BIOGENIX

BIOHAZARD SPILLAGE MANAGEMENT

	NAME	DESIGNATION	SIGNATURE	DATE
Prepared by	SHIVARAJ NAIK	INFECTION CONTROL OFFICER		01/07/2020
Reviewed by	DR. JULIET TEDDY	DEPUTY LABORATORY DIRECTOR		01/07/2020
Reviewed & Approved by	DR. SALLY ABDULLA IBRAHIM	LABORATORY DIRECTOR		01/07/2020

1. TABLE OF CONTENT

2 REVISION HISTORY

#	Version	Date	Changes Made by	Reason for Changes	Clause Changed
1	1.0				

3 REVIEW HISTORY

#	Version	Date	Changes Made by	Reason for Changes	Clause Changed
1	1.0				

4 POLICY STATEMENT:

4.1 This Biological Spill Procedure has been prepared by Biogenix laboratory and provides clear steps in the event of a Biological Spill to help develop Occupational Health and Safety awareness of good practice for all staff in the delivering of services within the facility not limited to the laboratory.

4.2 This policy is to inform and instruct staff to safely and effectively manage a spillage of biologically hazardous material.

4.3 Biohazardous material spillage will be managed in the lab by the trained laboratory technicians.

4.4 The laboratory has a separate body fluid spill kit kept as easily accessible in case of spillage which is located at designated area in all the room.

4.5 Standard precautions will be implemented when cleaning surfaces.

4.6 All Laboratory staff is trained for managing the spillage by using biohazard spill kit.

4.7 All biohazard spillages are dealt immediately.

4.8 Always report blood/body fluid or other biohazardous spills

5 PURPOSE

5.1 This policy is intended to provide guidance to staffs of Biogenix Laboratory to safely and effectively manage spillages in the Biogenix laboratory.

5.2 Effective and well-organized spillage management plan will help to reduce the number of cross infection.

5.3 This will help the laboratory staff and others from the harmful hazard of body fluid spillage.

5.4 To raise the standard of hygiene and to make sure that all-proper measures are well adopted and employed in a perfect way.

6 SCOPE

6.1 The scope of this policy extends to all the staffs of Biogenix laboratory.

7 DEFINITIONS

7.1 Biohazard spills: Spills involving bio-hazardous materials such as but not limited to: blood and blood products.

7.2 Small Spill: A volume that is easily managed with a minimal amount of decontamination equipment and materials. Generally, spillage less than 10 cm is considered as small spill.

7.3 Large Spill: A volume that would require more than one-person, large amounts of decontamination equipment and material, and/or contamination of objects that would prove difficult to decontaminate, i.e., rugs, mattresses, furniture, electronic equipment's. Spillage which is more than 10 cm is considered as large spill.

8 ACRONYMS

8.1 PPE – Personal Protective Equipment

9 RESPONSIBILITIES

9.1 Managerial responsibility:

9.1.1 Have the responsibility to ensure local risk assessments are carried out where necessary, e.g. To identify the use of appropriate personal protective equipment (PPE), adherence to safe practices, including the provision of resources to ensure this, immunization programmes are offered appropriately and any incidents that occur are reviewed and subsequent actions taken where appropriate.

9.1.2 Have the responsibility to ensure training is available and staff has the responsibility to attend such training sessions.

9.1.3 Have responsibility to display posters, clearly demonstrating the actions when dealing with spillages.

9.2 Infection Control Staff:

9.2.1 Provide education for staff and management on this policy.

9.2.2 Act as a resource for guidance and support when advice on management of biohazardous spillages is required.

9.2.3 Provide advice on individual risk assessments for managing blood and body fluid spillages.

9.2.4 Investigate and advise on suspected transmission of infection as a result of biohazardous spillage.

9.3 Lab personnel responsibility

9.3.1 All health care staff in laboratory should receive adequate training in the management of different types of spillages.

9.3.2 It is the responsibility of staff to;

9.3.2.1 Deal with a spillage if witnessed or discovered

9.3.2.2 Secure the Hepatitis B vaccine

9.3.2.3 Maintain Standard Universal Precautions

9.3.2.4 Ensure a supply of protective clothing.

9.3.2.5 Replenish the items after handling one spillage.

9.3.2.6 Report the incident to chief lab technologist/Infection control/Safety officer/Lab Director.

10 PROCEDURE

10.1 Risk Assessment:

10.1.1 Spillages are, by nature, highly unpredictable. Contamination of the environment and risk of exposure to infectious agent's increases where the spillage is left unattended, or ineffectively managed.

