

the red book.

**Exposure to Blood on the Job:
*What School Employees Need to Know***



The
N E A
is the
nation's
largest
independent
labor association,
representing more than
2.7 million education employ-
ees in public schools and institu-
tions of higher education throughout the
United States. • NEA created the Health
Information Network in 1987 in partnership with the
National Association of School Nurses, the Academy of
Pediatrics, and the U.S. Public Health Service. Our mission is to
improve health, safety and student achievement by providing school
employees with vital, effective and timely health information through
parent, community, public and private partnerships. • Funding for this
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James has cut his finger...and there is blood everywhere.

You rush to help. As a school employee, what do you need

to know about

blood and

disease to

make sure

that both you

and James are

safe from

infection?



What should you use to clean up his cut?

This handbook will give you information and resources you need to protect yourself and your students from diseases transmitted by blood.

INTRODUCTION



When you heard James' cry for help, your first instinct was to rush to his aid. What should have been your second instinct? To grab a pair of gloves or, if they weren't readily accessible, to use something else like a plastic bag or piece of clothing to keep a barrier between your skin and James as you cleaned his cut and applied pressure to stop the bleeding.

This booklet contains the basic information that you — the school employee — need to know about the hazards of contact with blood and body fluids on the job. What are your risks? Your responsibilities? Your rights? How can you make sure that neither you, your co-workers, nor your students are exposed to infections? This booklet will answer these questions for you and provide you with tools and tips to share with your co-workers, family and friends.

Note: If you want more details on legal and management issues, exposure control plans, contract language, and training programs, call the Business and Labor Resource Service at 1-800-458-5231 to order the Centers for Disease Control and Prevention's Labor Leader's Kit and other useful materials. (See Resource Section).

Many school personnel can reasonably anticipate coming into contact with blood and other body fluids when at work — whether in the classroom, on the playground, the playing field, or the school bus. That's why it is important that all school employees understand the danger of exposure to infections and ways to minimize their risk.



BLOOD IN THE SCHOOL ENVIRONMENT

Blood carries viruses and bacteria. If infected blood gets into another person's bloodstream, that person can also become infected and might get sick. Usually, the body's immune system can defend us from illness. But, some of these infections can result in serious, life-threatening diseases.

What's an occupational exposure incident?

It's a situation at work when blood or other potentially infectious body fluids come into contact with your eyes, skin, or mucous membranes, or when you have *parenteral* contact with blood (piercing of the skin or mucous membranes through sticks or cuts by a needle or sharp instrument, human bites, cuts and abrasions).

If you got James' blood in your eyes, mouth, or a cut on your skin — or if your blood got into James' cut — there was an exposure.

FACT:

Viruses carried by blood are known as bloodborne pathogens.

Bloodborne = found in blood.

Pathogen = disease-producing microorganism.

Bloodborne pathogens may be present in blood and other materials, such as body fluids containing visible blood, semen and vaginal secretions, broken skin, or saliva.

Bloodborne pathogens can cause infection by entering your body through:

- open cuts and nicks
- skin abrasions
- dermatitis (if skin is broken)
- acne
- mucous membranes of your mouth, eyes, nose, or vagina

mucous membranes = the moist layer of tissue lining passages and cavities of the body with contact to air, except the ears.

THREE VIRUSES

FACT:

Hepatitis =
Inflammation
(swelling) of the liver.

More than 5 million people in the U.S. have hepatitis. Excessive alcohol use, certain chemicals or drugs, and viruses can cause the disease.

Hepatitis B (HBV) is not spread by casual contact such as shaking hands or sharing



bath-
room
facilities

— and you cannot get it from water or food.

Did You Know?

HBV is 100 times more contagious than HIV. There's a higher concentration of HBV in a drop of infected blood than there is of HIV.

This section illustrates the causes, symptoms, and prevention of the three viruses of greatest concern to school personnel: **Hepatitis B**, **Hepatitis C**, and **HIV**.

For information on other kinds of hepatitis, contact organizations listed in the Resource section or your local Public Health Department.

Hepatitis B

What does the disease do?

Hepatitis B is a serious, sometimes fatal disease that infects and damages the liver.

How is the disease contracted?

The hepatitis B virus (HBV) is transmitted through direct contact with infected blood, semen, vaginal fluid, or saliva. It is primarily spread through sexual contact. HBV can be transmitted by sharing needles or razor blades with an infected person, and *perinatally* from a woman to her baby either in utero (while the fetus is developing in her uterus) or during childbirth.

The chance of getting HBV if stuck with a contaminated needle is as high as 30%.

