairs, roofs, walls, elevators
3. Containers	scrap bins, disposal receptacles, barrels, carboys, gas cylinders, solvent cans
4. Electrical	switches, cables, outlets, connectors, grounding, connections, breakers
5. Fire Protection Equipment	extinguishers, hoses, hydrants, sprinkler alarm systems, access to equipment

Slide 15

6. Hand Tools	wrenches, screwdrivers, power tools, explosive actuated tools
7. Hazardous Materials	flammable, explosive, acidic, caustic, toxic
8. Materials Handling	conveyors, cranes, hoists, hoppers
9. Personal Protective Equipment	hard hats, safety glasses, respirators, gas masks
10. Pressurized Equipment	boilers, vats, tanks, piping, hoses, couplings, valves

Slide 16

11. Production Equipment	mills, shapers, cutters, borers, presses, lathes
12. Personnel Support Equipment	ladders, scaffolds, platforms, catwalks, staging
13. Powered Equipment	engines, electrical motors, compressor equipment
14. Storage Facilities	racks, bins, shelves, cabinets, closets, yards, floors

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<tr><td>15. Walkways and Roadways</td><td>aisles, ramps, docks, vehicle ways</td></tr>
<tr><td>16. Protective Guards</td><td>gear covers, pulleys, belt screens, work station, guards, railings, drives, chains</td></tr>
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<tr><td>Slide 17</td><td>
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<tr><td>17.valves, emergency switches, cutoffs, warning systems, limit switches, mirrors, sirens, signs</td><td>valves, emergency switches, cutoffs, warning systems, limit switches, mirrors, sirens, signs</td></tr>
<tr><td>18.start-up switches, steering mechanisms, speed controls, manipulating controls</td><td>start-up switches, steering mechanisms, speed controls, manipulating controls</td></tr>
<tr><td>19.handles, eye-bolts, lifting lugs, hooks, chains, ropes, slings</td><td>handles, eye-bolts, lifting lugs, hooks, chains, ropes, slings</td></tr>
<tr><td>20.drinking fountains, washrooms, safety showers, eyewash fountains, first aid supplies</td><td>drinking fountains, washrooms, safety showers, eyewash fountains, first aid supplies</td></tr>
<tr><td>21.valves, emergency switches, cut-offs, warning systems, limit switches, mirrors, sirens, signs</td><td>valves, emergency switches, cutoffs, warning systems, limit switches, mirrors, sirens, signs</td></tr>
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<tr><td>Slide 18</td><td>Reporting and record keeping
• When reporting a workplace inspection/audit, ensure you record;
  • name of department/ area inspected
  • date and the inspection team's names
  • Title of report at the top of the page
• Number each item consecutively, followed by a hazard classification of items according to the chosen scheme
• Assign a priority level to the hazards observed to indicate the urgency of the corrective action required</td><td>Emphasize on proper documentation and record keeping. Participants to understand the schemes used in audit checklist</td></tr>
<tr><td>Slide 19</td><td>Follow-up and monitoring
• Review the information obtained from regular inspections to identify where immediate corrective action is needed
• Identify trends and obtain timely feedback
• Analysis of inspection reports may show the following:
  ➢ Priorities for corrective action</td><td></td></tr>
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	➢ Need for improving safe work practices ➢ Insight about why accidents are occurring in particular areas ➢ Need for training in certain areas ➢ Areas and equipment that require more in-depth hazard analysis	
Slide 1	**MODULE 3.8** **HEALTHCARE WASTE MANAGEMENT**	*This is a discussion session on management of health care waste in facilities*
Slide 2	**Terminologies** • Who is responsible for managing waste? Person generating waste • Hazardous waste? Waste because of its concentration, physical characteristics or quantity is able to increase mortality or irreversible illness • Biohazard waste-Waste that has biological component and can pose threat to the health and safety of the people and environment	
Slide 3	**Why do we manage waste** • To protect human health & the environment. • To minimize the generation of hazardous waste. • Hazardous Waste Management Programs are designed to meet or exceed compliance with National and/or	*Facilitator to emphasize on importance of managing waste*

	local Regulations	
Slide 4	How do you manage waste in your departments?	*Participants share their experiences in hospitals.* *The facilitator then takes them through the steps of waste management and how to classify waste*
Slide 5	**Steps of waste management (1)** **Segregation**- Done at the point of generation Use; • Facilitates the safe handling of wastes ▪ Separates recyclable waste from hazardous waste ▪ Ensures that waste is treated according to its hazards. ▪ Reduces overall costs of transport, treatment and disposal. • Packaging and labeling Includes; • waste type and generator(ward/department) • Date of generation	*This steps constitute proper waste management. Facilitator to emphasize that all steps are important in preventing infections while handling healthcare waste.*

