

**BLOODBORNE PATHOGENS
SELF-LEARNING MODULE**

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BLOODBORNE PATHOGENS

Self-Learning Module

This Self-Learning Module is used to educate staff initially about University Precautions, the necessity of using protective barriers when caring for patients, the procedure to follow in the event of exposure to blood and/or body fluids/substances, and the distinction between high risk, low risk and general waste. Additionally, the Site-Specific Data Sheets that have been prepared for each hospital and facility affiliated with Hospital Hill Health Services Corporation. They provide information on: the availability of amub bags and disposable pocket resuscitative masks, the handling and disposal of linen, the location of protective barriers, the disposal of high-risk, low-risk and general waste, the emergency code and paging system, the Hazards Communication Program, the disposal and handling of infectious waste, and the fire/tornado evacuation plan. It is important to read the Site-Specific Data Sheet for the hospital and/or facility where a rotation is to be completed prior to beginning the rotation.

Directions

1. Study the Self-Learning Module Objectives and the Site-Specific Data Sheets compiled for the hospital or facility at which a rotation is to be completed.
2. Review the Module.

Objectives

At the completion of the learning module the participant will be able to:

1. State why health-care workers and patients are at risk for acquiring communicable bloodborne disease in the hospital.
2. Describe what is being done to provide protection in the workplace against communicable bloodborne diseases.
3. Identify the major communicable bloodborne disease in the health-care industry today.
4. Recognize those areas in the hospital affiliated with HHHSC considered to be at high risk for exposure to bloodborne diseases.
5. Describe the modes of transmission of HIV and HBV.
6. Describe the risks of acquiring HIV as a health-care worker.
7. Recognize what factors influence the likelihood of infection with bloodborne pathogens.
8. Describe how exposure to blood and/or body fluids/substances may occur.
9. Describe the steps to take if a bloodborne pathogen exposure occurs.
10. State the procedure to obtain free HBV vaccination, boosters or titer checks.
11. Specify what universal precautions are and how to apply them.
12. Describe what protective barriers are available to health-care workers and where they are located.
13. Describe how to handle sharp objects, such as needles and scalpels.

14. State when and how hands are to be washed.
15. Differentiate between general versus low and high potentially infectious waste.
16. Recognize how to dispose of waste.

Introduction

In 1983, the Centers for Disease Control (CDC) published the document "Guidelines for Isolation Precautions in hospital," which contains a section entitled "Blood and Body Fluid Precautions." This called for blood and body fluid precautions when a patient was known or suspected to be infected with a bloodborne pathogen.

In 1987, the CDC published the document "Recommendations for Prevention of HIV Transmission in Health Care Settings." This recommends that blood and body fluid precautions be consistently used for all patients regardless of their bloodborne infections status.

This extension to all patients is referred to as Universal Blood and Body Fluid Precautions or Universal Precautions.

On March 6, 1992 the Occupational Safety and Health Administration (OSHA) regulations became effective, which require employee training in this area.

Documents Available

The following documents are available by contacting the Human Resources Manager at Hospital Hill Health Services Corporation, 800 Hospital Hill Center, 2301 Holmes Street, Kansas City, Missouri 64108:

HHHSC Exposure Control Plan
HHHSC Hazard Communication Plan
Occupational Exposure to Bloodborne Pathogens-
29CFR 1930.1030

Why are health-care workers and patients at risk for acquiring communicable bloodborne diseases in the hospital?

Health-care workers perform numerous tasks involving direct and indirect patient contact every day.

In many hospitals, isolation is not initiated until the diagnosis of an infectious disease is suspected or proven.

The causative agent is present in the affected body site or substance before the diagnosis is established.

Therefore, transmission may occur:

Transmission

Transmission of communicable bloodborne diseases may occur before isolation.

In addition, patients and/or health-care workers may be carriers of infection; inapparent infection may be clinically unrecognized, yet still communicable.

Finally, without their being aware, health-care workers may handle blood and body fluids/substances that are infected with bloodborne pathogens.

Critical Points

Health-care workers want to be assured that the risk of becoming infected and infecting others while caring for patients is minimized.

Patients want assurance that treatments in hospitals do not put them at risk.

One of the most difficult issues raised by HIV concerns action needed to ensure a safe hospital environment.

What is being done to ensure a safe hospital environment and to provide protection in the workplace against communicable bloodborne diseases like HIV?

Employers are responsible for providing appropriate safeguards for health-care workers who may be exposed to blood and body fluids/substances.

The CDC has prepared a category of isolation called Universal Precautions, developed to protect health-care workers from exposure to bloodborne pathogens.

In response to CDC directives, OSHA (Occupational Safety and Health Administration) now requires the timely implementation of Universal Precautions.

Hospitals have the responsibility to:

- Provide appropriate barriers

- Educate health-care workers

- Monitor compliance with Universal Precautions and develop a procedure for handling noncompliance among employees

Critical Point

It is the responsibility of each health-care worker to comply with HHHSC's policies and procedures, **and** the policies and procedures of each hospital/facility affiliated with Hospital Hill to protect themselves from communicable bloodborne diseases like HIV.

What areas at hospitals affiliated with HHHSC are considered High Risk for exposure to bloodborne disease?

- Emergency Room

- Pediatrics

- Anesthesiology

- Respiratory Therapy

- Burn Unit

ICU
Intermediate Care/Telemetry
Renal Unit
Hematology-Oncology
Cardiac Catheterization Laboratory

Critical Point

Fortunately, there is a vaccine available, free of charge to all employees who are at risk for exposure to blood and body fluids regardless of where they work.

Is HIV the major communicable bloodborne disease in the health-care industry today?

No, Hepatitis B is considered the major communicable bloodborne disease in the health care industry.

Hepatitis B is a viral illness that can cause serious damage to the liver.

CDC estimates that approximately 140,000 - 320,000 new infections of Hepatitis B occur in the United States each year.

Hepatitis B is responsible for approximately 5,000 deaths annually.

1 - 1.25 million people are carriers of Hepatitis B and can pass it on to others, often unknowingly.

30% to 40% of people with acute Hepatitis B infections show no symptoms.

Hepatitis B is much more infectious than HIV.

Critical Point

The high incidence of infection in some clinical settings is unfortunate because the mode of transmission is well known and infection is readily avoided by attention to work practices and use of protective barriers as described in Universal Precautions.

Given that Hepatitis B is the number-one occupational hazard in the health-care industry, what exactly is the risk of acquiring HIV?

There is a small but recognizable risk associated with HIV.

Prospective studies suggest that the risk of HIV acquisition (by accidental needle stick) with contaminated needles is less than 1 percent. Acquisition from other types of nonsexual contact is considerably smaller.

- The HIV virus can lead to AIDS.
Most people infected with the virus will develop AIDS.
- Through June 2000, 745,907 AIDS cases were reported to CDC. Through June 2000, there have been a total of 438,795 deaths of persons with AIDS. Most HIV infected persons have not yet progressed to AIDS and many persons infected with HIV have not been tested.

Critical Points

The rate of infection appears to be no greater among health-care workers than in the general population.

HIV is not highly contagious, and transmission ordinarily requires repeated sexual contact or intravenous inoculation.

How are HIV and HBV transmitted?

Both HIV and HVB are transmitted in the same way, that is through:

Sexual contact

Mucous membrane or parenteral exposure to infected blood and body fluid/substances

Mother/infant (in utero/perinatally)

All health-care workers are concerned about contracting AIDS because of its fatal outcome.

Pregnant health-care workers are not known to be at greater risk of contracting HIV or HBV infection than health-care workers who are not pregnant; however, if a health-care worker develops an HIV infection during pregnancy, the infant has a 50 percent risk of infection resulting from perinatal transmission.

Without intervention, 90% of babies born to infected mothers will become chronically infected.

The primary potential risk for health-care workers is a percutaneous or mucous membrane exposure to infected blood and body fluids/substances.

How might exposure to blood and/or body fluids/substances occur?

An exposure to blood and/or fluids/substances requires very specific conditions.

The infectious agent must be directly introduced into the person's body. These means blood and/or body fluids/substances must be introduced through the skin (percutaneously) or by contact with mucous membranes such as the eye, mouth or nose.

A percutaneous event occurs when body fluids/substances are introduced through the skin. This can occur through being injured by a needle stick, sustaining a cut by a sharp object, or having blood and/or fluids/substances contaminate nonintact skin, that is, an existing wound, sore, broken cuticle, or chapped skin.

A mucous membrane exposure occurs when blood and/or body fluids/substances are splashed into the eye, mouth or nose.

Critical Points

There are no documented or reported cases of HIV developing after mouth-to-mouth resuscitation. However, it is theoretically possible if mucous membrane exposure to blood should occur while giving mouth-to-mouth resuscitation.

HIV and HBV are not transmitted by casual contact or through intact skin.

"Limiting means of exposure" means instituting Universal Precautions to ensure that health-care workers will be adequately protected.