Carl the Custodian keeps the school running – making sure buildings get cleaned, roofs don't leak, and equipment is fixed. If there's an accident, Carl is the

one who cleans it up. He knows the proper procedures and guidelines for

handling a blood spill – and has access

to biohazard bags and containers to properly dispose of potentially infectious waste. He always uses his gloves on the job and makes sure he and everyone else stays protected.



Nancy is a school nurse and works at five different sites during the day. She has a lot of kids to keep track of and makes sure they all receive the necessary care when they come into the school's clinic with a problem or injury. She practices

universal precautions, using gloves with every child. Often the school nurse

will provide school employees with training and equipment to deal

with bloodborne diseases, and to administer the hepatitis B vaccination to students and employees. The school nurse is an important person to work with on any health education program.





HBV can also be transmitted indirectly because it can survive in dried blood on hard surfaces and at room temperature for at least a week! So cleaning contaminated surfaces is very important in the prevention of HBV.

What are the symptoms?

Symptoms of hepatitis B may include fatigue, loss of appetite, nausea, vomiting, stomach or joint pain, tenderness near your liver, jaundice (yellow eyes and skin), dark urine, and light colored stools.

How common is the disease?

Each year there are up to 200,000 new infections and 5,000 hepatitis B related deaths in the U.S. (compared to 40,000 new HIV infections per year). One in approximately 20 persons now has, or will have, hepatitis B.

Hepatitis C

What does the disease do?

Hepatitis C is a serious, often fatal disease caused by a virus that infects and damages the liver.

How is the disease contracted?

The hepatitis C virus (HCV) is primarily transmitted through blood-to-blood contact — most commonly through shared needles, and blood

What are Universal Precautions?

The term universal precautions refers to an approach to infection control that treats all body fluids as if they are infectious. This means that you should use gloves and other protective equipment whenever there is a risk of exposure to blood or other body fluids *regardless of whether you think a person is infected or not.*

FACT:

Hepatitis C is not spread by casual con-



tact such as shaking hands or sharing bathroom facilities — and you cannot get it from water or food.

FACT:

HCV is more common than hepatitis B and ranks slightly below alcoholism as a cause of liver disease and reason for liver transplants.

Did You Know?

Unlike hepatitis B, currently there is NO VACCINE for hepatitis C. And there is very limited post-exposure treatment available.

transfusions or organ transplants received before 1992. Roughly 60% of all HCV cases are from blood exposure associated with injecting drug use.



The chance of infection from a stick with a contaminated needle is 1.8%.

The risk of transmitting HCV through sexual contact appears to be low, but precautions should be taken anyway. Transmission from household contact also appears low; and transmission from mother to infant is uncommon. *An average of 70% of HCV infections result in chronic hepatitis.*

How common is the disease?

Up to 180,000 people may become infected with HCV each year in the U.S. There are 10,000 deaths from HCV every year and this number is expected to triple in the next decade.

HIV/AIDS

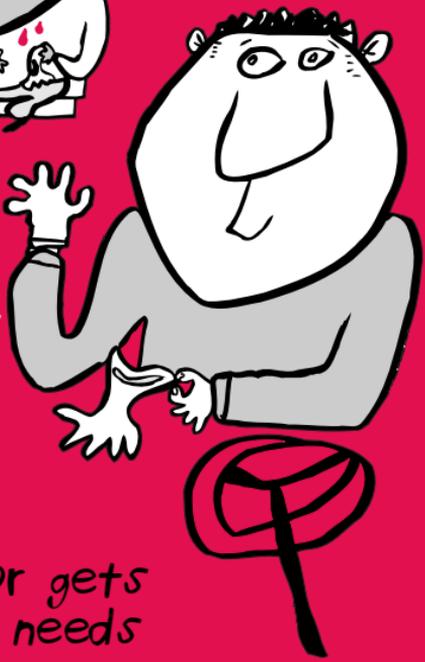
What does the disease do?

HIV (Human Immunodeficiency Virus) attacks the body's immune system causing a person to become vulnerable to infection. A person who is infected with HIV can remain healthy for a long time. But eventually the immune system is weakened and that person may develop other diseases or opportunistic infections. When this happens, a person is diagnosed with AIDS (Acquired Immune Deficiency Syndrome).

Bob the BUS Driver is often the first school employee that children see in the morning. His job is to drive the school bus safely, and be responsible for the safety of the students who ride with him. Frequently,



Bob is the only adult on the bus. So if a student has a health problem, Bob needs to know the district guidelines on how to respond. Also, if a student gets into a fight or gets a bloody nose, Bob needs disposable gloves on the bus so that he can minimize the risk of blood exposure.



