INFECTION
CONTROL
GUIDELINES

Minimizing
Occupational Exposure
to
Infectious Materials

Rio Rancho Public Schools
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REGULATIONS

The OSHA standard 29 CFR 1910.1030, Bloodborne Pathogens, requires employers to reduce the risk of infection to employees from bloodborne pathogens. Those regulations apply to all employees who come in contact with blood or infectious materials in the scope of job duties.

PURPOSE:

The purpose of this manual is to educate Rio Rancho Public School employees how to avoid contracting infections, how to apply universal precautions to the work place, and about specific work practices which reduce the chances of infection.

DEFINITIONS:

Infectious materials and biomedical wastes are substances that carry a significant risk of transmitting disease to other humans, therefore require special handling.

These materials include:

1. Blood and blood products, waste blood including menstrual blood, blood components such as serum or plasma, human blood used medically, and any other human blood products.

2. Medical sharps which are needle syringe units, contaminated broken glass, lancets, and any other sharps used in medical procedures.

3. Items contaminated with blood or blood products, or bodily fluids (semen, vaginal secretion, pus, saliva, vomit):
   a. Soiled bandages, pads or tissues (contaminated with blood or wound drainage).
   b. Bloody disposable materials, utensils, instruments.
   c. Table tops, environmental surfaces, laboratory or medical equipment which is contaminated.
   d. Anything visibly contaminated with blood.
DISEASE TRANSMISSION

Diseases are spread in several steps. To prevent the spread of disease, it is necessary first to know how it is transmitted.

The first step is the microorganism itself which is any bacterium, fungus or virus. The organism must be pathogenic, or capable of causing disease.

The second step is the presence of a reservoir or place which will allow for the microbe to survive and, perhaps, even multiply. Common reservoirs would include supplies and equipment which are used in patient care, food and drink, linen, the human body and waste material.

The third step is the pathogen must be passed through a portal of exit from the host, or source. Portals of exit include the respiratory tract, vascular system, skin and mucous membranes as well as the gastro-intestinal and genitor-urinary tracts. Each of these portals of exit is peculiar to certain diseases. For example, influenza involves only the respiratory tract and typhoid fever involves the gastro-intestinal tract. The pathogen is passed from the host through the appropriate portal.

The fourth step is the actual transmission of the disease. Transmission can occur by several methods, but airborne routes and contact are the most common methods.

The airborne mode spreads several diseases, the most notable being tuberculosis. Many of the so-called childhood diseases; measles, mumps and chicken pox are spread this way. Control of the airborne spread of those diseases usually involves good ventilation and caution when coming into close proximity of infected children.

The major mode of disease transfer involves contact transmission. This takes place either through direct or indirect contact. Direct contact transmission primarily involves person-to-person spread through actual physical contact, toughing, or through sneeze or cough droplets. Indirect contact transmission can be the result of your contact with some contaminated material such as blood, urinary catheters or body fluids.

Diseases which can spread through blood and infectious materials include:

1. Human Immunodeficiency Virus (HIV) is the virus that causes acquired immune deficiency syndrome (AIDS). It is spread sexually, through blood and perinatally. It is present in blood, semen, vaginal secretions and other body fluids contaminated with blood.
2. Hepatitis B (HBV) is a major cause of acute and chronic hepatitis, cirrhosis and primary hepatocellular carcinoma. The Hepatitis B virus causes infection in the liver. Viruses pass into the body through cuts, scrapes and wounds in the skin. Symptoms include mild flu, headache, weakness, fever, nausea, diarrhea, jaundice, fatigue and aches. It is incurable, but treatable.
3. Malaria is a parasitic disease primarily acquired by mosquito bites but can be transmitted through blood.
4. A staphylococcus infection is the bacteria infection common in wounds, cuts and open sores. The “staph” bacteria is found commonly on the skin.
5. Streptococcus bacteria causes infection of the respiratory system and is spread by contact, coughing, etc...
6. Hepatitis A is an infection with the HAV virus transmitted from person to person by a fecal-oral route and contaminated food or water.
7. Syphilis is a venereal disease acquired by contact from ulceration or lesions of the mucous membranes of an infected person.
**Method of Transmission:**

Infection is possible from a single exposure of contaminated material. Types of exposure include:

1. Skin penetrations such as needle sticks or cuts
2. Eye splash or sprays
3. Mucous membrane penetration through mouth, nose, gastro-intestinal tract, gums, or reproductive tract.
4. Internal contact through open cuts, abrasions, human bites, or non-intact skin. Very few organisms can gain access through normal intact skin.