10.1.2 Biohazard Spillages carry a risk of infection transmission.

10.1.3 All spillages should be treated as potentially infectious and Standard Universal Precautions observed.

10.1.4 Assessment should be made of the:

10.1.4.1 Content of the spillage – blood, urine, other.

10.1.4.2 Size of the spillage: Either small or large spill

10.1.4.3 Material on which the spillage has occurred – fabric, vinyl, metal etc.

10.1.5 Protective clothing should be worn as needed to prevent skin exposure, or contamination of the clothing

10.1.6 Biohazard spillages need to be disinfected using a chlorine-releasing agent at a concentration of 10,000 parts per million, to render the area safe.

10.2 Incident reporting:

10.2.1 Always report blood/body fluid or other biohazardous spills.

10.2.2 Incident reporting of spillages to ensure future incidents or exposures to blood and other body fluids from spillages can be avoided and appropriate measures can be put in place, the staff who came across the spillage have responsibility to write the incident report and notifying it through the proper channel.

10.2.3 All major spills must be reported immediately to the laboratory director or infection control officer. A major spill is one in which:

10.2.3.1 a hazardous material contacts skin, eyes, etc.

10.2.3.2 a break in the skin occurs

10.2.3.3 the spill splashes over an area larger than 30 cm in diameter

10.2.3.4 the extent of the spill is undetermined, or

10.2.3.5 the spill involves an agent transmitted by aerosol

10.3 Preparation for a spillage management:

10.3.1 Gather all necessary equipment to deal with the spillage:

10.3.1.1 Personal protective equipment.

10.3.1.1.1 Workers involved in cleaning must wear protective clothing. The minimum requirement is disposable gloves and gown. Whereas staff handling biohazard spill in sample collection and extraction room should wear coverall PPE.

10.3.1.1.2 If a spillage covers a large area, goggles/face shield, a waterproof apron (or gown) and overshoes will also be needed to prevent contamination of clothing.

10.3.1.1.3 If spillage occurring in molecular laboratory Coverall PPE should be used.

10.3.1.1.4 Please refer BG-PP-INF-003 titled Personal Protective Equipment

10.3.1.2 Waste receptacle – check the correct waste bag is available particularly in clinical/care settings, e.g. red biohazard waste bag.

10.3.1.3 Items to manage the spillage:

10.3.1.3.1 Disposable towels

10.3.1.3.2 Disinfectant (approved, appropriate solution or granules containing sodium hypochlorite or sodium dichlorisocyanurate with a concentration of 10,000ppm available chlorine as granules)

10.3.1.3.3 Water and general purpose neutral detergent

10.3.2 Many of the items used are often contained within ‘spillage kits’. Spillage kits might also contain’ single incident use’ disposable scoops

10.3.3 If necessary, a sign which can be displayed or the use of a physical barrier to ensure all other persons avoid the spillage while it is being dealt with.

10.4 Spillage kit:

10.4.1 Biogenix Laboratory is equipped with a Biohazard spillage kit and cleaning equipment's, including a mop and cleaning buckets plus cleaning agents. These items are readily available for spills management and are stored in an area known to all workers.

10.4.2 The kit should consist of the following:

10.4.2.1 Gloves.

10.4.2.2 Disposable paper towel

10.4.2.3 Scoops for removing the solidified spillage.

10.4.2.4 Yellow waste bags

10.4.2.5 Sodium dichlorisocyanurate compounds as granules

10.4.2.6 Disinfectant solution.

10.4.2.7 MSDS of concerned disinfectants.

10.4.3 All of these items should be placed in a yellow plastic box stored in a designated area in the department.

10.5 General Good Practice Points:

10.5.1 Spillages should be dealt with immediately

10.5.2 Gather all equipment required to deal with a spillage including personal protective equipment and spillage kits. Appropriate solutions must be used for the safe and effective management of spillages

10.5.3 Standard precautions apply, including use of personal protective equipment (PPE) as applicable.

10.5.4 Cleaning up and disinfection after work with human blood and other body fluids should be conscientiously performed;

10.5.5 Generation of aerosols from spilled material should be avoided.

10.5.6 Hot water will make blood stick to the surface it is on. For this reason, cold or warm water should always be used for the first contact with blood or blood stained articles.

10.5.7 After clean up dry area so that it is not slippery.

10.5.8 Disinfectants should be those containing a solution or granules of sodium hypochlorite or sodium dichlorisocyanurate, with a concentration of 10,000ppm available chlorine. Manufacturer's instructions should be followed to ensure the correct contact time is achieved. This is usually a few minutes.

