



# Healthcare Waste Management Training

Module 6  
International & national regulations,  
guidelines, policies

# Content

- International principles for handling waste
- Kenya's guidelines
- International agreements
- Regulations for packaging and external transport
- Treatment guides



# International principles

Beside

- Precautionary Principle,
- Duty of Care Principle

observed during the segregation process, following principles are incorporated in several international conventions, guidelines and national laws:

- Proximity Principle,
- Polluter Pays Principle.



# International principles I

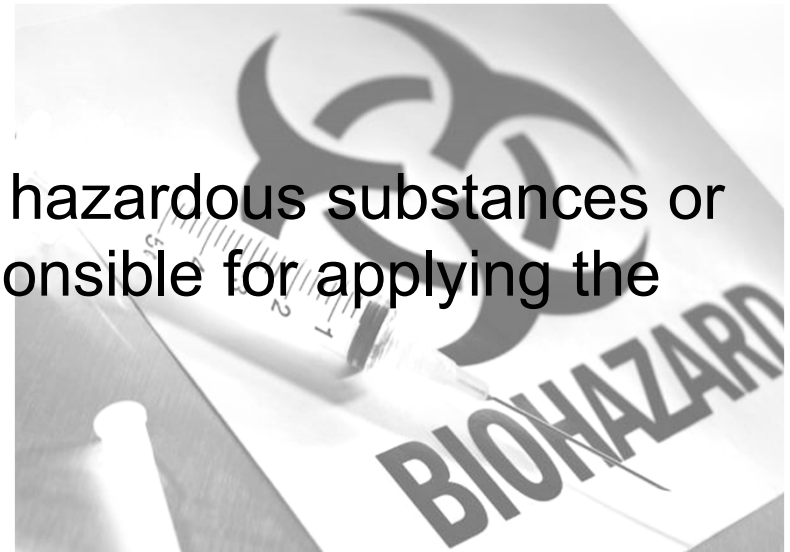
## Recap:

### Precautionary Principle:

- It's a key principle governing health and safety protection
- When a certain risk is insufficiently known, it should be assumed that this risk is significant.
- Health and safety protective measures should be designed accordingly

### Duty of Care Principle:

- Any person handling or managing hazardous substances or related equipment is ethically responsible for applying the utmost care.



## International principles III

### **Polluter Pays Principle:**

- Implies that any waste producer is legally and financially responsible for the safe and environmentally sound disposal of the waste he has produced.
- This principle also attempts to channel liability to the part which caused the damage.
- Wherever practicable the polluter should pay for the costs they impose on the environment, whether they are national government, local government, commerce or industry or members of the public.



# International principles IV

## **Proximity Principle:**

- Recommends that treatment and disposal of hazardous waste take place at the closest possible location from its source in order to minimize the risks linked to its transport
- According to a similar principle, any community should either recycle or dispose of the waste it has produced, inside its own territorial limits



# Kenya's Guidelines

Selection of Kenya's guidelines covering healthcare waste issues:

- National Standards And Guidelines On Injection Safety And Medical Waste Management (2006)
- The Environmental Management And Co-ordination Act, [EMCA] (1999)
- Kenya National Guidelines On Safe Disposal Of Pharmaceutical Waste. (2001)
- The Public Health Act, Chapter 242 Laws Of Kenya
- National Environmental Sanitation And Hygiene-MoH Kenya, (2007)

# NEMA Guideline

## Waste management Regulations 2006:

- Part VI 38. “Any person who generates biomedical waste shall at the point of generation and at all stages thereafter segregate the waste in accordance with the categories provided under the Seventh Schedule to these Regulations”.
- Part VI 40 “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 of”.



## NEMA Guideline – II

### **Schedules that regulate biomedical Waste:**

- Seventh Schedule [segregation]
- Sixth schedule [in line with Basel Convention]
- Eighth Schedule part I & II [security & packaging]
- Ninth Schedule [biomedical treatment]
- Tenth schedule [Standards for treatment plants]

So?

- NEMA regulates; Handling, storage, transportation, Treatment and disposal technologies and Application of treatment and disposal methods to health-care waste categories;

# NEMA Guidelines

## **Any person handling waste Must have:**

- 1. Training on safe handling of hazardous wastes
- 2. Appropriate protective gear such as, gas mask, aprons, gumboots, helmets, gloves, goggles.

