IQRA NATIONAL

 UNIVERSITY

**FACULTY ALLIED HEALTH AND SCIENCE**

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PAPER biosafety & risk management

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Q1: **What is hazard analysis? Why it is important? Give your ideas and suggestions regarding hazard analysis in a clinical set up by giving an example**. (10)

**Definition:**

* Hazard analysis is a process which are investigation of the system faults.

 **OR**

* The major goal of hazard analysis is to identify the event that may eventually lead to accidents & Determine its impact on the system.

**Importance of hazard analysis:**

* Train the hospital worker:
* To aware the hospital sweepers that the hospital waste are completely destroy.
* Investigation:
* To use the investigation of the major and minor accident.
* Policies:
* To improve the hospital policies.
* Risk:
* To decreased the risk rate.
* Aware:
* To aware the hospital staff.
* The help to the prevent accidents & sickness absence.

**Hazard analysis in clinical setup:**

* **Hazard in laboratory:**
* Infection

1: Inhale the pathogen

2: Contaminated food

3: Skin lesion

* Burns**:**

1: Inflammable equipment

2: Spread lamp

* Cuts & pricks
* Edge of broken glass wear, knife, needle
* Hazards of chemical exposer
* Electric shocks

Touching the live wire

* **Safety precautions:**
* Coat gown
* Specimen carefully handle
* Avoid eating & drinking
* Avoid smoking
* Gloves& needle, syringe used carefully
* After ends of the days worker are clean with disinfected materials
* Hand should be washed before exit the lab
* **Hospital safety:**

We know that outbreak corona virus in all over the world. And also include in the hospitals .Corona virus are high rate of hazard. Coronavirus are aerobic microorganism that spread to the person to person through droplets, coughing & sneezing.

 The safety precautions of high rate of hazard due to coronavirus. That are include all hospital staff .when they must be follow the some safety precautions according to (WHO) used personal protective equipment e.g coat gown, gloves, mask N95 ,disinfected chemical, alcohol etc.

In my point of view that we are aware the hospital workers, patients and the relative that corona virus are danger to the patients and hospital staff. And clean the hospital surface.

**Q2: Clinical risk management is an approach to improve the quality and safe delivery of health care. Paraphrase in your own words all the steps involved in clinical risk management. (10)**

* **Clinical risk management:**
* Clinical risk management is an approach to improving the quality & delivery of health care.
* **All the steps involved in clinical risk management:**

1: **Looking for hazards:**

The first steps is looking for hazard that is anything thing should be harmful for your health that you can work in the lab. In the lab hazard is your working equipment e.g knife, chemicals, burns, glass wear, that should be in the hazard category.

**2: Decide who might be harmed:**

After the hazard we can decide who might be harmed that are include patients, sweeper, laboratory worker, doctors, para medical staff etc. they are include in high risk of hazard.

**3:Precautions are adequate or whether more should be done:**

When the third step is finding that if any think should be harmful for your health like hospital waste they can be proper disposed , Proper cleaning of the hospital surface .when you make sure that doctor and lab worker must be used there (PPE).

If you make sure that the any hazard substance should be harmed for your body.

**4: Record your findings:**

After the third step when you find anything about the hazard substance you can saved the record. And can more improvement in against the hazards.

**5: Review your assessment and revise it if necessary:**

 When after the fourth step you improve you safety precautions against the hazard e.g aware the sweeper they can be proper dispose the hospital waste after exposed the environment. Proper rules and regulation to be ensure that the safety for yourself.

**Q3: Segregation is separating waste by type (e.g., infectious waste, pharmaceutical waste) into color-coded bags at the place where it is generated. The key to minimization and effective management of health-care waste is segregation (separation) and identification of the waste. As a health care worker how would you separate health care waste to protect public health? (10**)

* **Segregation & separation waste management**:

When can separation and segregation of biomedical waste are disposed to the different ways e.g we can used the different color coded bags, dustbin to manage the different type of waste (infection waste, lab waste, hospital waste, & pharmaceutical waste according to the (WHO) rules and regulation. And can identification of the waste.

* **Include some waste** **for separation:**
* General waste
* Pathological waste
* Chemical waste
* Sharps waste
* Radioactive waste
* Pharmaceutical waste

**1: General waste:**

 Include in general waste paper, wrapper, kitchen waste, sweeping waste. And they are put in the black color coded dustbin to be proper disposed it.

**2: Pathological waste:**

 Include in pathological waste blood, body fluid, urine, human fetus, laboratory culture, tissues, swabs, bandages. And they can put in the yellow color coded dustbin to be proper disposed it.

**3: chemical waste:**

 Include in chemical waste solvents, diagnostic kits, poisonous and corrosive materials, and cleaning agents. When they can be put in the brown color dustbin to be proper disposed it.

**4: sharp waste:**

Include in sharp waste glass ware, needles, scalpels and blades. They can be put in the special bag, sharps container.

 **5: Radioactive waste:**

Include in radioactive waste laboratory research, contaminated glassware, packages, or urine.

 **Radioactive disposure**: Radioactive waste is first characterized to determine its physical and chemical properties as well as its radio activity. It is then processed which may include sorting, decontamination and steps to reduce volume.

* Put into the safe condition for interim storage and ultimately disposal.
* Very low level waste contain small amounts of radioactive substance.
* This waste requires minimal isolation and is suitable for disposal in near surface facilities.
* It requires more containment and isolation.
* High level waste presents the greatest hazard
* Its disposal is several hundred meters underground.

6: Pharmaceutical waste:

 Including the pharmaceutical waste expired, unused & contaminated pharmaceuticals, e.g expired drugs, vaccines.