10.5.9 Disinfectants must not be mixed with detergents as this can render them ineffective, use these agents separately.

10.5.10 Disinfectants can be deactivated by reacting with organic material such as blood, so if there is a lot of infective material present you will need a lot of disinfectant or you will need to reduce the load of organic material present by first carefully wiping up and removing the bulk of the organic material then deactivate all contact areas with an appropriate disinfectant.

10.5.11 Always try to contain the spill, don't spread it, wipe material towards the centre and take care to remove any sharp objects with forceps before attempting wipe up

10.5.12 All items used during a spillage must be disposed of or decontaminated appropriately

10.5.13 Hand hygiene should be performed following management of spillages

10.5.14 Material Safety Data Sheets (MSDS) should be referred to ensure safe management of spillages and to avoid hazardous from the chemicals and disinfectants e.g. disinfectants being used in accordance with manufacturer's instructions for storage, contact times and expiry dates.

10.6 Management of blood and other body fluid spillage:

10.6.1 Spillages should be dealt with immediately

10.6.2 Preparation and Staff Protection:

10.6.2.1 Gather all necessary equipment

10.6.2.2 Personal protective equipment must be donned.

10.6.3 Procedures:

10.6.3.1 Procedures for managing blood and other infective agent spills are dependent on the nature and size of the spill, as well as the location, as discussed in **9.1**.

10.6.3.2 Liquid spills generally have three components:

- the bulk liquid that puddles on the surface
- small splashes of liquid that are distributed around the spill area
- even smaller droplets that form airborne particles (aerosols)

10.6.3.3 Containment of spillages may be necessary in the first instance. This should be done using disposable towels. If the spillage is large, first use disposable towels or tissues to absorb/contain the fluid. Care must be taken to avoid splashing during this time, especially as the spillage has not yet been inactivated with disinfectant.

10.6.3.4 Think about where these components may have landed and make sure you clean all potential areas of contamination

10.6.4 Hard surfaces:

10.6.4.1 Spot Cleaning of Blood and body fluids.

10.6.4.1.1 Wear disposable gloves.

10.6.4.1.2 Wipe up spot immediately with a damp cloth, tissue or absorbent paper towel.

10.6.4.1.3 Then clean with warm (not hot) water and detergent.

10.6.4.1.4 Discard contaminated materials (tissue, paper toweling) as biological waste.

10.6.4.1.5 Take off and dispose of gloves with biological waste.

10.6.4.1.6 Wash hands thoroughly with soap and water.

10.6.4.2 Spot Cleaning of Viral Media or Preparation (Molecular Biology).

10.6.4.2.1 Wear Coverall PPE with double gloves.

10.6.4.2.2 Cover the spill with tissue or disposable towel.

10.6.4.2.3 Gently pour diluted hypochlorite solution with a concentration of 10,000ppm available chlorine on tissue or disposable towel and allow it to react for 10 minutes before wiping up.

10.6.4.2.4 Then clean with 70% Ethanol.

10.6.4.2.5 Discard contaminated materials (tissue, paper toweling) as biological waste.

10.6.4.2.6 Take off and dispose of PPE in biological waste.

10.6.4.2.7 Wash hands thoroughly with soap and water.

10.6.4.3 Small Spills (up to 10 cm):

10.6.4.3.1 Collect spill kit, PPE, cleaning materials and equipment.

10.6.4.3.2 Wear disposable clean gloves. Eyewear and plastic apron should be worn where there is a risk of splashing occurring. If spilled materials suspected to have airborne pathogens e.g. Viral Media/preparation cover all PPE is must.

10.6.4.3.3 Check for sharps if these are present remove first with forceps and discard into sharps biohazard waste. Wipe up spill immediately with absorbent material (for example, paper hand toweling). Place contaminated absorbent material into biohazard waste.

10.6.4.3.4 disinfect area by wetting with freshly prepared hypochlorite solution with a concentration of 10,000ppm available chlorine and allow to react for 10 minutes.

10.6.4.3.5 Clean the area with warm water and detergent using disposable cleaning cloth/mop.

10.6.4.3.6 Discard contaminated materials (absorbent toweling, cleaning cloths, disposable gloves and plastic apron) as biological waste.

10.6.4.3.7 Take off PPE.

10.6.4.3.8 All reusable items take from the box like disinfectant solution, presept granule box etc should be whipped and replaced into the kit.