	• Name of the person completing the label • Hazard symbol	
Slide 6	**…….Steps of waste management** **Decontamination** This is the process applied to render the object/material safe by reducing or removing the bio-burden. i.e • Chemical • Physical - Heat, steam and pressure • Incineration • Other choices e.g. shredding • **S**team autoclaving is the preferred method of all decontamination processes. • Infectious waste should be autoclaved before leaving the lab	
Slide 7	**…….Steps of waste management** • **Storage**-Well ventilated enough lighting, away from patient area and eating places, away from rodents. Enough water and dry surface • **Collection**-Daily, designated route trolley for transportation, enough supply of liners	
Slide 8	**Waste management Plan** The establishment of a plan allows taking stock of the	

	existing situation, defining the objectives that need to be met, formulating appropriate strategies, and identifying the necessary implementation means	
Slide 9	**…..Waste Management plan** • The initial step involves identifying types of waste generated in a department/hospital, and drawing an action plan of how that waste will be managed. All the steps of waste management are reflected. • A good plan involves training of its staff	
Slide 10	**Purpose of waste management plan** • Prevent and minimize waste production. • Reuse or recycle the waste to the extent possible. • Treat waste by safe and environmentally sound methods. • Dispose of the final residues by landfill in confined and carefully designed sites.	

Slide 11	• Health care waste is a potential reservoir of pathogenic microorganisms and requires appropriate, safe, and reliable handling
	• The waste should be segregated at point of generation
	  • Should be placed in appropriate colour coded bins with appropriately coloured liners
	  • sharps should be placed in the safety boxes for disposal
	• Highly infectious, infectious and hazardous waste should be incinerated.
		Facilitator to project this slide as a summary

Slide 1	**MODULE 4** **SAFETY EQUIPMENT**	
Slide 2	**Presentation outline** • Objectives • definitions • Safety equipment/Plant	
Slide 3	**Objectives** By the end of this session, participants should be able to: • Relate safety equipment and their areas of operation • Apply acquired knowledge and skills in ensuring safety and health in the work environment.	
Slide 4	**Definition of safety equipment** • Is an equipment designed to minimize occupational hazards • used as a protective measure to individual exposed to specific hazardous agents. Some example of safety equipment:- 1. Biosafety Cabinet 2. Fume hood/Fume cupboard 3. Autoclave 4. Cytotoxic drug safety cabinet 5. Pharmaceutical isolators 6. Emergency showers and eye wash stations	*Other safety equipment include; vacutainers, sharp containers etc*

Slide 5	**Biosafety Cabinets**
	
	• Biosafety cabinets are used to provide primary containment in the laboratory when the investigator is using potentially infectious materials. There are three types of biological safety
	  • Class I
	  • Class II (A1, A2, B1 and B2)
	  • Class III	

Slide 6	**BSCs classes and uses** Class I BSC • Provides personnel protection. Exhaust air filtered by a High-Efficiency Particulate Air (HEPA) filter. Class II BSCs • Class II provides personnel, environment and product protection. comprises 3 types. Class II BSCs have 4 types • Type IIA1: not vented thus making it suitable for use in ductless laboratories. 70% of the air is exhausted from the cabinet while 30% is re-circulated type IIA2 vented and non-vented, 70% of the air is exhausted from the cabinet while 30% is re-circulated.	
Slide 7	**----BSCs classes and uses** • Type II B1 vented, with 30% of the air exhausted from the cabinet while 70% is re-circulated back to the room. • Type II B2 totally exhausted through a dedicated duct. class III BSC • Class III provides maximum protection to environment and user while working with highly infectious microbiological agents. • Both supply and exhaust air are HEPA filtered (used mainly with highly pathogenic agents that usually do not have prophylaxis**)**	
Slide 8	**Correct use of Biosafety Cabinet** • Avoid overcrowding of a work area in the BSC • Avoid in and out motion in the face of BSC • Do not use Bunsen burners or open flames in the cabinet-damage the HEPA filters • Availability and use of SOP/manuals	*BSC use airflow (one direction) therefore avoid movement in front while in use.*
Slide 9	**Biosafety Cabinet**	