How do HHHSC employees go about getting vaccinated?

The best way to prevent Hepatitis B infection is to be vaccinated.

HHHSC provides optional Hepatitis B vaccination, boosters, and titer checks to health-care workers free of charge.

The newer vaccines are not made from blood products; you cannot get Hepatitis B or AIDS from the vaccine.

The immunization regiment consists of three doses of vaccine.

The first dose is followed by a second dose at one month and a third dose at six months.

Employees interested in obtaining immunization, boosters or titer checks should contact the Employee Health Department at Truman Medical Center-Hospital Hill or the Associate Health Department at Truman Medical Center - Lakewood.

What happens if an employee is exposed to blood/body fluids through a needle stick or by other means?

The CDC has developed guidelines for drug treatment after exposure to blood/body fluids. The most important issue is that for these drugs to have their greatest potential to prevent the transmission of HIV they must be started as soon as possible after exposure. The following steps will be taken in all types of needle sticks, regardless of the needle source:

In general these exposures carry a low, but real risk of transmitting disease. Treatment with antiviral drugs may reduce the risk of infection. However, the drugs have potential to cause significant side effects. Because of these side effects, drug treatment is not recommended for every exposure. The Occupational/Associate Health Nurse or a doctor will discuss the recommendations with the exposed individual.

If the exposed individual chooses to receive drug treatment: It is Important to begin treatment right away. Blood will be drawn to check blood count, kidney and liver functions. These tests will be rechecked periodically in Occupational Health/Associate Health. Individuals should discuss any problems they may have while taking the medication(s) with the Occupational Health Nurse.

Truman Medical Center Hospital and Lakewood Procedures

- Notify the Program Director and/or Chief Resident
- Complete a report of injury form
- Go immediate to Occupational Health or the Emergency Department for after hours care. At Truman Medical Center-Lakewood, go to Associate Health or the North office or after hours to the Emergency Room.

St. Luke's Hospital Procedures

If exposed to blood/body fluids from a known HIV patient or a potential high risk source patient:

- Notify the Program Director and/or Chief Resident

- Between the hours of 8:00 a.m. - 5:00 p.m., Monday through Friday, report the incident to the Employee Health Office located at 4320 Wornall, Medical Plaza I, Suite 620.
- On weekends and after hours on weekdays, report to the Emergency Room.

Any other exposures or occupational illnesses/accidents are to be reported to and cared for by the Truman Medical Center Occupational/Associate Health Department unless emergency care is required.

Immediate first aid for exposures:

Needle stick exposure - Clean the wound vigorously with soap and water for 10 to 15 seconds, using friction.

Mucosal splash to the eye, nose or mouth - Flush or rinse with saline or water.

Mucosal splash to the skin or contamination of an open wound - Wash with soap and water. Change clothes if necessary.

Critical Point:

All needle sticks, mucosal splashes, and contamination of open wounds with blood and/or body fluid/substances must be reported to Truman Medical Center Occupational/Associate Health Department.

Why not test all patients at the time of admission to the hospital (particularly HIV and HBV)?

Routine testing has not been recommended for several reasons:

Emergency room patients must be treated promptly and results from HIV and HBV screening would not be returned promptly.

For HIV there is a window period wherein it usually takes from 6 to 12 weeks to develop antibodies. Transmission may occur during this time.

For HBV, there is a window period of 90 days.

Falsely negative serology can occur with improperly performed tests or laboratory errors.

Critical Points

If work practices are only upgraded following a return of a positive HIV or HBV, then workers are inadequately protected before diagnosis is made.

Therefore, blood and body fluids/substances must always be considered potentially infectious for bloodborne pathogens.

In certain situations patients and health-care workers should be tested for HIV. However, the written, informed consent of the source patient and/or health-care worker is required prior to testing for evidence of HIV infection.

Why patients and health-care workers should be tested for HIV?

Testing should occur:

- To determine a diagnosis
- To screen donor blood and donor organs
- To track an occupational exposure
- When an employee requests testing

Critical Point

It is important to recognize the extreme sensitivities associated with HIV for patients and health-care workers as well as their respective rights to privacy and confidentiality.

If routine testing is not recommended, then what can be done to adequately protect health-care workers from communicable bloodborne disease?

Minimize Direct Contact with Blood and Body Fluids/Substances.

Because it is not possible to know when an individual may be infected, consistent use of Universal Precautions reduces the chances of direct contact with blood and body fluids/substances.

Universal Precautions may provide the additional benefit of protecting employees and patients from a wide variety of other infections.

What exactly are universal precautions?

Fundamental to the concept of Universal Precautions is treating blood and body fluids/substances as if they were infected with bloodborne pathogens and taking appropriate protective measures.

All health-care workers should routinely use appropriate barriers precautions when exposure to bloodborne pathogens is anticipated.

Universal Precautions are intended to protect health-care workers from parenteral, mucous membrane, and on intact skin exposures to bloodborne pathogens.

Universal Precautions include:

Good Hand Washing

Hands and skin surfaces should be washed after contact with blood and body fluids/substances and after removing gloves.

Gloves

Gloves should be worn for touching:

Blood and body fluids/substances

Mucous membranes

Nonintact skin

Items or surfaces soiled with blood or body fluids/substances

Gloves should be worn for performing venipuncture or vascular access procedures.

Gloves should be changed after contact with each patient.

Though gloves reduce the incidence of contamination, they cannot prevent penetration injuries from needles and other sharp instruments.

Gowns and Aprons

Gowns and/or aprons should be worn during procedures that are likely to soil clothing or generate splashes of blood and body fluids/substances, such as exchange transfusions.

Masks and Protective Eyewear

Masks and protective eyewear should be worn during procedures that are likely to generate splashes or droplets of blood and body fluids/substances, such as suctioning.

Handling Sharps

Needles and sharp objects should be correctly handled and disposed of.

Resuscitative Devices

Resuscitative devices, such as ambu bags and pocket resuscitative masks, should be used in an emergency.

Work Restrictions

Health-care workers with rashes, exudative lesions, or weeping dermatitis should not perform direct patient care.

Spills

Spills should be correctly cleaned up

Waste

General and potentially infectious waste should be separated.

Critical Points

Universal Blood/Body Fluids Precautions signage will be posted in all areas where patient care is delivered.

All protective barriers are located in patient care areas.

A pocket resuscitative mask will be available to all direct care givers at most of the facilities and hospitals affiliated with Hospital Hill.

What body fluids/substances do universal precautions apply to?

Blood

Body/fluids containing visible blood

Human tissue

Cerebrospinal fluid

Synovial fluid

Pleural fluid

Peritoneal fluid

Pericardial fluid

Amniotic fluid

Semen

Vaginal secretions

Critical Point

Universal Precautions do not apply to the following, unless they contain visible blood. However, as a matter of precaution, all of these should be treated as if they are infected.

- Feces
- Nasal secretions
- Sputum
- Sweat
- Tears
- Urine
- Vomit

How will universal precautions interface with each hospital's infection control practices?

Universal Precautions for blood and body fluids will be used in the care of all patients.

Specific isolation precautions are required for the prevention of nonbloodborne pathogens.

Critical Point

Universal and Specific Isolation Precautions are intended to supplement rather than replace recommendations for routine infection control such as using gloves to prevent gross contamination and good hand washing.

What should I tell patients and their families about universal precautions?

You must assist patients and families in understanding the benefits of applying Universal Precautions.

The routine use of appropriate work practices and protective barriers is a prudent step toward protection of the health of all.

Critical Point

Remind patients and families that potentially infectious agents are present in blood and body fluids/substances; while the health-care workers practice Universal Precautions, patients, families and visitors should do their part to prevent contamination by:

- Adhering to good hand washing and practicing personal hygiene.
- Wearing protective barriers when handling blood and body fluid/substances
- Disposing of waste in the appropriate receptacle
- Following directions on posted signs for specific isolation and Universal Precautions

What factors influence the likelihood of infection with bloodborne pathogens?

The concentration of the virus (viral concentration is higher for HBV than HIV)
The duration of the contact
The presence of skin lesions on the hands of health-care workers
The immune status of the health-care worker (for HBV)

Critical Points

Immediately and thoroughly wash hands and skin surfaces that are contaminated with:

Blood
Body fluids/substances containing visible blood
Or other body fluids to which Universal Precautions apply.

Remember to wear protective barriers for any anticipated contact with:

Blood
Body fluids/substances containing visible blood
Or other body fluids to which Universal Precautions apply.

When should hands be washed?

Studies show that health professionals do not wash their hands 70% of the required times.

The CDC recommends considering the intensity, duration, and sequence of activity with a patient to determine the need for hand washing.