Chris the Clinic Assistant staffs the health clinic – sometimes alone, other times with a school nurse. Chris is trained in first aid, CPR, and other medical procedures. Chris is also ready to listen to a student's personal problems or to talk about life decisions.

Chris knows that universal

precautions are important when handling any body fluids. The Clinic Assistant can be a good resource to help plan a bloodborne pathogen training workshop.



How is the disease is contracted?

HIV is transmitted mainly through unprotected sex and sharing needles (blood to blood contact). HIV can be transmitted *perinatally* from a woman to her baby either in utero (while the fetus is developing in her uterus), during childbirth, or through breastfeeding. HIV can also be spread by contact with infected blood and body fluids.

Some health care workers have contracted HIV from a stick with a needle that contained infected blood — but the risk of transmission from an contaminated needle is very rare and estimated to be 0.3%.

What are the symptoms?

Some people who become infected with HIV experience mild flu-like symptoms within the first few months after exposure. As the body's immune system breaks down (over an average of 8 to 10 years), some people might develop more severe symptoms and infections.



Currently, there is no vaccine for HIV. Drug treatments are available, but they are expensive and not effective for all individuals.

How common is the disease?

CDC currently estimates that there are between 650,000 and 900,000 people living with HIV in the U.S. Every year there are roughly 40,000

FACT:

To date, there have been no reported cases of **HIV** transmission in a school setting, even when contact with blood and body fluids has occurred.

HIV is NOT transmitted by casual contact.

You cannot get HIV by touching or working with



people who are HIV-positive. You cannot get HIV from mosquitoes, toilet seats, sharing utensils or kissing.

Did You Know?

Over 500,000 cases of **AIDS** have been reported in the U.S. since the beginning of the epidemic in 1981. AIDS is the second leading cause of death for Americans ages 25-44.

TIP:

Careful handwashing after using the bathroom and before preparing food will help reduce the transmission of **hepatitis A**.

new HIV infections. HIV disproportionately affects young people of color.

Hepatitis A

The hepatitis A virus (HAV) is NOT a blood-borne disease. HAV is transmitted by the ingestion of fecal matter. You can get it through:



- diapers or other clothing soiled by fecal matter
- food or water contaminated from poor personal hygiene or sanitary conditions
- oral-anal sexual contact



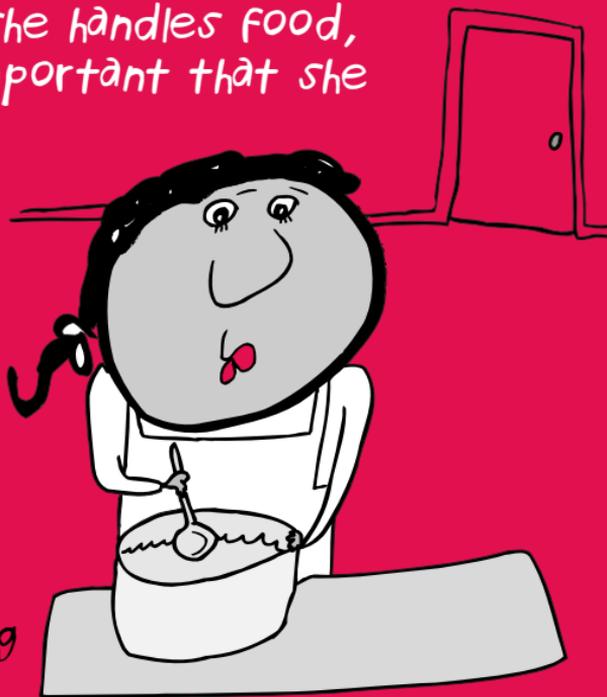
- raw shellfish from sewage-contaminated water
- contaminated water or food in countries where hepatitis A is common and where clean water and proper sewage disposal are not available



- injecting drug use

Unlike hepatitis B and hepatitis C, HAV does NOT cause long-term liver damage and usually does not cause death. There is a vaccine available to prevent HAV infection.

Florence the Food Service Worker is the friendly face that students see when they get breakfast or lunch at school. She tries to make sure that the kids have a nutritious meal. Because she handles food, it's especially important that she wash her hands after using the bathroom and wear gloves while she serves food. Florence and other food service employees should be given the training they need on the risks of transmission of viral and bacterial infections, including hepatitis A.



PROTECTION & PREVENTION

TIP:

Protection & Prevention:

All education staff need to know where the first aid kits are



located and where to report

any incident involving a blood exposure.

You can find out if your state is **covered by OSHA** or has adopted similar standards by contacting your local, county or State Health Department or your regional OSHA office.