**WORK PRACTICES**

**Universal Precautions:**

The most common method of controlling the spread of disease is through universal precautions. All human blood and body fluids are treated as a potential hazard. Special precautions are necessary:

1. Wash hands before and after contact with a patient or student after a medical procedure, or cleanup of blood or infectious material.

2. Employees shall wash their hands immediately after removing gloves or other personal protective equipment, after contact with blood or other potentially infectious materials. If hand washing facilities are not immediately available, employees shall use antiseptic hand cleaner or towelettes and shall wash hands with soap and water as soon as feasible.

3. Used needles shall not be sheared, bent, broken, recapped or removed by hand.

4. If potentially infectious blood, waste, or fluids are splashed on you, into cuts, or on your face, flush the area with mild soap and water.

5. Eating, drinking, smoking, applying cosmetics or lip balm, and general handling of contact lenses are prohibited in work areas where there is a likelihood of contact with blood or contaminated waste. Do not touch your face while working in contaminated areas.

6. Food and drink shall not be kept in refrigerators, freezers, shelves, cabinets, or on counters or bench tops where blood or other potentially infectious materials are present.

7. Specimens of blood or other potentially infectious materials shall be placed in an identified container which prevents leakage during collection, handling, storage or shipping. Acceptable containers include impervious boxes and bags.

8. If the primary container leaks, it shall be placed within a second container which prevents leakage. The second container shall be labeled or color coded. Warning signs and labels should be placed on regulated wastes. The biohazard label should be affixed to item to prevent unintentional handling.

*Universal precautions: protection, hand washing, and waste disposal*
Cleaning and Disinfection:

The work site is to be maintained in a clean and sanitary condition.

1. Work surfaces shall be decontaminated with an appropriate disinfectant after completion of procedures; when surfaces are overtly contaminated; immediately after any spill of blood or other potentially infectious materials; and at the end of the work shift if contaminated since the last cleaning. These surfaces include changing tables, toilets, and tables used for medical purposes.

2. Protective coverings such as plastic wrap, aluminum foil or imperviously backed absorbent paper may be used to cover equipment and environmental surfaces. These coverings shall be removed and replaced at the end of the work shift or when they become overtly contaminated.

3. D-FEN-30-40 disinfectant or one part chlorine bleach in 10 parts water can be used for disinfecting. The bleach solution should not be used on adaptive equipment or surfaces it could damage. One part Green Soap to 5 parts water is suitable for those surfaces. Also, Clorox should never be mixed with ammonia.

4. Mops should be cleaned if contaminated. A disinfectant solution should be used.

5. Special Education and Nursing Services employees should consult the “Health, Safety and Medical Management Procedures for Students with Special Needs” manual for specific procedures for the control of communicable disease.

Sharps and Waste Handling:

1. Contaminated sharps shall be discarded immediately in closeable, puncture-resistant, leak-proof (on sides and bottom) containers. The container shall be red and identified with the Biohazard symbol.

2. Contaminated sharps containers shall be easily accessible to employees.

3. Contaminated sharps containers shall be kept upright throughout use and not allowed to overfill.

4. If there is a leakage, contaminated sharps containers shall be placed in a closeable, appropriately labeled container constructed to contain all contents and prevent leakage.

5. Reusable sharps containers shall not be opened, emptied or cleaned by hand.

Infectious Waste Handling:

1. Regulated waste shall be placed in containers which are closeable and prevent leakage of fluids during handling, storage or shipping. The container should be double-bagged if necessary.

2. Contaminated laundry shall be handled as little as possible with a minimum of agitation. Contaminated laundry shall be bagged or containerized at the location where it was used and shall not be sorted or reused until it has been laundered.

3. Contaminated laundry shall be placed in labeled or red containers.

4. Whenever contaminated laundry is wet and presents a reasonable likelihood of soaking through, the laundry shall be placed in leak-proof bags.

5. Employees handling contaminated laundry shall wear gloves and other appropriate personal protective equipment.
6. Trash sacks should not be held close to the body or slung over the shoulder.

7. Use containers that prevent leakage during collection, handling, processing, storing or shipping of waste. Place bloody tissue, dressings, and soiled diapers in plastic bag before disposing.

8. Pick up sharps and broken glassware using a brush and dust pan or tongs, then discard in a closeable, puncture-resistant, leak-proof container.

9. Persons with eczema or other chronic skin conditions on hand or arms cannot work in patient care areas or with special needs children until cleared by the Occupational Health Clinic.