Routine, brief patient care activities do not require hand washing, for example:

Shaking hands
Taking blood pressure

Hands are to be washed:

When coming on and off of duty
Before performing an invasive procedure
Before/after contact with wounds
Before contact with a susceptible patient
After contact with a source likely to be contaminated with micro-organisms.
Between contacts with patients
Prior to leaving a patient's room
After performing personal body functions
Before and after meals or snacks
After removal of barrier precautions, including gloves
Before preparing and administering medications or food

Critical Points

- When in doubt, wash your hands.
- Hand washing continues to be most effective procedure for preventing the spread of infection

- Wearing gloves does not reduce the number of times hands should be washed.

How should hands be washed?

The following steps outline the procedure for hand washing:

Using continuously running warm water and one-half teaspoon of soap, make a good lather, and rub all hand surfaces together vigorously for 10 to 15 seconds. Friction counts.

Check nailbeds, cuticles and under the nails for the removal of debris.

Hold hands down so that water drains from the fingertips into the sink rather than running back toward the elbows.

Rinse well

Dry with a paper towel

While working to reduce nosocomial infection, you also have the opportunity to educate patients and families about the importance of good hand washing and personal hygiene.

In addition to washing hands, the health-care worker must also consider what protective barriers are appropriate.

Critical Point

Do not contaminate your hands after washing by turning off the faucet or raising the waste receptacle lid with hands. If necessary, use a paper towel for this purpose.

How does the health-care worker determine what protective barriers are appropriate?

Consider the following:

The procedure being performed

The type of exposure

The type of potentially infectious body fluids/substances:

Blood

Body fluid containing blood tissue

Other body fluids to which Universal Precautions apply

The volume of blood and/or body fluids likely to be encountered

The probable route of exposure, e.g. Percutaneous/mucous Membrane

The probability of exposure

Critical Point

In utilizing protective barriers, some judgement must be exercised based on patient and procedure variables suggesting the likelihood of blood and body fluid exposure.

The likelihood of infection after skin exposure to HIV, HBV, or any bloodborne pathogens will depend on certain factors.

Are protective barriers necessary when performing activities of daily living, for example, bathing, feeding, diaper changing?

Protective barriers are to be worn when performing activities of daily living when exposure to blood, body fluids containing visible blood, or other body fluids to which Universal Precautions apply, is likely.

Gloves are not routinely worn for bathing or feeding a patient if skin is intact.

Gloves are not required for the prevention of infection with bloodborne pathogens during diaper changes under normal circumstances.

Critical Points

Gloves will not protect the health-care worker from penetration (for example, bites)

Gloves are to be routinely worn during the manipulation of any indwelling tube.

Gloves must be changed between patients (and hands washed) and between dirty and clean procedures on the same patient.

Where are protective barriers located at hospital affiliated with HHHSC?

Prior to beginning a rotation at a hospital or facility affiliated with Hospital Hill, it is important to check the Site-Specific Data Sheet to determine where protective barriers are located at each hospital of facility.

Pocket resuscitative masks will be available to all direct care givers at most hospitals and facilities affiliated with Hospital Hill as an additional means of protection to be used in any resuscitative effort.

Gloves are available at or near the bedside of all patients.

In some of the ICU's, where codes and emergency interventions are more frequent, an ambu bag may be at the patient's bedside.

Finally, sharps containers will be readily accessible in all clinical areas where needles/sharps are used, including patient rooms at each bedside.

How do I protect myself from personal exposure during an emergency or code?

Gloves are located at or near the patient's bedside in every patient room, as well as treatment rooms and nursing stations, and should be used to protect one-self from potentially infectious body fluids.

Ambu bags are at the patient's bedside in some critical care areas and are located on crash cart in all patient care areas.

Pocket resuscitative masks are available to all direct care givers at most hospitals and facilities affiliated with Hospital Hill. Carry your mask with you at all times or know exactly where it is located.

Critical Points

The mask is easy to clean. The one-way valve can be cleaned for repeated mannequin training but should be discarded after one use on a patient.

Remember that the risk of any single exposure remains extremely small. The emergency care of a patient should never be delayed because protective barriers are not immediately available.

How do I handle needles and sharp objects?

Needles and sharp objects should be handled in such a manner as to prevent accidental cuts or punctures. Used needles should be:

- Bent
- Broken
- Reinserted into their own sheaths
- Unnecessarily handled

Immediately after use, needles and sharp objects should be discarded intact into a disposable needle box.

How are used needles/sharps and soiled linen disposed?

Needle/sharps containers are located in all rooms where they are used. Depending on the policy of the hospital or facility through which a rotation is to be completed, all linen may or may not be treated as infectious. In hospitals where all linen is treated as infectious, the linen usually will not be separated or double-bagged.

It is important to check the Site-specific Data Sheet for each facility at which a rotation is to be completed to determine if all linen is treated as infectious, the manner in which linen is to be disposed of, and the location of linen hampers or chutes.

What do I do if a spill occurs or equipment is contaminated?

Spills of high-risk waste must be cleaned and disinfected.

Spills on nonporous surfaces (for example, counter tops) should be absorbed and disinfected with a 1:10 solution of bleach and water.

Spills on porous surfaces (for example, carpets) should be absorbed, cleaned and disinfected in accordance with each individual hospital/facility's policy and procedure.

In addition, protective eyewear, scissors, and clamps contaminated with blood and body substances should be washed with soap and water and wiped with a 1:10 bleach solution.

Nondisposable supplies and equipment used in procedures or codes (for example, cutdown trays and intubation trays) should be bagged and sent for reesterilization.

What are the two categories of potentially infectious waste for purpose of waste disposal?

Potentially infectious waste falls into two categories: high risk and low risk.

High-risk potentially infectious waste includes:

- Microbiologic waste and specimens
- Other laboratory waste and specimens

Pathology waste and specimens
Operating room waste
Sharps and needles
Containers filled with blood or potentially infectious body fluids
Disposable items visibly contaminated with potentially infectious substance

Low-risk potentially infectious waste includes:

Partially eaten patient food
I.V. tubing
Anesthesia and respiratory care equipment
Disposable items not visibly contaminated with potentially infectious substances

Critical Points

Low-risk potentially infectious waste and high-risk potentially infectious waste are disposed of differently.

Check the Site-Specific Data Sheet for the hospital/facility where you will be completing a rotation to determine the site-specific procedure for disposing of Low Risk and General Waste, High Risk Waste and, where applicable, Cytotoxic Waste.

What is general versus potentially infectious waste?

General waste is garbage or rubbish that is not contaminated with potentially infectious or cytotoxic substances.

Potentially infectious waste is that which is visibly contaminated by any of the following:

- Blood
- Body fluids containing visible blood
- Human tissues
- The following fluids:
 - Cerebrospinal fluid
 - Synovial fluid
 - Pleural fluid
 - Peritoneal fluid
 - Pericardial fluid
 - Amniotic fluid
 - Semen
 - Vaginal secretions

Critical Point

Potentially infectious waste is further classified into two categories for the purpose of waste disposal.

SUMMARY

Blood is the single most important source of HIV, HBV, and other bloodborne pathogens in the occupational setting.

Infection control efforts for HIV and HBV and other bloodborne pathogens must focus on preventing exposures to blood, body fluids/substances containing blood, and other body fluids to which Universal Precautions apply, as well as the delivery of the HBV immunization.

All patients who are in the hospital should be treated as if they were carrying bloodborne infections.

The risk of transmission from exposure to infected blood during patient care either by splashing on skin or mucous membranes or by needle stick is certainly low, even when the patient is known to be infected.

Reducing the risk of infection for hospital staff to zero is not possible; however, it is the responsibility of health-care workers to know where protective barriers are stored in their work area and how to use them.

All policies have been developed to protect the health-care worker and provide a safer working environment.

The risk of nosocomial transmission of HIV, HBV, and other bloodborne pathogens can be minimized if health-care workers follow these general guidelines:

- Take care to prevent injuries when using needles, scalpels, and other sharp instrument of devices.

- Use protective barriers to prevent exposure to blood, body fluids/substances containing blood, and other fluids to which Universal Precautions apply. The type of protective barriers should be appropriate to the procedure and anticipated exposure.

- Immediately and thoroughly wash hands and other skin surfaces that are contaminated with blood, body fluids containing visible blood, or other body fluids to which Universal Precautions apply.

Familiarize yourself with the site-specific policies and procedures of each hospital or facility where a rotation is to be completed.

SITE-SPECIFIC DATA SHEET

TMC- Lakewood

Ambu Bags/Pocket Resuscitative Masks:

Ambu bags are located on all crash carts.
Pocket resuscitative masks are available in the PPE (Personal Protective Equipment) boxes located on the walls in the hallways and also on the crash carts.

Linen:

All linen is treated as being contaminated and is therefore not separated or double-bagged.
Clean linen is located at each end of the nursing units.
Contaminated linens will be bagged in a leak-proof brown plastic bag at the point of origin for transport to the dirty linen receptacle located in the soiled utility room on each unit.

Protective Barriers:

Gloves are located in wall-mounted containers in each patient room.
Masks, gowns and/or goggles are located outside the patient's room if category-specific precautions are being observed as to the patient. Otherwise, masks, gowns, and goggles can be found in the supply closet on each nursing unit and also in the PPE boxes located on the walls in the hallways.