Facilities generating or storing or treating waste must have;

- 3. Caution and Warning signs must be provided.
- 4. Fire fighting equipment

# International agreements

## **Conventions:**

- BASEL CONVENTION on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, United Nation Environmental Program (UNEP), 1989
- The Stockholm Convention on Persistent Organic Pollutants, administered by the United Nations Environment Programme (UNEP), 2001

# The Basel Convention

- Signed in 1989 and entered into force in 1992
- At present 170 Parties to the Basel Convention
- **History:**
  - In the late 1980s, a tightening of environmental regulations in industrialized countries led to a dramatic rise in the cost of hazardous waste disposal.
  - Searching for cheaper ways to get rid of the wastes, “toxic traders” began shipping hazardous waste to developing countries and to Eastern Europe.
  - When this activity was revealed, international outrage led to the drafting and adoption of the Basel Convention.

## **Intention:**

- To reduce the movements of hazardous waste between nations, and specifically to prevent transfer of hazardous waste from developed to less developed countries (LDCs),
- To minimize the amount and toxicity of wastes generated,
- To ensure they are environmentally sound management as closely as possible to the source of generation, and
- To assist LDCs in environmentally sound management of the hazardous and other wastes they generate.
- It does not address the movement of radioactive waste!

## The Basel Convention IV

- **Hazardous waste definition:**
  - Annex I of the Convention lists those wastes that are classified as hazardous and subject to the control procedures under the Convention.
  - Annex II of the Convention identifies those wastes that require special consideration (known as “other wastes”, and which primarily refer to household wastes).

# Stockholm Convention

## **Stockholm Convention on Persistent Organic Pollutants:**

- Entered into force in 2001 and was ratified by 128 parties,
- Is an international legally binding agreement on persistent organic pollutants (POPs):
  - “chemical substances that persist in the environment, bio-accumulate through the food web, and pose a risk of causing adverse effects to human health and the environment”.
- Requires Parties to take measures to eliminate or reduce the release of POPs into the environment.

## Stockholm Convention II

- Covers twelve different chemicals including by-products from waste incineration:
  - Dioxins and
  - Furans.
- Under some circumstances, including when
  - Wastes are incinerated at **low temperatures** or when
  - **Plastics** that contain polyvinyl chloride (**PVC**)are incinerated, both substances and other toxic air pollutants may be produced as emissions and/or in bottom or fly ash.
- Exposure to dioxins, furans and co-planar PCBs may lead to adverse health effects.



# Transport of Biomedical/Hazardous Waste

- **NEMA WM Regulations 2006.**
- During Transport there should be no scattering of, escaping of, or flowing out of the waste or emitting of noxious smells from the waste;
- Follow the scheduled routes approved by the Authority from the point of collection to the disposal site or plant;
- Duly filled tracking document as set out in Form III of the First Schedule

## Treatment of Hazardous Waste-Kenya

- Every person who generates toxic or hazardous waste shall treat or cause to be treated such hazardous waste using the classes of incinerators prescribed in the Third Schedule.
- Any leachate or other by-products of such treated waste shall be disposed of or treated in accordance with the conditions laid down in the license or in accordance with guidelines issued by the Authority in consultation with the relevant lead agency. (WMR 2006)

## SEVENTH SCHEDULE: (Regulation 38)

Includes Categories of Biomedical waste.

- Infectious Waste
- Pathological waste
- Sharps , This includes both used and unused sharps.
- Pharmaceutical waste
- Genotoxic Waste
- Chemical waste
- Waste with high content of heavy metals
- Pressurized containers
- Radioactive waste
- General solid waste

# NINTH SCHEDULE : *(Regulation 40)*

## Treatment methods of Bio-Medical Waste

Waste Category	Treatment
Dialysis Unit Waste	Steam Sterilization
Biological, Surgery & Blood	Steam Sterilization Or Incineration
Pathological, Human Fluids	Steam Sterilization Or Incineration
Low Level Radioactive Waste	Consult Radiation Protection Board
Laboratory Waste	Steam Sterilization
Anti-neoplastic Drug Waste	Incineration
Contaminated And Unused Sharps	Steam Sterilization And Incineration/Grinding

## **TENTH SCHEDULE *(Regulation 47)***

### **STANDARDS FOR WASTE AUTOCLAVING**

- III. Medical waste shall not be considered properly treated unless the time temperature and pressure indicators indicate that the required time, temperature and pressure were reached during the autoclave process. If for any reasons, time temperature, pressure or residence time was not reached, the entire load of medical waste must be autoclaved again until proper temperature, pressure and residence time were achieved.
- IV. Recording of operational parameters

# SELF REGULATIONS

- Good or Bad?