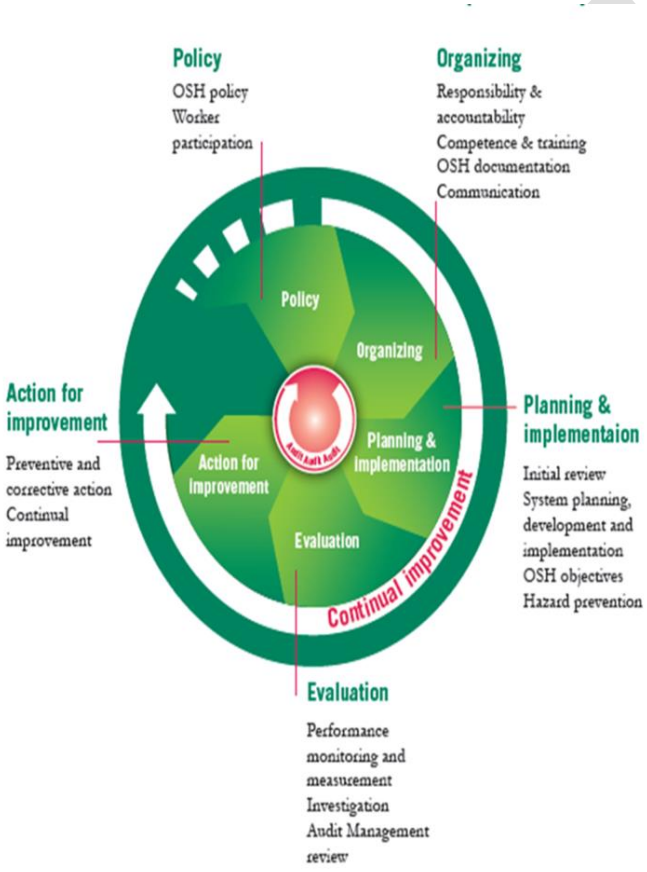
	 Unvented and vented to a duct Biosafety Cabinet	
Slide 10	**Fume cupboards / hoods** • The fume hood is often the primary control device for protecting laboratory workers when working with flammable and/or toxic chemicals. • Before using a fume hood: • Make sure that you understand how the hood works. • You should be trained to use it properly. • Know the hazards of the chemical you are working with; refer to the chemical's Material Safety Data Sheet if you are unsure. • Ensure that the hood is on.	
Slide 11	**Fume cupboards / hoods** • When using a fume hood: • Never allow your head to enter the plane of the hood opening. • Be sure that nothing blocks the airflow through the baffles or through the baffle exhaust slots. • Keep all materials inside the hood at least six inches from the sash opening. • Do not permanently store any chemicals inside the hood.. • When using extremely hazardous chemicals, understand your laboratory's action plan in case an emergency, such as a power failure, occurs.	

Slide 12	**Fume cupboards / hoods-Example** 	
Slide 13	**Cytotoxic drug safety cabinet** • Cytotoxic drug safety cabinets are primary barrier against exposure to aerosols that are produced in the preparation, manipulation and dispensing of cytotoxic drugs. • Direct contact to cytotoxic drugs may cause irritation to the skin, eyes, and mucous membranes; ulceration and necrosis of tissue • The toxicity of cytotoxic drugs dictates that the exposure of health-care personnel to these drugs should be minimized by use cytotoxic drug safety cabinet.	
Slide 14	**Emergency showers and eye wash stations** • Provide on the spot decontamination by allowing workers to flush away hazardous substances that can cause injury. • Accidental chemical exposures can still occur even with good engineering controls and safety precautions. • As a result, it is essential to look beyond the use of goggles, face shields, and procedures for using personal protective equipment. • Emergency showers and eyewash stations are a necessary backup to minimize the effects of accident exposure to chemicals. • Emergency showers can also be used effectively in extinguishing clothing fires or for flushing contaminants off clothing.	