Sharps Disposal:

Needles, syringes, lancets, etc. are not to be recapped. Sharps containers are wall-mounted and located in each patient room and treatment area, as well as in the medication rooms on the nursing units. Sharps containers are opaque in color or red and labeled with the biohazard symbol. Specimens in syringes are not to be transported with an uncovered contaminated needle. A gelatin cube may be attached to the needle and the syringe then placed in a plastic bag for transport only.

Waste Disposal (High Risk, Low Risk and General Waste):

Clear colored trash bags are used for the disposal of low risk and general waste.
Red bags with the universal biohazard symbol are used for the disposal of high-risk waste.

Emergency Code and Paging System:

Code 13 - Help is needed to control a combative patient or to control a visitor or employee who has become violent.

Code Red - Fire

Code Blue - Life threatening situation/cardiac arrest. To activate a "Code Blue" page, dial "2222" on the telephone. When the operator responds to the call, inform the operator of the location of the Code Blue.

Code Search - Bomb

Code Adam - Infant/Child abduction

Show of Support - Individual with escalating behavior.

Handling and Disposal of Infectious Waste:

All infectious waste spills are reported to Environmental Services for decontamination.

Infectious waste is placed in hospital approved leak-proof containers or red plastic bags appropriate for the characteristics of the infectious waste.

Containers for infectious waste are always identified with the universal biological hazard symbol.

The Director of the Infectious Waste Management Program, the Infection Control Practitioner, the Director of Materials Management, the Director of Plant Operations, the Medical Director and the Safety Chairman are all resource persons who may be contacted with regard to any questions as to infectious waste management at the Truman Medical Centers.

Hazard Communication Programs:

Department Heads at the Truman Medical Centers are responsible for maintaining a current list of all hazardous chemicals used in the work area and will make the list available upon request. Appropriate Material Safety Data Sheets (MSDS) supplement this list.

The Department Heads at the Truman Medical Centers are responsible for informing all persons who have entered their area to perform work or services, of the chemical labeling system and the location of the hazardous chemicals in their work area.

Department Heads and Supervisors should be contacted with any questions with regard to reading and interpreting information on hazardous chemical labels and MSDS(s), as well as any questions with regard to recommended and available methods of protection.

Hazardous Material Handling and Waste Disposal:

Department Heads at Truman Medical Centers are responsible for the proper and safe management of hazardous materials and wastes purchased, stored, used, generated and disposed of by their respective departments.

Hazardous materials may take the form of solids, liquids, or gases and include chemical, infectious and radioactive substances.

Any material suspected of being hazardous should be properly identified by checking it against all source listing for hazardous materials
Departments that generate hazardous waste maintain copies of manifests and certificates of destruction for all hazardous wastes..
Security is to be notified of all spills involving hazardous materials or wastes. The Department Manager of the department in which the spill is located is also to be notified and is responsible for the clean up of spills occurring in his or her area.
Every Department has the necessary safety equipment to properly handle all materials identified as being hazardous in the department.

Fire Evacuation Plan:

Report the fire by doing the following:

Pull down the bar on the fire alarm

Follow up by dialing the Operator. Give the exact location of the fire and identify yourself.

If the fire is small, try to extinguish it before the Fire Department arrives. If the fire is or becomes large, get out and close doors to slow the spread of the fire.

In the event evacuation becomes necessary, it may be accomplished in one of the following three ways:

Horizontal Evacuation: Persons are evacuated to the far end of the hallway, away from the fire. **DO NOT LET THE FIRE GET BETWEEN THE PATIENTS AND THE FIRE ESCAPE OR STAIRS.**

Vertical Evacuation: Persons are evacuated from the entire floor to the floor below.

Total Evacuation: The entire building is evacuated in accordance with the instructions contained in the Disaster Plan. A copy of the Disaster Plan is located on each nursing unit and in each hospital department.

The ABC type fire extinguisher may be used on **ALL TYPES** of fires and is the most prevalent type of fire extinguisher in the hospital. To operate the fire extinguisher, do the following:

Break the seal and pull the pin

Direct the hose at the base of the fire

Depress the handle

The range is approximately 20-25 feet and the operational life of the extinguisher is 22-25 seconds.

It is important not to overestimate the life of an extinguisher and to remember that they operate for a brief period of time so as not allow the fire to work you into a corner. **ALWAYS LEAVE AN ESCAPE ROUTE.**

SITE-SPECIFIC DATA SHEET

TMC- Hospital Hill

Ambu Bags/Pocket Resuscitative Masks:

Ambu bags are located at the head of each patient's bed in Intensive Care Units (MICU, SICU, & IMTC). Ambu bags are also located on each cart on each nursing unit.

Pocket resuscitative masks are located in each patient room in the PPE box.

Linen:

All soiled linen is treated as infectious. Do not sort or rinse.

Linen is disposed of in yellow plastic bags.

Linen hampers are located in various places, such as the soiled utility rooms, patient rooms, and patient bathrooms.

Protective Barriers:

Protective equipment is found in wall mounted containers in every patient room

Hand must be washed before donning and after removing any personal protective equipment.

Sharps Disposal:

Needles, syringes, lancets, etc. are not to be recapped.

Used sharps are placed in red "sharps containers" (labeled with a bio-hazard symbol) found in every patient room and all treatment areas.

Full "sharps containers" will be taken to the soiled utility room and placed into a large covered red rectangular tub designed to hold about four of these "sharps containers."

Waste Disposal (High Risk, Low Risk and General Waste):

General waste are disposed of in normal waste containers located in patient rooms and at the nurse's station.

Bio-hazardous waste will only be disposed of in covered red containers with a Biological Hazard Symbol on the outside of the container. These are located in the patient rooms or at the nurse's station.

Cytotoxic waste is (1) placed into sealable plastic container/bag, (2) placed into a cardboard box labeled "Chemotherapeutic Waste," and (3) sent to the Pharmacy for disposal

Emergency Code and Paging System:

Code Delta/Code Alert - Notification of initiation of the Emergency Management Plan.

Doctor Red - Fire or fire drill with a location.

Code Blue - Life threatening situation/cardiac arrest. To activate a "Code Blue" page, press the nearest Code Blue button and dial "3051" on the telephone to give the operator the location of the Code Blue.

Code B - Bomb

Code Adam - Abduction of an infant or a patient. Everyone should be alert to suspicious persons and anybody carrying an infant toward an exit.

Handling and Disposal of Infectious Waste:

Infectious waste is placed in appropriate leak-proof containers or plastic bags appropriate for the characteristics of the infectious waste.

Containers for infectious waste are identified with the universal Biological Hazard Symbol.

Infectious material spills containment and clean-up are the responsibility of the person/department causing the spill. Limited absorbent material and some non-technical assistance is available from Environmental Services (ES). ES will assist with the disinfecting of the area after the clean-up has been completed.

Questions or concerns about infectious or hazardous materials may be directed to the Safety Officer (x4031), the Director of Plant Operations (x3080), Infection Control (x4598), or Environmental Services (x 3086).

Hazard Communication Programs:

Those working at Truman Medical Center have a "right to know" what hazardous materials and conditions are present in the facility or that they may be exposed to in the process of exercising their duties.

Department Heads at the Truman Medical Centers are responsible for maintaining a current list of all hazardous chemicals used in the work area and will make the list available upon request. Appropriate Material Safety Data Sheets (MSDS) supplement this list.

The Department Heads at the Truman Medical Centers are responsible for informing all persons who have entered their area to perform work or services, of the chemical labeling system and the location of the hazardous chemicals in their work area.

Truman Medical Center will provide Personal Protective Equipment (PPE) to all individuals employed or practicing within the facility.

Department Heads and Supervisors should be contacted with any questions with regard to reading and interpreting information on hazardous chemical labels and MSDS(s), as well as any questions with regard to recommended and available methods of protection.

Scrubs are not considered to be PPE by OSHA and therefore when there is any potential of an exposure to a hazardous material or infectious waste the appropriate PPE must be donned before commencing in the activity.

Hazardous Material Handling and Waste Disposal:

Department Managers are responsible for the proper and safe management of hazardous materials and wastes purchased, stored, used, generated and disposed of by their Department.

Hazardous materials may take the form of solids, liquids, or gases and include chemical, infectious and radioactive substances.

Any material suspected of being hazardous should be properly identified by checking it against all source listings for hazardous materials.

Departments that generate hazardous waste maintain copies of manifests and certificates of destruction for all hazardous wastes.

Security (3017) is to be notified of all spills involving hazardous materials or wastes. The Department Manager is also to be notified and is responsible for the clean up of spills associated with the activities of their Department.

Every Department has the necessary safety equipment to properly handle all materials identified as being hazardous in the department. Each department also has a phone number of a support agency that may be called to assist in the event of a large spill (usually the KCMO Fire Department HazMat Response Team).

