# Effect of waste management intervention program on knowledge attitude and practice (KAP) among nurses &house keepers in Mansoura Emergency Hospital: Quasi experimental study

## Demographic data:

**Name:** **Date:**

**Education:** less than basic education Basic education □ Technical school □Technical institute □ University education (Bachelor)

**Job description:** □Waste collection workers □Nurse □ Head nurse □ health & safety team

**Department:** **Previous job :**

**History of previous Viral hepatitis (HCV) infection:** □ yes □no

**Did you receive Hepatitis B Vaccine?** □ yes □no

**If yes mention no of HBV doses: ……**

**Did you attend previous waste management training program? □ yes □no**

- ***Knowledge score (27 questions)***

| **Knowledge statement** | **Yes** | **No** |
|---|---|---|
| 1. Medical waste is defined as any solid, liquid, gaseous waste produced from all heath care activities | **1** | **0** |
| 2.Hazardous Medical waste as any waste is generated as a by-product of healthcare work and keep hazardous properties such as ignitable, corrosive | **1** | **0** |
| 3.Hospital waste management is a system that doesn't include reuse or recycling of waste but includes segregation ,collection, transportation the, containment, and final disposal of hospital-generated infectious waste after disinfection. | **1** | **0** |
| 4. Hazardous medical waste have many adverse health effects | **1** | **0** |

***Choose the best answer*: Which of the following is the correct type of medical waste?**

5. Cartoon boxes is considered**:** □Infectious waste □ **Non-hazardous waste** 1 □Pathological waste

□ sharps □chemical waste □ others

6. Kitchen waste is considered: □Infectious waste □ **Non-hazardous waste1**

□ Pathological waste □ sharps □chemical waste

7. Blood contaminated fomites: □ Non-hazardous waste □**infectious waste1**

□ Pathological waste □ sharps □ radioactive wastes

8. The biological fluid of patients who received radiotherapy □ Non-hazardous waste □infectious waste □Pathological waste □ Sharps □ **radioactive wastes1**

9. **The remaining vaccine bottles**: □ **Infectious waste** 1□ non-hazardous waste □ Pathological waste □ Sharps □ Chemical waste □ others

10. **The waste in the form of sharps & scissors is considered**: □Infectious waste □ non -hazardous waste □Pathological waste □ **Sharps 1**□chemical waste □ others

11. **The aerosol packages in hospital is considered:** □ Infectious waste □ non-hazardous waste □Pathological waste □ Sharps □ Chemical waste

□ **hazardous waste under pressure1**

☒ **Select the appropriate way for segregation of the following type of waste**:

| | Segregation knowledge | Red bags | black bags | Special containers | Sharp Box |
|---|---|---|---|---|---|
| 12 | Syringe or needle package | **0** | **1** | **0** | **0** |
| 13 | Contaminated test tube | **1** | **0** | **0** | **1** |
| 14 | Amputated fingers or toes or teeth | **1** | **0** | **0** | **0** |
| 15 | Contaminated wound dressing | **1** | **0** | **0** | **0** |
| 16 | Stitch needles | **0** | **0** | **0** | **1** |
| 17 | Aerosol packages | **0** | **0** | **1** | **0** |
| 18 | Pharmaceutical waste | **1** | **0** | **0** | **0** |
| 19 | Biological fluids with radioisotopes | **0** | **0** | **1** | **0** |

**20**. **Final Disposal of radioactive waste is the responsibility of Egyptian atomic energy authority in coordination with radiotherapy departments**: □ yes 1 □no 0

21. **The hazardous waste must be segregated from ordinary waste** :

□ yes 1 □no 0

22. **The red bags should be closed when:**

□Completely filled About 2/3 ***1*** □

at any level at the end of working day0 □ None of the above 0

23. **The way of disposal of chemical waste is**:

□ Sewer system after dilution 1 □special plastic containers 2 □I don't know 0

24. **What happens when infectious waste is wrongly disposed in black bags**?

□ Remove manually to red bags 0 □ Insert whole back bag into red bag 1

25. **The maximum allowable time for storage of hazardous waste in medium storage room during the winter is 72 hours**? □

yes 0 □no 1

26. **The requirements of medium storage rooms is to be clean room with water resistant floors & walls , proper lighting and ventilation**

□ yes 1 □ no 0

27. **I know the method of final disposal of hazardous medical for my hospital**

□ yes 1 □ no 0

- ***The attitude score (10 questions)***

| ***Attitude statement*** | **Agree** | **Disagree** | **I don't know** |
|---|---|---|---|
| *1. I believe that waste segregation is necessary* | 1 | ***0*** | ***0*** |
| *2. It is necessary to dispose sharps in sharp box* | ***1*** | ***0*** | ***0*** |
| *3.Chemical waste should be disposal in special plastic containers* | ***1*** | ***0*** | ***0*** |
| *4.It is not necessary that storage room have adequate ventilation* | ***0*** | ***1*** | ***0*** |
| *5.The hazardous infectious waste can be recycled* | ***0*** | ***1*** | ***0*** |
| *6.It is Not necessary to have special requirement for transport containers* | ***0*** | ***1*** | ***0*** |
| 7. It is waste of money to make color code hazardous waste bags | ***0*** | ***1*** | ***0*** |
| *8. Attending training programs for waste management is waste of time* | ***0*** | ***1*** | ***0*** |
| 9. It is not necessary to close the red bags | ***0*** | ***1*** | ***0*** |
| 10. It is important to do visual screening for red bags to ensure adequate segregation of hazardous waste | ***1*** | ***0*** | ***0*** |

❖ **The Practice score (9 questions):**

| Practice statement | No | sometimes | Most of time | always |
|---|---|---|---|---|
| 1. I segregate the hazardous waste from non-hazardous waste | **0** | **1** | **2** | **3** |
| 2. I attend training programs about safe medical waste disposal | **0** | **1** | **2** | **3** |
| 3. I follow the rules of administration as regards the disposal of hazardous waste | **0** | **1** | **2** | **3** |
| 4. I report needle stick injuries or sharps injury to infection control unit | **0** | **1** | **2** | **3** |
| 5. I do recapping of needles before disposal in sharp box | **3** | **0** | **0** | **0** |
| 6. I dispose the needles in red bags | **3** | **0** | **0** | **0** |
| 7. I dispose the contaminated dressings in black bags | **3** | **0** | **0** | **0** |
| 8. I remove the hazardous waste from black bags to red bags | **3** | **0** | **0** | **0** |
| 9. I wear the personal protective equipment during disinfection of blood or biological fluid spills | **0** | **1** | **2** | **3** |

**Thanks a lot for your cooperation**

***Occupational health & safety team in Mansoura Emergency hospital***