Hepatitis B, Hepatitis C and HIV infection are preventable!

- Practice universal precautions and follow an exposure control plan in the workplace
- Use barriers like condoms during sex to avoid contact with semen and vaginal secretions
- Do not share needles
- If getting a tattoo or body piercing, make sure staff wear gloves and follow proper procedures for cleaning instruments
- Do not share toothbrushes or razors
- Get the hepatitis B vaccination

POLICY

Public employees in many states are covered by the Bloodborne Pathogen Standard, developed in 1991 by the Occupational Safety and Health Administration (OSHA). The OSHA standard provides guidelines for protection from exposure to blood and body fluids on the job for all workers who “reasonably anticipate” contact with blood. Not all states ratified the OSHA standard (only 22 out of 50). Some states have adopted their own policies that protect employees. Some counties and cities have passed executive orders or legislation if the state has not.

Sandy the School Secretary knows it all – where things are, what has to be done, and how to get the principal's attention. Often Sandy is the first person a student comes to with a problem – physical or emotional – and is a

"first responder" for first aid. On days when the school nurse or clinic assistant is not there,

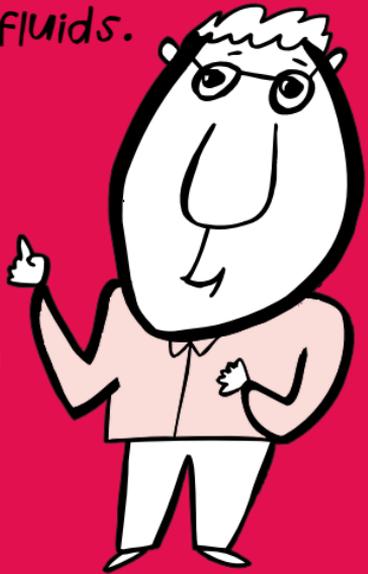
Sandy has to fill in, dispensing medications and attending to students'

medical needs. Secretaries must be equipped with the proper training and tools to perform their duties – and know whom to call with questions about medical help and policy issues.



Tony is a Teacher who works all day in a classroom full of students, helping them learn and caring for their needs. Every day is different, and Tony never knows if he may have to handle blood or body fluids.

Whether it's a child with a bloody nose, scrape or cut, or a child who gets sick and vomits,



teachers are often the first responders to situations requiring first aid and they should have training and access to gloves.

And teachers need accurate health information to pass on to their students.

Every school district should have a workplace policy on HIV/AIDS to provide employees, students, and their families guidance regarding confidentiality, proper procedures, and protections — and to help prevent controversy. And school employees should be trained every year on the policy. To find out about your school district's policy, contact your school nurse, principal, and/or district office.

IMPORTANT PREVENTION TIPS:

HANDWASHING

Washing your hands is one of the most effective ways of preventing disease transmission.

Always wash your hands after using the bathroom, handling any body fluids, or removing disposable gloves. If you're in a situation where handwashing facilities are not available, your employer should provide you with antiseptic hand cleanser or towelettes. Use these only as a temporary measure and make sure you still wash your hands as soon as you can.

GLOVES

Disposable gloves should be readily available to all school personnel. You can usually obtain gloves from your school nurse or clinic assistant. If your state is covered by OSHA or a similar state law, gloves should be provided to you free of charge.



TIP:

Handwashing:



Lather with soap and rub your



hands vigorously under



running water for at least 15 sec-

onds. Rinse hands and dry completely with a paper towel and turn the water off using that towel.

TIP:

Proper Glove Removal:

- Pinch one glove at the wrist and peel glove off.



- With the exposed hand, tuck fingers under the base of second glove and peel off from the inside, tucking the first glove inside the second
- Dispose of gloves promptly.
- Never touch the outside of the glove with bare skin.
- Wash your hands as soon as possible.

School employees should receive training on how to remove gloves correctly.

Some schools use **red fanny packs** on the playground or on field trips. These kits should contain:

- ✔ at least two pairs of disposable gloves
- ✔ Gauze
- ✔ Band-Aids
- ✔ Paper towels
- ✔ Antiseptic towelettes
- ✔ a Ziploc bag to use for disposal.

If you have not been provided them by the school district, contact your principal, your local affiliate president and/or the employee relations personnel in the district to find out whom to contact for gloves.

Gloves should only be used once and be properly disposed of after use. Heavy-duty utility gloves should be used for housekeeping. They must be properly disinfected before being used again.

NOTE: Most disposable gloves are made of latex and contain powder to make them easy to put on and remove. However, increasingly people are developing allergies to latex and/or to the powder. Powder-free latex gloves and gloves made of vinyl or polyethylene are now more widely available.