Fire Evacuation Plan:

When someone sees or suspects a fire (or a fire drill) they will immediately initiate the activities associated with the acronym "RACE"

Remove patients/persons from the area of the fire.

Activate/pull nearest Fire Alarm Manual Pull Station and call operator at 3140.

Contain the fire by closing the door(s).

Extinguish the fire if it is safe to do so.

To operate the fire extinguisher use the "PASS" method:

Pull the pin.

Aim the extinguisher nozzle.

Squeeze the handle to start the flow.

Sweep across the base of the fire from side to side.

It is important not to overestimate the life of an extinguisher and to remember that they operate for a brief period of time so as not to allow the fire to work you into a corner. ALWAYS LEAVE AN ESCAPE ROUTE.

It is imperative that everyone remain calm while doing the following.

Close all doors from the hallways to all rooms and work areas.

Have an employee stand by the oxygen shut-off valve.

Ensure the Automatic Smoke/Fire Doors have closed and latched.

Control hallway traffic - have Out-Patients and guests go to the nearest safe area.

Let patients know what is happening and assure them of their safety.

Gather the Medical Records.

Do not use the elevators.

When the "All Clear" is announced over the PA system, open all doors including the Automatic Smoke/Fire Doors in the hallways.

In the event evacuation becomes necessary, it may be accomplished in the following order:

Horizontal: Moving patients and staff on the same floor as far away from the fire as possible. DO NOT LET THE FIRE GET BETWEEN THE PATIENTS AND THE FIRE ESCAPE OR STAIRS.

Vertical: Moving patients and staff to at least one level below or above the floor where the danger is located.

Total: The entire building is evacuated in accordance with the Emergency Management Plan to a pre-designated point outside the building. A copy of the Emergency Management Plan is located with each department.

SITE-SPECIFIC DATA SHEET

Children's Mercy Hospital

Ambu Bags/Pocket Resuscitative Masks:

Ambu bags are located on the crash carts. Ambu bags are also located at the patient's bedside in the ICU and nursery units.
Pocket resuscitative masks are not available at Children's Mercy Hospital.

Linen:

All linen is treated as being infectious and is therefore not double-bagged or separated.

Linen is disposed of in white waterproof bags or in white plastic barrels which are located in the hallway and/or in the soiled utility rooms on the nursing units.

Each patient room has a hook on the back of the entry door that has a white plastic bag for the disposal of linen.

Protective Barriers:

Gloves are located outside the door of each patient's room and in the treatment rooms.

Gowns, masks, and goggles are located in the storerooms on each nursing unit. Protective barriers are located outside the door to the patient's room whenever a patient is placed in category-specific location.

Sharps Disposal:

Freestanding sharps containers are located in every patient room, in every clinic room and in the medication rooms.

Waste Disposal (High Risk, Low Risk and General Waste):

Low-risk and general wastes are disposed of in brown or cream-colored trash bags.

High-risk waste is disposed of in red trash bags.

Cytotoxic waste is disposed of in white plastic containers.

Emergency Code and Paging System:

Code Blue - Cardiac arrest or a child with severe bradycardia and respiratory arrest. Code Blue is not called in Emergency Department, Intensive Care Unit or Nursery.

Doctor Red - Fire.

Handling and Disposal of Infectious Waste:

Hazardous waste includes any waste material that is toxic, ignitable (flash point <140 degrees) corrosive (pH <2.0 or >12.5), or reactive with water or heat.

Each Department is responsible for developing an inventory of chemicals in their area, and listing these chemicals on the Chemical Inventory Form supplied by the Safety Office. A copy of this inventory is maintained in each hospital Department.

Each department that uses or generates hazardous chemicals or waste is responsible for establishing a policy and procedure for the clean up of spills. Any questions with regard to the identification and handling of hazardous chemicals/materials should be directed to the Safety Committee or the Safety Office.

Toxic/Flammable Spill or Leak Procedure:

In the event of a leak or spill of toxic, hazardous or flammable substance, refer to the Material Safety Data Sheet notebook, located on each department, to obtain information to properly handle the spill.

All persons are to evacuate the entire area in which the spill has occurred, closing all doors to the department.

Notify the Department Director or the Charge Person of the spill. The Department Director or Charge Person will then alert the Hospital Switchboard. Information given should include the location of the spill or leak, the type of substance and the severity of the situation.

Fire Evacuation Plan:

When evacuation of the entire structure is required within a very short period of time, notification of the necessity to evacuate will be announced through the hospital paging system and by telephone through a message stating: "Attention, Evacuation Plan is now in effect. Please evacuate all areas." In addition, a message will be provided by telephone to the affected area with information as to the reason for evacuation, the nearest safe location, and any other special instructions that may be necessary.

The objective in all evacuations is to move persons as quickly as possible to the nearest safe location, which in most cases will be another area on the same floor. Two primary evacuation routes should be selected, both of which will provide the quickest access away from the area and to a safe location.

All ambulatory patients should be moved first. Ambulatory patients can be effectively evacuated by holding hands to form a chain and following a hospital staff member along the evacuation route.

Non-ambulatory patients can be moved by carry, stretcher, wheelchair, or blanket drag and pull/carry. Never attempt to evacuate patients by bed or mattress removal. A limited number of emergency stretchers are available from the Security Office.

When evacuating, close all doors behind you to keep hazardous conditions confined.

Remember to walk quickly, but do not run.

SITE-SPECIFIC DATA SHEET

Independence Regional Health Center

Ambu Bags/Pocket Resuscitative Masks:

Ambu bags are located on the crash carts and in the "First Responder Boxes" which are maintained in each nursing unit and patient care area. The First Responder Box contains all of the initial items needed to assist in reviving a patient until additional help can arrive.

Pocket resuscitative masks are not available at Independence Regional Center. However, bag masks are available in each First Responder Box. Independence Regional Health Center observes a policy when resuscitating patients of "No mouth-to-mouth."

Linen:

All linen is treated as being contaminated and is therefore not double-bagged or separated.

Linen is disposed of in clear plastic bags.

Linen hampers are located on every patient unit and in the soiled utility rooms.

Protective Barriers:

Gloves are located in every patient room.

Goggles are located in every patient room in the Emergency Department, and Intensive Care Unit.

Gowns, masks and fluid face shields and located in different places on the various floors and may be obtained by asking any nurse on the unit.

Sharps Disposal:

Sharps containers are wall-mounted in every patient room, with exception of the Passages Unit (Geriatrics).

There are freestanding sharps containers in all areas where there are no visitors or patients.

In the Passages Unit, health care providers use a special sharps container with a reclosable lid that is carried with them to the patient's room for disposal of used sharps/needles.

Waste Disposal (High Risk, Low Risk and General Waste):

Low-risk waste and general waste are disposed of in clear plastic trash bags.

High-risk waste is disposed of in red plastic trash bags

Cytotoxic waste is disposed of in yellow leak-proof containers.

Emergency Code and Paging System:

The following code designations announced over the public address system when appropriate:

Code Blue - A life and death situation (ext. 2222)

Activate Emergency Plan Tornado Watch - Tornado watch

Activate Emergency Plan Tornado Warning - Tornado warning

Code Red - Fire

Activate Emergency Plan Semi-Alert - Warning of potential danger

Activate Emergency Plan Complete Alert - Implement DisasterPlan

All Clear - Return to normal duties/operations

Trauma Team to ED, Trauma Alert - Warning of Trauma Code

Trauma Team to Ed, Trauma Code - Requires a surgeon to respond

Stat Team & Location - Involves controlling a combative patient

Code Exit - Patient Abduction/Elopement (ext. 2229)

All codes are preceded and followed by two bells. In the event of a practice or drill situation, a statement follows the code; "This is a drill."

Hazardous Waste Program:

Hazardous materials are categorized by four major characteristics, which may appear alone or in combination. The four characteristics are defined as follows:

Toxic: A material is toxic if, when tested by EPA-approved method, an extract from the waste contains specified concentrations of heavy metals or pesticides, such as lead, mercury, or Lindane pesticide.

Reactive: Reactive materials are normally unstable, react violently with water, have explosive potential, or release poisonous gases.

Examples include gunpowders and red/yellow phosphorous.

Ignitables: These materials are liquids with a flashpoint of less than 140 degrees F, or solids that catch fire easily and burn so rapidly that they create a solid ignitables include paint sludge, certain metals and their dusts.

Corrosive: A corrosive is a liquid that has a pH value of less than or equal to 2.0, or a pH value equal to or greater than 12.5. They will corrode a standard metal container. Examples include paint and varnish removers and battery acids.

Overall responsibility for the hospital Hazardous Waste Program is with the Hazardous Waste Coordinator. The Hazardous Waste Coordinator, Safety Manager, Department Heads and/or the hospital's written Hazardous Waste Program may be consulted with any questions regarding the disposal and handling of hazardous waste. In addition, the following persons, in the following order, may be contacted with regard to the Hazardous Waste Program:

General Manager or Environment Services, ext. 5438

Chairman, Safety Committee, ext. 3166

President, ext. 3160

All departments involved in the generation and handling of hazardous materials participate in identifying materials to be included in the program as

well as the segregation, packaging, usage, treatment, storage and disposal of materials identified as being hazardous.