10. The use of protective equipment devices is determined by an individual’s occupational needs and includes gloves, eye and face protection, aprons, lab coats, and mouth pieces.

11. The use of gloves does not preclude the necessity for hand washing.

12. Gloves must be worn when there is blood or contaminated material present, or when an employee has cuts, lesions, chapped hands or dermatitis.

**WARNING LABELS:**

1. Warning labels shall be affixed to containers of regulated waste, refrigerators, and freezers containing blood or other potentially infectious materials; and other containers used to store, transport, or ship blood or other potentially infectious materials.

2. The label is orange or red-orange with a black symbol. The label indicates that pathogenic material is present and that universal precautions and waste handling procedures must be followed.

**EXPOSURE AND MEDICAL FOLLOW-UP**

**Hepatitis B Vaccine:**

HBV infection is transmitted through exposure to blood and other infectious body fluids and tissue. Anyone with occupational exposure to blood is at risk of contracting the infection.

Workers must use clean work practices and protective clothing and equipment to prevent exposure to potentially infectious materials. However, the defense against Hepatitis B is the vaccination.

The new OSHA standard covering bloodborne pathogens requires employers to offer the three-injection vaccination series free to all employees who are exposed to blood or other potentially infectious materials as part of their job duties. These occupationally exposed individuals include health care workers, emergency responders, morticians, first-aid personnel, law enforcement officers, correctional facilities staff, launderers, as well as others.

The Hepatitis B vaccination is a non-infectious, yeast-based vaccine given as a three series of injections in the arm. It is prepared from recombinant yeast cultures, rather than human blood or plasma. Thus, there is no risk of contamination from other bloodborne pathogens nor is there any chance of developing HBV from the vaccine.

More than 90 percent of those vaccinated will develop immunity to the Hepatitis B virus. To ensure immunity, it is important for individuals to receive all three injections. At this point, it in unclear how long the immunity lasts, so booster shots may be required at some point in the future. Side effects of the inoculation include temporary redness and swelling, soreness at the injection site and headache. Side effects occur in less than 10 percent of individuals.
The vaccine causes no harm to those who are already immune or to those who may be HBV carriers. Although employees may opt to have their blood tested for antibodies to determine need for the vaccine, Rio Rancho Public Schools cannot make such screening a condition of receiving the vaccination, nor is Rio Rancho Public Schools required to provide pre-screening.

When an employee receives the vaccination, counseling by a health care professional is offered. This discussion will help an employee determine whether inoculation is necessary. If antibodies are present or a previous HBV vaccination was given, re-inoculation is not necessary.

Workers who decide to decline vaccination must complete a declination form. Employers must keep these forms on file so that they know the vaccination status of everyone who is exposed to blood. At any time after a worker initially declines to receive the vaccine, he or she may later opt to take it.

**EXPOSURE INCIDENT:**

Medical follow-up is required for workers who have an exposure incident. The most obvious exposure incident is a needle stick. But any specific eye, mouth, other mucous membrane, non-intact skin, or internal contact with blood or other potentially infectious materials is considered an exposure incident and should be reported to Rio Rancho Public Schools.

Exposure incidents can lead to infection from the Hepatitis B virus (HBV). Every year about 8,700 health care workers contract Hepatitis B from occupational exposures. Approximately 200 persons die annually from this bloodborne infection. Some will become carriers, passing the infection on to others.

Few cases of AIDS are directly traceable to a work-place exposure. AIDS is caused by the human immunodeficiency virus (HIV) and the risk of contracting the disease by direct contact to highly contaminated blood is less than one half of one percent.

Reporting an exposure incident right away permits immediate medical follow-up. Immediate intervention can delay the development of Hepatitis B or enable the affected worker to trace a potential HIV infection. Prompt reporting also can help the worker avoid spreading a bloodborne infection to others. Further, it enables Rio Rancho Public Schools to investigate the accident and help prevent reoccurrences.

If necessary, the follow-up includes blood testing, medical evaluations, treatment and counseling. The Hepatitis B vaccine may also be administered at this time.

**MEDICAL RECORDS:**

Medical records must remain confidential. Records must be maintained for the duration of employment plus thirty (30) years in accordance with OSHA’s standard on access to employee exposure and medical records. The records will be kept by the Occupational Health Clinic. You have access to the record, and it can be provided to your next employer at your request.
References:


Smith-Kline-Beecham Biologicals Prescribing Information.

With special thanks to the Albuquerque Public Schools and their staff members who shared their expertise and this booklet for our use in the Rio Rancho Public School District.