10.6.4.3.9 Clean and disinfect bucket and mop. Dry and store appropriately

10.6.4.3.10 Wash hands thoroughly with soap and water

10.6.4.3.11 Reusable eyewear should be cleaned and disinfected before reuse.

10.6.4.4 Large Spills (greater than 10 cm):

10.6.4.4.1 Where possible, isolate spill area.

10.6.4.4.2 Where a spillage of potentially infectious material has occurred the area must be vacated for at least 30 minutes for aerosol particles to be dispersed.

10.6.4.4.3 Confine and contain the spill.

10.6.4.4.4 Collect cleaning materials and equipment ('Spills kit') check spill kit disinfectant is within use by date.

10.6.4.4.5 Wear disposable cleaning gloves, eyewear, mask and Gown. If spillage occurred in molecular laboratory cover all PPE is must.

10.6.4.4.6 Check for sharps if these are present remove first with forceps and discard into sharps biohazard waste.

10.6.4.4.7 Cover the spill with paper towels or absorbent granules, depending on the size of the spill, to absorb the bulk of the blood or body fluid/substance. Use disposable scraper and pan to scoop up absorbent, paper towel and any unabsorbed blood or body substances. Place all contaminated items into Biohazard bag for disposal.

10.6.4.4.8 Disinfect area by flooding with freshly prepared hypochlorite solution with a concentration of 10,000ppm available chlorine and allow 10 minutes to react then wipe up making sure that you don't allow it to come into contact with your skin or clothing and discard in biohazard waste.

10.6.4.4.9 Decontaminated areas should then be cleaned thoroughly with warm water and neutral detergent.

10.6.4.4.10 Wipe surroundings that may have been contaminated with aerosols using freshly prepared hypochlorite solution with a concentration of 10,000ppm available chlorine.

10.6.4.4.11 Discard contaminated materials (absorbent toweling, cleaning cloths, disposable gloves and plastic apron) as biological waste

10.6.4.4.12 Take off PPE.

10.6.4.4.13 If the outside of the Biohazard bag becomes soiled, then assistance will be needed. Someone will need to hold open a second clean Biohazard bag while you place the soiled bag into it, followed by your gloves.

10.6.4.4.14 All reusable items take from the box like disinfectant solution, chlorine granule box etc should be wiped and replaced into the kit.

10.6.4.4.15 Wash hands thoroughly with soap and water on completion.

10.6.4.4.16 Autoclave all items used to clean the area, including the protective clothing. Do not autoclave material containing hypochlorite, since chlorine gas can be produced.

10.6.4.4.17 Clean and disinfect bucket and mop. Dry and store appropriately

10.6.5 Soft furnishings:

10.6.5.1 Soft furnishings have been used during delivery of care the steps described for managing hard surfaces can be applied to soft furnishings. However, for those items that may become damaged by this process (e.g. through the use of disinfectants), a solution of detergent and water can be used to clean the area thoroughly

10.6.5.2 Soft furnishings can also be wet vacuumed.

10.6.5.3 Following cleaning of soft furnishings, every effort must be made to air the room to allow drying in order that the furnishing will dry before reuse.

10.6.5.4 If contamination is heavy, it may be necessary to incinerate soft furnishings if there are grounds for believing that the contaminated material is infectious.

10.6.6 Management of the area of clearance of the spillage:

10.6.6.1 Ensure the area is decontaminated and is safe, with all items that have been used to clear the spillage removed and disposed of into the infectious waste or cleaned where appropriate

10.6.6.2 Personal protective equipment worn should be removed and disposed of into an infectious waste receptacle

10.6.6.3 Hand hygiene should be performed following removal of PPE.

10.6.6.4 Consider implementing measures to prevent spillages, such as available safety medical devices.

10.6.6.5 Incident form is completed to enable lessons to be learned.

10.6.6.6 Any exposure incidents should be managed as per Occupational Exposure Management, Including Sharps. In such case the incident should be reported first aid has to be done immediately.

11 CROSS REFERENCE:

11.1 http://www.health.vic.gov.au/ideas/bluebook/appendix5

11.2 http://www.sheffieldpct.nhs.uk/boardmeetings/papers/spctagenda040308-29h.pdf

11.3 Management of blood and body fluid spillages by Welsh Healthcare Associated Infection Programme (WHAIP).

11.4 https://www.deakin.edu.au/__data/assets/pdf_file/0005/228704/spills-in-labs.pdf

12 RELEVANT DOCUMENTS & RECORDS:

12.1 N/A