Department Managers are responsible for assuring that required and proper equipment and personal protective devices are provided, maintained and used.

Any hazardous or unsafe conditions should be immediately reported to the Department Manager.

Infectious Waste Program:

Infectious waste is defined as waste capable of producing an infectious disease. To be infectious waste, the waste must contain pathogens with sufficient virulence and of sufficient quantity so that exposure to the waste by a susceptible host could result in an infectious disease. Included within the definition of infectious waste are the following:

- Disposable items/trash wet with blood or body fluids from any patient
- Cultures of infectious agents and associated biologicals; all microbiology lab waste

- Blood and blood products, including serum, plasma, and other components known or suspected to be contaminated with a transmissible infectious agent

- Pathological waste, including tissue, organs, body parts, blood and body fluids removed during surgery, autopsy and/or biopsy

- Contaminated needles/sharps.

Infectious waste is segregated from other waste at the point of generation.

Infectious waste is to be placed in leak-proof containers or plastic bags appropriate for the characteristics of the infectious waste as follows:

- Bulk liquids that are not carefully poured down the drain into the sanitary sewer should be placed in bottles, flasks or tanks. These containers should be tightly stopped or capped.

- Solids or semi-solids can be placed in impervious plastic bags. These bags should be closed by folding or tying and should be capable of containing the enclosed. They should not be overfilled. There is no need to double-bag waste unless the integrity of the bag is disrupted.

- Sharps should be placed in rigid, puncture-proof containers.

Notify the Infection Control Department with regard to any emergencies due to exposure or accidents associated with infectious waste.

If packaging holding infectious waste fails and a spill or leak occurs, the following should be observed in the clean up of the spill or leak:

- While wearing gloves, use paper towels or other disposable material to absorb/wipe up as much of the spill as possible.

- Any EPA-approved hospital disinfectant may be used as well as a 1:10 solution of household bleach and water.

- The disinfectant should be applied to the infectious material and allowed to sit for 5-10 minutes.

- Protective gloves should be worn during clean up.

- The material (paper, towels, rags, etc.) used during the clean up should be placed in an impervious container and also handled as infectious waste.

Fire Evacuation Plan:

A copy of the Independence Regional Health Center Evacuation Plan is located on each nursing unit and in each hospital department and should be checked for information as to the route of evacuation to be used.

In the event of a fire, pull the nearest fire alarm. Then dial "0" and advise the operator of the exact location of the fire.

If the fire is small, secure a fire extinguisher and attempt to put the fire out. Know the location and types of fire extinguishers available in the area in which you are working.

SITE-SPECIFIC DATA SHEET

Research Medical Center

Ambu Bags/Pocket Resuscitative Masks:

Ambu bags are located on the crash carts on each patient care unit.
Pocket resuscitative masks are attached to the wall at the head of each patient's bed.

Linen:

Soiled linen is separated from unsoiled linen, but is not double-bagged.
Linen is laundered on the premises.
Unsoiled linen is disposed of in white cloth bags.
Soiled linen is disposed of in red plastic bags containing the universal biohazard symbol.
Linen hampers are located on every patient care area.

Protective Barriers:

Gloves are wall-mounted at each patient's bedside.
Goggles are located on the crash carts in every patient care area.
Gowns, masks and goggles are located on the nursing units in different areas.
The head nurse or a nurse on the floor will be able to inform you as to the location of these items.

Sharps Disposal:

Sharps containers are wall-mounted in every patient room at the patient's bedside.

Waste Disposal (High Risk, Low Risk and General Waste):

Low-risk waste and general waste are disposed of in different colored bags for each patient care area.
The important thing to remember is that high risk waste and cytotoxic waste are initially disposed of in red plastic bags containing the universal biohazard symbol, and are then placed into green cans. The green cans are stored in designated areas on each patient care unit.

Emergency Code System:

The hospital emergency code system is activated by dialing "4444" on any hospital telephone.
This system is used for any patient, employee or visitor emergency, including the reporting of a fire.
All emergencies are paged by the operator as a "Code Blue."

Hazardous Communication Plan/Disposal and Handling of Infectious Waste:

Research Medical Center has complied a Hazardous Communication Plan that consists of five volumes and is therefore too extensive to include in this orientation manual.

The director of the Hazardous Communications Program may be reached at extension 4076.

Material Safety Data Sheets are located on every nursing unit and identify hazardous chemicals and substances in each unit, advise of precautions to be taken when in contact with such substances in each unit, advise of precautions to be taken when in contact with such substances, and provide instructions for handling exposure.

Material Safety Data Sheets are also located in every area where there are chemicals and/or infectious materials.

SITE-SPECIFIC DATA SHEET

St. Luke's Hospital

Resuscitation Equipment:

A red respiratory emergency box is located on all nursing units and in all departments and contains equipment including:

Adult resuscitation bags and masks
Intubation supplies

Linen:

All linen is treated as being potentially infectious and is therefore not separated or double-bagged.

Linen is disposed of in clear plastic bags.

There are linen chutes in each patient care area for the disposal of linen.

Linen is not transported through the hospital.

Protective Barriers:

Gloves are located in every patient room and each nursing unit.

Other protective barriers, such as gowns, masks and goggles are located in different areas, depending on the organization of the nursing unit. It is recommended that you ask the head nurse on the floor as to the location of these items.

Sharps Disposal:

Sharps containers are located in each patient room and on the medication carts.

Hazardous Communication Policy:

The St. Luke's Hospital Hazard Communication Program is located in the on-line Plan For Care Manual. Copies of this plan can be obtained from Risk Management.

The Compliance Manager for the Hazard Communication Standard (HCS) is responsible for the daily management of the program.

A hazardous chemical is defined as any chemical that poses a "physical" or a "health" hazard.

A "physical hazard" is defined as any chemical for which there is scientific and valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable an organic peroxide, an oxidizer, pyrophoric, reactive or water reactive.

A "health hazard" is defined as any chemical for which there is statistically significant evidence that acute or chronic health effects may occur in exposed

employees. This includes chemicals that are carcinogens, toxic, irritants, corrosives, and those that target organs that they attack.

Material Safety Data Sheets (MSDS) provide information to employees concerning chemicals and their hazards. MSDS are developed by the manufacturer or distributor of the chemical and provided to the user. The MSDS contains information regarding the ingredients in the product, physical data, fire and explosion data, health hazard data, reactivity data, environment protection procedures, special protection information and information as to any special precautions which should be observed when handling or exposed to the product

A master copy of the MSDS for each hazardous chemical is filed in the Risk Management Department. MSDS for each work area are available during normal working hours for any employee to review. An MSDS can be obtained by contacting the Department Manager or his or her designee. Each chemical included in the Hazard Communication Program is assigned a rating for health, flammability and reactivity. The rating is based on the information supplied by the manufacturer or distributor on the Material Safety Data Sheet.

A personal protection equipment code is assigned to each chemical based on recommendations from the manufacturer and is also based on normal exposure to the chemical/substance.

If untrained or unfamiliar with material spilled, notify Supervisor and Security. Take no further actions to cleanup the spill.

If the spill is minor and can be absorbed, neutralized, or otherwise controlled at the time of the release, and the department has the appropriate spill response kits or equipment. Properly trained employees, and protective equipment, the spill can be cleaned up by employees in the area where the spill occurred.

Review the Material Safety Data Sheet (MSDS) for the type of material involved and the appropriate clean-up procedures. Contact the Safety Manager (x26233) or Security (x229911) for assistance.

In the event of a spill, contain the spill to prevent spread. Neutralize/absorb the chemical according to MSDS. Used spill kits and any liquids from the clean up must be placed in an appropriate container and marked with contents and appropriate hazard characteristics.

Infectious Waste Management:

Infectious waste is defined as waste that is capable of producing an infectious disease. For a waste to be infectious, it must contain pathogens of sufficient virulence and quantity so that exposure to the waste by a susceptible host could result in an infectious disease. Infectious waste includes the following:

Isolation Wastes: Wastes generated by hospitalized patients who have communicable diseases capable of being transmitted to others via those wastes;

Contaminated Surgical, Dialysis and Laboratory Waste: Wastes generated by surgery, dialysis and laboratory departments in the process of caring for hospital patients who have communicable diseases capable of being transmitted to others via wastes;

Cultures and Stocks of Infectious Agents and Associated Biologicals:

Cultures and stocks of infectious agents shall be designated as infectious wastes because of the high concentrations of pathogenic organisms typically present in these materials. Included in this category are all cultures and stocks of infectious organisms as well as culture dishes and devices used to transfer, inoculate and mix cultures. Also included are animal carcasses, body parts and bedding from animals contaminated with infectious agents.

