

# NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY

(NEMA)

Internal Memo

Approved  
5/9/2017  
[Signature]

<b>TO:</b> Director General	<b>From :</b> Deputy Director Compliance
<b>Ref.</b> Internal Memo	<b>Date:</b> 6 <sup>th</sup> September 2017

## **RE: HEALTHCARE WASTE MANAGEMENT GUIDELINES**

Reference is made to the Ministry of Health letter Ref no: MOH/EHS/WASTE/VOL.3/63 dated 28<sup>th</sup> August 2017.

### **Introduction:**

Health-care activities protect and restore health and save lives however, the amount of waste and by-products generated cause adverse environmental impacts. Of the total amount of waste generated by health-care activities, about 85% is general, non-hazardous waste. The remaining 15% is considered hazardous material that may be infectious, toxic or radioactive.

### **Types of Waste:**

Waste and by-products cover a diverse range of materials, as the following list illustrates:

- **Infectious waste:** waste contaminated with blood and other bodily fluids (e.g. from discarded diagnostic samples), cultures and stocks of infectious agents from laboratory work (e.g. waste from autopsies and infected animals from laboratories), or waste from patients in isolation wards and equipment (e.g. swabs, bandages and disposable medical devices);
- **pathological waste:** human tissues, organs or fluids, body parts and contaminated animal carcasses;
- **sharps:** syringes, needles, disposable scalpels and blades, etc.;
- **chemicals:** for example solvents used for laboratory preparations, disinfectants, and heavy metals contained in medical devices (e.g. mercury in broken thermometers) and batteries;
- **pharmaceuticals:** expired, unused and contaminated drugs and vaccines;
- **Genotoxic waste:** highly hazardous, mutagenic, teratogenic or carcinogenic, such as cytotoxic drugs used in cancer treatment and their metabolites;

- **Radioactive waste:** such as products contaminated by radionuclides including radioactive diagnostic material or radio therapeutic materials; and
- **Non-hazardous or general waste:** waste that does not pose any particular biological, chemical, radioactive or physical hazard.

**Segregation of waste-** the key to minimization and effective management of health care waste is segregation and identification of the waste. The waste producer is responsible of waste segregation and it should be done close to the source of waste production.

**Disposal of waste-** to ensure proper waste disposal the main methods used are incineration, shredding, and chemical disinfection. The waste can also be disposed through landfilling and encapsulation to avoid scavengers from exposing the waste.

### **Guidelines:**

There are four internationally accepted principles that guide systems development and maintenance in order to safeguard public health. These are the precautionary, polluter pay principles, duty of care and proximity principle.

#### **1. Precautionary Principle:**

Waste handlers are required to be prepared and responsible for the protection, preservation and restoration of the environment. Medical practitioners should be cautious of when handling medical waste in order to ensure that they protect themselves, those around them and the environment

#### **2. Polluter Pays Principle**

All waste producers are legally and financially responsible for: safe handling of waste, environmentally sound disposal of waste and creating an incentive to produce less waste.

#### **3. Duty of Care**

The principle stipulates that any person handling or managing hazardous substances or related equipment is ethically responsible for applying the utmost care.

#### **4. Proximity Principle**

The principle recommends that treatment and disposal of hazardous waste take place as near as possible to the point of production as is



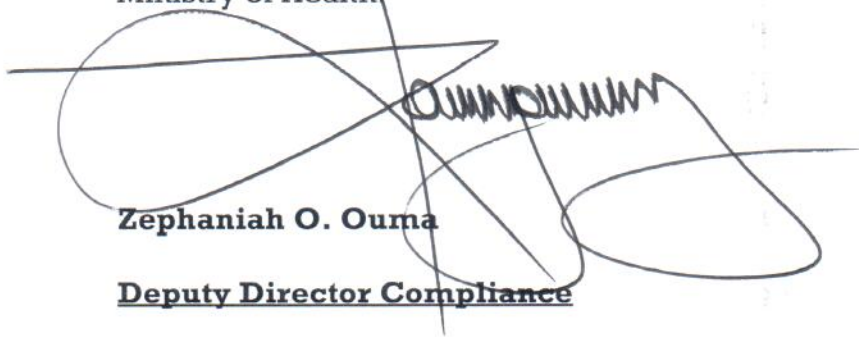
technically and environmentally possible to minimize risks involved in transport.

**Color Code Systems used in Kenya;**

<b>Type of Waste</b>	<b>Color of container and markings</b>	<b>Type of Container</b>
Sharps	Yellow (Marked 'Sharps')	Puncture proof
Infectious	Yellow	Strong leak proof plastic bag with biohazard symbol
Highly Infectious	Red (Marked Highly Infectious)	Containers capable of being autoclaved
Non-Infectious/ non-hazardous(non-clinical)	Black	Plastic Bag or container
Chemical and Pharmaceutical	Brown	Plastic bag or Container
Radio Active Waste	Yellow with black radio-active symbol	Lead Box

**Recommendations**

I therefore advise that NEMA should adopt the guidelines as requested by the Ministry of Health



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**Deputy Director Compliance**

