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Opinion

Spill Management

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Introduction

Spillage

A substance such as oil or any liquid substance escape from container.

Spill

A spill is an amount of liquid that has spilled from a container.

Spill Management

Each department which stores or handles hazardous, microorganisms or hazardous chemicals or toxic chemicals must have to place with emergency plans & procedures for dealing with the spillage chemicals.

i. The head of department is responsible for ensuring that these documentations is up to date and that it is readily available to staff & emergency services.

ii. It is also a legal requirement to assess the need for & to provide appropriate personal protective equipment (PPE) along with training in its use.

Spill Management Procedure

Ensure you know what to do if there is spill on your site.

The key steps are:

Be safe:

i. Do you know what the spill material is?

ii. Do you need personal protective equipment?

iii. Get the write safety equipment before you act.

Stop the Sources:

i. Turn off the tap or valve.

ii. Plug the leak or roll the drum over- if it is safe to do.

Protect Storm Water:

i. Confine the spill with sandbags or booms.

ii. Powder type spills cover with plastic to stop them blowing around.

iii. Block off access to storm water grates, sump & interceptors.

Notify:

i. Tell your supervisor.

ii. Inform agencies such as fire services.

Clean Up:

i. Liquid Spill: Pump into a safe container, absorbed them with appropriate materials or mix them with a compatible (able to exist) solid so you can sweep them up for disposable don't use dispersants (drops).

ii. Powder Spill: Sweep or vacuum up & put them in safe container.

a) If the spill needs to be neutralized, get a properly qualified staff members to supervise.

b) Keep the contaminated area as small as possible. if it can be avoided, don't walk around contaminated area.

c) Clean up the area & any contaminated equipment or cloth after removing spill keep within the contained area, stop wash water or sweeping getting into storm water or soil.

Dispose Responsibly:

i. Dispose of contaminated materials & clean up material or clothing as a hazardous waste or ask your waste disposal contractor to dispose of it for you.

ii. Do not hose (rubber pipe) spill.

Restock and Review:

i. Replace any containment equipment or protective gear immediately.

ii. Do the spill report immediately to find out how and why the spill happened.

Types of Spillage in Hospitals

A. Blood & body fluid spillage.

B. Mercury spillage.

A. Blood & body fluid spillage

i. This include blood, vomit, urine, & pus etc. all of which may contain disease causing micro-organisms.

ii. General best practice includes for Blood & body fluid spillage: Use a Spillage kit if available.

a. Spillage Kit:

1. Disposable gowns.
2. 4 pair of gloves.
3. Aprons.
4. Pairs of goggles.
5. Disposable shoe covers.
6. 2 Disinfectant sachets.
7. Absorbent paper.
8. Disposable forceps.
9. Biohazard disposal bags.
10. Emergency contact number.

b. Cleaning of Blood & Body Fluid:

1. Cover a spill with a newspaper, blotting paper/paper towel or dry mud.
2. Pour 5 % phenyl or freshly prepared hypochlorite solution having 10,000ppm (parts per million) or (1%) chlorine on it and wait for 30 minutes
3. Wear gloves and collect it with a plastic scoop & put in a plastic container.
4. Wet mop the area with phenyl.
5. Gloves should be disposed of in a clinical bag.
6. Hands must be washed following clearing up.
7. If broken glass is present, first decontaminate the spillage as above, then carefully remove the pieces of glass with disposable forceps or scoop to a sharps bin, before wiping up.
8. Paper towel, gloves, disposable overshoes and any contaminated clothing should be placed in yellow clinical waste bag for incineration and hand wash.
9. Finally, the area should be washed with water and detergent and allowed to dry.

c. Cleaning Large Spills:

Large volume of body fluids must be managed by following actions:

i. Wear gloves, eye protection and a disposable apron. If the spillage is extensive, disposable plastic overshoes or rubber boots may be necessary.

ii. Liquid spills should cover with (chlorine releasing) Pour 5 % phenyl or freshly prepared hypochlorite solution having 10,000ppm (parts per million) or (1%) chlorine on it and wait for at least two minutes before clearing up with paper, towel, absorbent mats.

iii. A Specialized spillage mope with absorbent cotton/gauze.

iv. Alternatively, the spill may be covered with paper, absorbent mats and gently flooded with hypochlorite solution containing 10,000ppm (1%) available chlorine (again this should be left for at least two minutes before attempting to clear up.)

B. Mercury Spillage:

a. Mercury Spill Management Kit:

1. Nitrile gloves or two pairs of latex gloves.
2. Face mask.
3. Protection for the eyes.
4. Scotch tape.
5. 10cc syringe.
6. Covered plastic/glass container with water.
7. Poster depicting the process of mercury containment.

b. Safe Disposal of Mercury on Spillage:

i. Mercury should never be touched with bare hands.

ii. All jewelry should be removed.

iii. Avoid brooms, brushes and vacuum cleaner to clean the spilt mercury.

iv. Never put mercury in trash bins, burners or drains or in municipal dustbins.

v. Switch off heating of air conditioning system during mercury spillage.

vi. Collect spilt mercury using paper board to accumulate small mercury droplets together.

vii. Pick up broken glass carefully, wrap in a paper towel, and place in a glass container with 5 to 10 ml of water.

viii. Use a regular syringe for sucking the mercury droplets. left out small beads are to be gathered with two cardboards and then scooped.

ix. Place in a water in a glass container.

x. Locate any remaining mercury with the help of flashlight.

xi. Seal the glass container and label as mercury waste and place in a safe corner.

xii. Place all the materials used in the cleanup, including gloves, in a trash bag.

xiii. Seal the trash bag with tap and label as mercury waste.

xiv. Wash the area with mercury neutralizing agents like 20% calcium sulfide or sodium thiosulphate solution (if the chemicals are available.)

xv. Wash your hands, face, and any other areas of your body exposed to the mercury.

xvi. Keep the room ventilated for a minimum of 48 hour.

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