Blood and Blood Products: All human blood and blood products, including serum, plasma and other components known or suspected to be contaminated with a transmissible infectious agent.

Pathology Waste: Autopsy waste which consists of tissues, organs, body parts and body fluids that are removed during surgery and autopsy.

Sharps: All discarded sharps, including hypodermic needles, syringes, pipettes, broken glass and scalpel blades.

Other potentially infectious materials are the following body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, and any body fluid that is visibly contaminated with blood.

Personnel handling infectious waste materials are provided with protective barrier equipment as needed.

Bags and boxes containing infectious waste is to be handled carefully so as to avoid puncturing or damaging the integrity of the container in any way.

In the event of an emergency involving an exposure or spill of infectious waste, notify Environmental Services (extension 2207), the Hospital Safety Officer (Risk Management - extension 22530), and the Infection Control Department (extension 22154).

All packaging and containers used for transporting infectious waste is identified with the universal biological hazard symbol.

Infectious waste must be segregated from other waste at the point of generation. Place infectious waste in a leak-proof container or plastic bags appropriate for the characteristics of the infectious waste.

Infectious waste is to be transported by the most direct route that minimizes exposure to patients, visitors, staff and the community.

For additional information of infectious waste, refer to the "Infectious Waste Management Plan" located in the on-line Plan for Care Manual.

Fire Evacuation Plan:

Evacuation routes are posted in each of the nursing units. The chart will also designate the location of fire extinguishers and fire doors. Refer to these routes to determine the fastest and safest evacuation route available, unless you are specifically instructed to follow alternate routes available, unless you are specifically instructed to follow alternate routes by the Fire Department, Police or Administration.

The degree of assistance given to each patient should be based upon the degree of the patient's helplessness and medical condition. Therefore, the following priorities should be observed for evacuation purposes:

Bedfast patients
Restrained patients
Wheelchair patients
Ambulatory patients

Patients should be evacuated to the nearest safe place on the same floor, if possible. When evacuating to others floors, movement should be to a floor on a lower level and by use of stairways. Always move patients toward a section of the floor on a lower level and by use of the stairways. Always move patients toward a section of the floor that has an enclosed stairway - never toward a dead end hall. Whenever possible, move to lower levels of the hospital.

In the event of fire, do the following:

Remove patients, visitors, and staff from immediate danger. Evacuate if necessary.

Turn in the alarm by pulling the alarm box in the area and calling the switchboard operator at the fire phone number 23000. Be sure to give the exact location and nature of the fire. Talk slowly and stay on the line until the operator has all the information.

Contain the fire by closing the door to the room or area involved.

Assure all stairway doors are closed. Close all fire doors in the area. If able, utilize fire extinguishers in the area to extinguish the fire. Do not attempt to extinguish the fire if doing so would put you in harms way. Evacuate beyond the first set of fire doors if necessary. If further evacuation is necessary, follow Evacuation Plan.

Know the locations and types of fire extinguishers available in the area in which you are working. If you do not remember ho to use the fire extinguisher.

Tornado Evacuation Plan:

In the event that a Tornado Watch/Warning is issued by the Severe Storms Forecast Center, the St. Luke's Hospital Communications Operator will receive this information.

Upon notification of a Tornado Warning, each department and building is to obtain access to the public broadcast media (radio or television) and monitor for changes in weather conditions.

Administration, or designate (Nursing Supervisor), will determine, based upon the proximity to St. Luke's of the Tornado Warning, whether the Tornado Plan will be implemented.

In the event the Tornado Plan is implemented, the operator will make the following announcement over the hospital paging system: "THE TORNADO PLAN IS NOW IN EFFECT."

Upon implementation of the Tornado Plan, the following procedure is to be observed:

Instruct all patients and visitors to remain on the unit.

Close all blinds and curtains.

Give patients extra blankets

Move non-ambulatory beds to the wall farthest from the windows.

Instruct ambulatory patients and visitors to move into the corridor.

Close all doors, including Fire Doors.
Await further instructions.

Emergency Code and System:

Doctor Red - Fire

Code Pink - Infant Abduction

Code Blue - Cardiac Arrest

Code Green - Trauma Team to Emergency Department

Code Yellow - Security Emergency in Emergency Department

Code Orange - A Civil Disturbance Outside of Hospital

SITE-SPECIFIC DATA SHEET

Trinity Lutheran Hospital

Ambu Bags/Pocket Resuscitative Masks:

Disposable ambu bags are located on each crash cart on the patient care units and also at the bedside of each patient in the Intensive Care Unit. Individual resuscitative masks are located in each patient room in a basket on the wall, with the exception of the Psychiatric Unit. The wall baskets are also on the Physical Therapy and Radiology Units. In the Psychiatric Unit, the individual resuscitative masks can be obtained at the nursing stations.

Linen:

All linen is treated as potentially infectious and is therefore not separated or double-bagged.

Linen is disposed of in clear plastic bags.

Linen hampers are located in the soiled utility rooms on each nursing unit.

Protective Barriers:

Gloves, gowns, masks, bib aprons, and goggles are located in every patient room and in every clinic cubicle.

Sharps Disposal:

Wall mounted sharps containers are located in the medication rooms and at the patient's bedside in every patient room, with the exception of the Psychiatric Unit.

In the Psychiatric Units, protected/shielded needles are used and disposed of in the sharps box located in the medicine room.

Waste Disposal (High Risk, Low Risk and General Waste):

Low-risk waste and general waste are disposed of in clear plastic trash bags.

High-risk waste is disposed of in red plastic trash bags with a bio-hazard insignia.

Cytotoxic waste is disposed of in yellow plastic containers.

Infectious Waste Management Program:

The Trinity Lutheran Hospital Infectious Waste Management Program incorporates a "cradle to grave" concept which details the handling of infectious waste from the point of generation until it is rendered non-infectious as required by Missouri State Law.

Infectious waste is defined as waste capable of producing an infectious disease and which contains pathogens of sufficient virulence and quantity so

that exposure to the waste by a susceptible host could result in an infectious disease.

Infectious waste includes the following:

Isolation wastes

Body fluids and contaminated items from patients with the following infectious diseases:

- Anthrax
- Diphtheria
- Lassa Fever
- Marburg virus
- Melioidosis-extrapulmonary
- Plague
- Rabies
- Smallpox
- Creutzfeldt-Jakob disease (CJD)
- Hepatitis B
- Hepatitis C
- HIV

Contaminated surgical, dialysis and laboratory waste; wastes generated by surgery, dialysis, and laboratory departments

Cultures and stocks of infectious agents and associated biologicals

Blood and blood products, including bulk blood, suctioned fluids, excretions and secretions of quantity sufficient to drip or flake off into the environment when handled.

Pathology wastes and autopsy wastes, including tissues, organs, body parts and body fluids that are removed during surgery and autopsy

All discarded sharps, including hypodermic needles, syringes, Pasteur pipettes, broken glass and scalpel blades that have come into contact with infectious agents during use in patient care.

The department generating infectious waste is responsible for the proper labeling and containment of the infectious waste at its origin.

The following is a list of persons who can be contacted regarding the Infectious Waste Management Plan or in an emergency:

Director of Security and Safety - Extension 2105

Infection Control Nurse - Extension 2197

Risk Manager - Extension 2060

Director of Housekeeping - Extension 2130

Assistant Administrator - Extension 2020

All packaging and containers used for infectious waste must be identified with the universal biological hazard symbol.

Infectious waste must be segregated from other waste at the point of generation.

Infectious waste is to be placed in leak-proof containers of plastic bags appropriate for the characteristics of the infectious waste. All packaging must maintain its integrity during storage and transit.

Heavy-duty impervious plastic bags are generally used for disposal of waste throughout the facility. There is no need to "double-bag" waste unless the integrity of the bag is disrupted.

All sharps are to be placed in rigid, puncture-proof containers. Leak-proof containers which are appropriately labeled with the biological hazard symbol, and which are stored in a limited-access area, are used for the short-term storage of infectious waste. These containers are locked when not in use and keys are available from the housekeeping supervisor if access is necessary.

Personnel handling infectious waste materials will be provided with protective garments as needed. Gloves are to be used for anticipated contact with blood or body fluids, gowns or an impervious apron are to be used if spoiling of clothing is likely, and protective eye wear and masks are to be worn if splashing of blood/body fluids is likely.

When handling trash, lift the bag containing the waste from the top, holding it away from the body and extremities, to avoid punctures/cuts/scratches from improperly discarded sharps.

If packaging holding infectious waste fails and a spill or leak occurs, notify the Director of Security and Safety on pager number 395-0155.

Prior to picking up infectious waste that has spilled or leaked, it must be disinfected with a hospital-grade EPA approved disinfectant. The disinfectant should be applied to the infectious material and should be allowed to sit for at least 10 minutes prior to clean up. The material should be placed in an impervious container and handled as other infectious waste.