Slide 15	**Hand Wash Stations** • Hand wash station is a designated place in an easily accessible area in which employees may wash their hands • There should be hand wash stations designed to take of physically challenged persons • There should be sufficient sinks to encourage and assist staff to readily conform to hand hygiene guidelines/SOPS • Washing hands using liquid soap, water and friction removes 99% of the transient micro-organisms/bacteria	
Slide 16	**Other equipment enhancing safety** Autoclaves • An autoclave is a pressure chamber used to sterilize equipment and supplies by subjecting them to high pressure saturated steam.  Example of Autoclaves	
Slide 17	**Hazards and Safe Use of Autoclave** • Hazards • Physical-Heat, steam and Pressure • Biological-Infectious material in; used linen and medical equipment Safe Use • User manuals and SOPs must be available and used • Training is required in the use of each autoclave since not all	

	autoclaves are the same. • Service and use of Biological indicators must be used to ensure proper working of the autoclave- • Requires statutory inspection (pressure equipment)	
Slide 18	**Other equipment enhancing safety** **Incinerator** An incinerator is an apparatus used for burning waste materials at high temperature until it is reduced to ash. Health care facilities use incinerators to burn highly infectious and infectious waste. Potential Infection from medical waste and fires or explosions in the incenarators are the greatest risks to the operators. Incenarators operators must be well trained and the equipment be well maitained	*Medical wastes that can be burned using the incinerator include, sharps, syringes, vials, ampoules, histological samples, blood stained materials, plaster of Paris, body parts etc.. Incinerators reduce the solid mass of the original waste by 80–85% and the volume by 95–96%, depending on composition and degree of recovery of materials such as metals from the ash for recycling.This means that while incineration*

		does not completely replace landfilling therefore the ash is buried in waste pit.
Slide 19	**Other equipment enhancing safety**  	
Slide 1	**MODULE 5** **SAFETY AND HEALTH MANAGEMENT IN HEALTH FACILITIES**	*Ask participants what management is and how it can be applied in OSH within the facility*
Slide 2	**Objectives** By the end of this module, the participant should be able to: • Describe elements of safety management; • Explain change management, procurement and contracting in the context of occupational health and safety in health; • Describe the role of training, monitoring, evaluation and reporting of occupational health and safety activities in the	

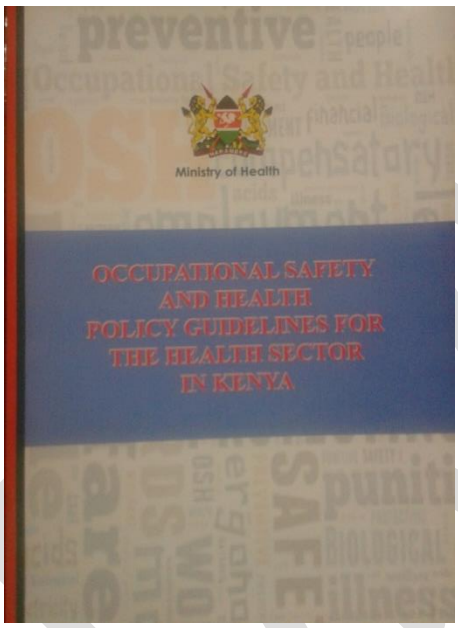
	facilities; • Describe how to collect and maintain OSH data in such a way that it is readily retrievable; and • Outline the procedures of in-house and statutory documentation procedures.	
Slide 3		*Take a few minutes to look at the diagram and emphasize on all the stages of an OSH management system. Engage the participant in discussing the items under each step.*
Slide 4	**1. Policy** What is Occupational Safety and Health Policy? • Document outlining the company's commitment to protect and promote the health, safety and welfare of workers signed by the top executive to emphasize its importance. • An injury prevention document. • Loss control document.	*Emphasize that it is a legal requirement that all workplaces maintain an OSH policy.*

	• Productivity improvement document.	
Slide 5	**…Policy** **Significance of the policy** • A well-defined policy on health and safety will help reduce the incidence and seriousness of work-related injuries. • The employer, in consultation with workers and their representatives should develop the OSH Policy . •	
Slide 6	**…Policy** OSH Policy should be: • Specific to the facility; • Concise, clearly written, dated and signed by the CEO; • Communicated to all employees; • Reviewed regularly; and • Available to stakeholders.	
Slide 7	**2. Organizing** This is deciding how to utilize the organization's resources. It entails: • Responsibility and Accountability: Employer should allocate responsibility, accountability and authority for implementation of OSH; • Competence and training: Employer should have access to OSH competence and should further provide regular OSH training to all employees; • OSH Documentation: A facility should establish and maintain OSH records; • Communication: proper flow of information among all members of the organization; and • Structures and Processes: the organization should establish and review effective structures and processes for proper OSH management.	*Discuss what is organizing*