Emergency Code and Paging System:

Plan Alpha - External Disaster

Plan Bravo - Internal Disaster

Code ONE - Fire Alarm Disabled

Code Blue - Medical Emergency

Code Red - Fire

Code Yellow - Bomb Threat

All other codes announced as "Situation is _____", e.g. tornado warning, severe weather, etc.

Fire Evacuation Plan:

Trinity Lutheran follows the "R-A-C-E" formula: Rescue, Alarm, Contain and Extinguish. According to the formula, the person who discovers the fire is to: rescue persons who are in immediate danger of being burned or suffocated; pull the hospital manual fire alarm box or call the operator; contain the fire by closing doors; and extinguish the fire by throwing a glass of liquid on it, smothering it with a blanket, or using the nearest fire extinguisher or hose. By using the fog spray setting on the nozzle of the fire hose, you can stand in the doorway and spray water onto a fire without getting shocked by electrical equipment in the room.

DO NOT TURN OFF LIGHTS!

There are four major methods of extinguishing/suppressing a fire at Trinity Lutheran:

Automatic System: Sprinkler systems are installed throughout the lower level, 1st, 2nd and portions of the third floor. CO2 extinguisher

systems are located in the kitchen and on the grill/deep fryer unit on the cafeteria line. Areas where high voltage electricity is employed in patient diagnosis have smoke detectors instead of sprinklers.

Fire Brigade: The fire brigade is composed of in house personnel with specific training in fire response, fire suppression and evacuation.

Fire Department: The Fire Department responds automatically when a fire alarm box is pulled, or by dialing "O" and notifying the operator of the location and extent of the fire. This is faster than dialing "911."

The individual who discovers the fire: The individual who discovers the fire has the best chance to extinguish it while it is small.

When a fire has been reported, the Switchboard Operator will page, "PLAN BRAVO - CODE THREE" five times over the paging system.

"CONDITION ORANGE" means that the automatic fire alarm reporting system has been taken out of service and that fires must be reported by dialing "O" on the telephone.

The initial evacuation of patients from a fire (smoke) area will be horizontal (through two smoke barrier doors) and will include only those patients who are in immediate danger.

Further evacuation of patients or vertical evacuation of patients will be accomplished only upon the direction of the Fire Brigade Commander or the Senior Fire Commander on scene.

All patients/employees/visitors from the evacuated area are to proceed to the Major Treatment Area (Linen Room - Purchasing) for treatment of injuries, burns or smoke inhalation.

For the Surgery area, a new evacuation route plan is posted just outside the Operations Area Entrance on the north side. The basic premise of the evacuation plan is to move the another trauma area separated from the fire scene before leaving the surgery area proper. Recovery and Holding Areas. In the event an Open Heart Surgery is in progress, the Hospital Fire Brigade will invade the Surgery Suite area and man available fir hoses to provide a water barricade between the fire area and the Open Heart Surgery Suite.

Hazardous Waste Management Plan:

The responsibility of disposing of chemical wastes rests with the Hazardous waste Coordinator and Department Heads who have access to the necessary safety equipment and who know how to dilute, handle and dispose of hazardous chemicals.

Radiological waste disposal is the responsibility of the Nuclear Medicine Department, as supervised by the Radiation Safety Officers.

Disposal of waste gases is the responsibility of the Anesthesia and Central Supply Departments.

The Hazardous Waste Management Coordinator is the liaison between hospital staff, departments, administration and outside contractors or agencies.

A hazardous chemical wastes is defined as any chemical that is toxic, flammable, corrosive, reactive, or capable of causing harm or serious injury to humans, animals, or the environment.

A Material Safety Data Sheet (MSDS) is completed on every chemical used in the facility and identified as hazardous.

Each department that uses hazardous chemicals maintains a Hazardous Chemical Register. It is visibly posted so all employees are aware of the chemicals in the department which have hazardous properties.

If a spill or leak is found, the following action is to be taken:

Before attempting to clean up any hazardous chemical spill, splash or leak, know what the chemical is.

Follow the directions according to the established procedure for cleaning up the particular spill, leak or splash.

Evacuate all personnel from the area.

Extinguish all flames.

Insure adequate ventilation

Call the Hazardous Waste Management Coordinator.

Wait by the spill area, well out of danger, until help arrives. Avoid tracking through the spill.

Obtain appropriate protective safety equipment and clean up the spill according to established procedures.

Protective clothing and equipment is available and must be used when handling hazardous materials.

Disposal of small amounts of liquid chemical wastes (60cc, 2oz.) may be accomplished by diluting one part chemical to 100 parts water and flushing it into the sewer system. Always add the 1 part chemical to 100 parts water. Never add the water to the chemical container.

No empty drums, buckets, jugs, pails or any other container that has held toxic or corrosive material or chemicals will ever be used for anything.

Radiation waste is waste that contains characteristics of radiological emissions. A sign bearing the radiation symbol and the words "Caution Radioactive Material" will be conspicuously posted in areas accessible to patients, staff or the public. Appropriate personnel monitoring equipment will be used, read and recorded monthly to assure exposure to radiation is within acceptable limits.

Each department that generates or handles radiation wastes will have written specific policies and procedures that contain information regarding the safe handling, admixture, transportation, administration and disposable gloves will be worn while handling and dispensing radioactive materials.

All dispensing and preparation of radioactive materials will be done behind a lead drawing station and disposable gloves will be worn while handling and dispensing radioactive materials.

Department procedure will be followed for all spills, leaks or contamination involving radioactive material. The Radiology Safety Officer is to be notified as soon as possible.

Waste gases are defined as gases that are released through expiration, escape, leeching, decomposition, or spillage as a result of use or by accident.

Each department that generates waste gas will have specific policies and procedures that contain information regarding the safe handling and disposal of these wastes.

The contents of any gas cartridge or cylinder will be identified by reading the label. Do not rely on color coding alone!

Anti-neoplastic wastes are defined as those chemicals that remain in containers, tubes, vials, or are wastes due to accident or spillage.

Each department that generates anti-neoplastic wastes will have specific policies and procedures that contain information regarding the safe handling, admixture, transportation, administration, and disposal of these wastes.

All mixing of anti-neoplastic drugs is to be placed in a zip-lock bag labeled "CAUTION - CHEMOTHERAPY DRUG." This outer bag is to be delivered along with the proper drug information to the individual responsible for administering the agent(s). Syringes containing anti-neoplastic drugs will be dispensed with capped needle or syringe tip cap in place. Additionally, prior to opening an ampule containing anti-neoplastic agents, care should be taken to ensure that no liquid remains in the tip of the ampule. A sterile gauze sponge should be wrapped around the neck of the ampule while opening. Syringes and I.V. sets with luer-lock fittings are to be used in administering anti-neoplastic agents. When priming I.V. sets, the distal tip cover must be removed before priming and priming should be performed into a sterile gauze sponge, which is then disposed of appropriately.

Disposable gloves and aprons are to be worn for all procedures involving anti-neoplastic drugs. Double gloving is recommended.

In the case of a spill involving anti-neoplastic drugs:

- Evacuate the room immediately for any gross spill.

- Shut the door and notify Security.

- Security will respond, contain and neutralize the spill, and complete the cleanup process.

- Spill waste will be stored in the appropriate area to await incineration.

SITE-SPECIFIC DATA SHEET

University Physician Associates Office - OB/GYN Clinic

Ambu Bags/Pocket Resuscitative Masks:

A pocket resuscitative mask is available at St. Luke's UPA.

Linen:

The clinic's linen is supplied through a linen service.

All soiled linen is treated as infectious.

Linen is disposed of in blue bags that have the biohazard label.

Linen soiled by blood is placed in an orange biohazard bag first and then placed in the blue linen bag.

Protective Barriers:

Gloves are easily accessible on the countertops in each examination room and in the ultrasound room.

Gowns are located in a drawer in each examination table.

Masks and goggles are not available at the Clinic.

Sharps Disposal:

Large, red freestanding sharps containers are located in each examination room and in the laboratory.

Waste Disposal (High Risk, Low Risk and General Waste):

Low-risk waste and general waste are disposed of in clear plastic bags.

High-risk or infectious waste are disposed of in the orange bags with the biohazard label and are double bagged.

Emergency Code System:

The clinic observes the same emergency code system as St. Luke's follows:

Code Blue - Cardiac Arrest

Code Pink - Infant Abduction

Doctor Red - Fire

Code Orange - A Civil Disturbance Outside the Hospital

Hazardous Communication Program:

The clinic director is responsible for maintaining a current list of all hazardous chemicals used in the clinic and will make the list available upon request. Appropriate Material Safety Data Sheet (MSDS) supplement this list.

Fire Evacuation Plan:

A In the event fire and/or smoke make evacuation necessary, summon all nearby assistance and protect lives, records and property - in that order.

Report the fire to the Fire Department by dialing "911".

If the fire is small, try to extinguish the fire before the fire department arrives.

If the fire is or becomes large, get out of the area and away from the fire.

Close doors behind you to slow the spread of the fire.