Slide 8	**3. Planning and Implementation** **P**lanning includes identifying existing hazards investigating root causes and formulating an action plan to mitigate the problem in relation to OSH in accordance to the policy.	*Ask the participants whether they are involved in planning at the health care facility and try to relate this to planning in OSH management*
Slide 9	**4. Evaluation** Performance monitoring and measurement should: (a) be used as a means of determining the extent to which OSH policy guideline objectivesare being implemented and risks are controlled; (b) include both active and reactive monitoring, and not based only upon work relatedinjury, ill health, disease and incident statistics; and (c) Must be recorded.	*Discuss what is evaluation*
Slide 10	**... Evaluation** Monitoring should provide: (a) feedback on OSH performance; (b) information to determine whether the day-to-day arrangements for hazard and risk identification, prevention and control are in place and operating effectively; and (c) the basis for decisions about improvement in hazard identification and risk control, and the OSH management system.	
Slide 11	**Action for Improvement** Preventive andcorrective action • Arrangements should include: (a) identifying and analysing the root causes of any non-conformities with relevantOSH regulations and/or OSH	*Discuss what action for improvement is.*

	management systems arrangements; and (b) initiating, planning, implementing, checking the effectiveness of and documentingcorrective and preventive action, including changes to the OSH managementsystem itself.	
Slide 12	**Continual improvement** Arrangements for establishment and maintainance of continualimprovement of the relevant elements of the OSH management system should take into account: a) The OSH objectives of the organization; b) The results of hazard and risk identifications and assessments; c) The results of performance monitoring and measurements; d) The investigation of work-related injuries, diseases, ill health and incidents, and theresults and recommendations of audits; e) The outcomes of the management review;	
Slide 13	**...Continual improvement** f) The recommendations for improvement; g) Changes in national laws and regulations, voluntary programmes and collectiveagreements; h) New relevant information; and i) The results of health protection and promotion programmes. .	
Slide 14	**Management of change** The impact on OSH of internal changes and of external changes (for example, as a result of changes in laws,regulations, organizational stractures andtechnology. A workplace hazard identification and risk assessment should be carriedout before any modification or introduction of new work methods, materials, processes or machinery. The implementation of a "decision to change" should ensure that all affected members of the *facility* are properly informed and trained.	*Discuss meaning of change,change agent & change management*

Slide 15	**Procurement** • Procedures should be established and maintained to ensure: • compliance with safety and health requirements for the *organization is* identified, evaluated and incorporated into purchasing and leasing specifications; and • Laws and regulations and the organizations own OSH requirements are followed prior to procurement of good and services	*Discuss procurement. Processes available in procurement.*
Slide 16	**Contracting** Arrangements for contractors working on site should: a) Include OSH criteria in procedures for evaluating and selecting contractors by the supplies chain managment units; b) Establish effective ongoing communication and coordination between appropriate levels of the *facility* and the contractor prior to commencing work; .	*Discuss available contracting services and process.*
Slide 17	**-----Contracting** c) Include arrangements for reporting of work-related injuries, ill health, diseases and incidents among the contractors' workers while performing work in the facility; d) Provide relevant workplace safety and health hazard awareness and training to contractors or their workers prior to commencing work and as work progresses, as necessary; e) Regularly monitor OSH performance of contractor activities on site by the manager; and f) Ensure that on-site OSH procedures and arrangements are followed by the contractor(s).	
Slide	**…Contracting**	

18	g)Infrastructure/construction/building safety • Design of the building has to be friendly; safe to all persons including vulnerable groups such physically challenge persons, children and elderly. • Relevant legislation and approvals must be followed. • Approval authorities include; Ministry of Works, NEMA, DOSHS and Ministry of Health – Public Health.	
Slide 19	**OSH POLICY GUIDELINES FOR THE HEALTH SECTOR**  	*Ensure that participants have the OSH policy guideline for the health sector in Kenya with them during this section and highlight the component of each chapter independently.*
Slide 20	**Monitoring and evaluation** **National Level** • NOSH committee shall develop national indicators • NOSH shall monitor indicators and submit to PS • PS to ensure annual management review of OSH indicators is done **County level** • COSH to coordinate development, review and approval of county objectives and targets in reference to National targets and indicators. • COSH to develop yearly implementation plan.	*Discuss monitoring and evaluation*

	• COSH focal person to monitor implementation and report using MOH reporting system • Review quarterly	
Slide 21	**…Monitoring and evaluation** **Facility level** • Facility OSH committee to adopt OSH targets and indicators • Facility OSH committee develop implementation plan and integrate it to facility operational plan • Facility OSH committee monitor implementation and report to County OSH. **Evaluation** • Evaluation tools to be designed by NOSH • OSH unit to disseminate the tool to county OSH focal person • County OSH to coordinate evaluation at facility level, compile county OSH report • Submit to health management committee at county level.	
Slide 1	**MODULE 5.2** **DOCUMENTATION AND REPORTING**	*Discuss what is documentation and reporting.*
Slide 2	**Documentation** A facility should establish and maintain information in a suitable medium such as paper or electronic form to: • Describe the core elements of the management system and their interaction; and • Provide direction to related documentation.	
Slide 3	**Document and Data Control** • There should be a documented procedure established and maintained for record management. • These documents should be:-	

	-Controlled and logged -Periodically received, reviewed as necessary and approved for adequacy by authorized personnel -Current and available at all locations where operations essential to the effective functioning of the OHS system are performed.	
Slide 4	**.....Document and Data Control** **Note:-** Documentation and data shall be legible, dated, readily identifiable and maintained in an orderly manner for a specified period. • Procedures and responsibilities shall be established and maintained. • An inventory of OHS documents in the data control system should be available.	
Slide 5	**.....Document and Data Control** • Obsolete documents and data should be promptly removed from all points of issue or use and properly disposed. • Archival documents retained for legal and knowledge preservation purposes should be suitably identified.	
Slide 6	**Records and Records Management** • Procedures for the identification and maintenance of OSH records should be documented. • Documentation of the results of audits and reviews should be done. • OSH records should be legible, identifiable and traceable to the activity, product or service involved.	*Discuss records and record management*
Slide 7	**Document and Data Control** • OSH records should be stored and maintained in such a way that they are readily retrievable and protected against damage,	*Health facilities are required by*

	deterioration or loss. • The records should be retained for a minimum period of 6 years.	*law to keep records such as the general register and fill in documents such as the DOSH 1 form incase of injuries at the workplace. These documents may need to be kept even beyond six years for legal purposes.*
Slide 8	**Record Keeping** As good health practice, facilities have a general obligation to keep records on health services provided to the workers. The obligations are: • General health record if the workers are treated as patients or health service clients; • Data on surveyed, detected and measured occupational exposures and risk assessments which have been made; • Statistics on occupational diseases and injuries. • Data on medical surveillance report forms; and • Documents on proposals for preventive and control measures.	*Emphasize the importance of record keeping. "anything not documented was or is not done"*
Slide 9	**In-House documentation** • The employees should be sensitized on hazard identification both general and specific to the unit. • Employees should be orientated to the use of workplace inspection checklist and hazard reporting form. • Safety checks should be done at the begining of each working	*Discuss in house documentation and its importance and enquire if it is carried*

	day and both normal and abnormal findings documented e.g electrical switches, fire extinguishers, first aid kits and other safety equipment.	*out in their facilities*
Slide 10	**...In-House documentation** • Employees should report on hazards they encounter in the course of work to their supervisors in writing. • All accidents, incidents, dangerous occurrences, exposure, and near misses should also be reported and documented in their respective tools. -This shall be done in a timely manner (within 8 hours after occurrence). • Other issues that should be recorded include:- - Replenishes of the first aid kit, Use of fire extinguishers, Safety alarms (whether intentional or unintentional)	
Slide 11	**Statutory Documentation** • All accidents and occurrences should be documented in the prescribed form(DOSH 1) and reported to the nearest DOSH office • Reports on safety and health audits, fire safety audit, plant examination and medical examinations should be well kept and documented. .	*The DOSH 1 form and other DOSH forms are available online at the ministry of labour and social services website, Documents that are not available online can be provided by the County Safety and Health Officer available in*

		your area.
Slide 12	**....Statutory Documentation** • Servicing and maintenance of safety equipment e.g. fire extinguishers should be regularly done and documented. • Annual inspection of the work environment should be done and findings documented • Workplace registration: Every workplace must be inspected to be registered for an annual OSHA certificate.	
Slide 13	**Conclusion** • All OSH committee secretaries in health facilities should establish and maintain records of OSH events in the facility. • Each facility shall investigate, analyze and record incidents in the General Accident Register. • Incident and accident reports shall be reviewed by the facility OSH committee on a monthly basis	

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Appendices 1: Technical working group members

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Appendices 3: Directorate of occupational safety and health services forms

a. Employee exposure report form
b. Hazard reporting form
c. DOSH 1: Accident notification form
d. "Dangerous occurence" and near misses form
e. Accident recording in the "general register"
f. Workplace inspection checklist
g. Medical examination report form