FIRST AIDS KITS

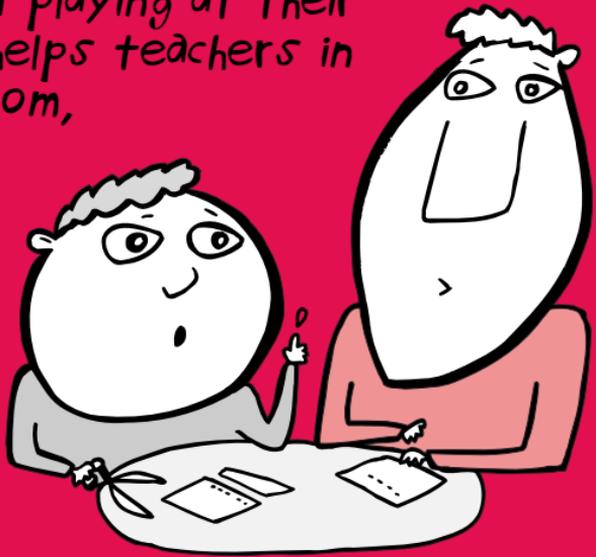


First aid kits should be located in every work area. Keeping them in the same place in every room makes it easier for staff to know where to find them.

RESUSCITATION DEVICES

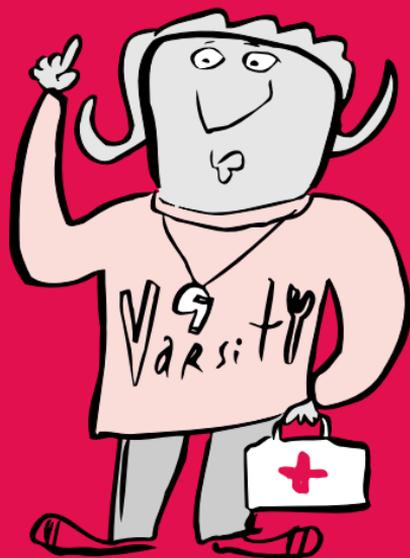
Another useful piece of protective equipment is the one-way resuscitation device, or Microshield, that can be used when giving CPR. These are available from medical supply companies in a Velcro pouch with a key ring or in a small plastic envelope. Microshields are single use only devices. You should be trained in how to use one.

pāt the pāra does it all – whether in the classroom, on the playground, or in the lunchroom, pāt helps make the school day run smoothly and ensure that students are learning and playing at their best. pāt helps teachers in the classroom, instructs the students, supervises playground activities and field trips, and assists in the lunchroom. It's important for pāt to be able to answer questions about health topics and to know where to find the first aid kit.



Coco the Coach knows there's always a chance that a student will get hurt when playing sports. Usually it's just a bump or bruise, but Coco has to be prepared for more serious injuries. If a child gets a scrape or cut, a coach needs to make sure no one else is exposed to blood.

All coaches and PE teachers should have easy access to a first aid kit whether on the field or in the gym.



CLEANING

To disinfect a work area after a blood spill, it is best to use EPA approved hospital grade disinfectant. You can also use household bleach — a solution of 10 parts water to one part bleach. Mix fresh bleach solution every day since it loses its potency and effectiveness after 24 hours.



Thoroughly wipe down the area with soap and water and then with the disinfectant or bleach, and let the area thoroughly air dry. If the tools used to clean the spill are not disposable, they should be disinfected after use and allowed to air dry thoroughly to prevent further contamination.

BIOHAZARD WASTE BAGS



Red biohazard infectious waste bags and sharps containers with the biohazard symbol are used to dispose of infected materials. Usually a sharps container is located in the school clinic and custodial staff are provided with durable, red plastic biohazard bags. If no biohazard bags are available, double-bag the waste and apply a label indicating that the contents are potentially harmful. Biohazard labels are available for this purpose. You may be able to make arrangements with your local or county Health Department to pick up the hazardous material for proper disposal.

VACCINATION

Vaccines are available to protect you against hepatitis A and hepatitis B.

TIP:

Cleaning:

Products are available to use on carpet or floors that turn liquid spills into solid waste. Powdered disinfectants solidify up to 100 times their own weight, decontaminate and convert hazardous fluids into non-hazardous granulated gel for easier clean up and disposal.

Did You Know?

The **HAV vaccine** is recommended for:

- people traveling to countries with poor sanitation or where HAV is endemic
- men who have sex with men
- people native to Alaska or the Americas
- employees of day care centers
- employees whose work involves diapering and providing assistance to institutionalized patients

Hepatitis A

The hepatitis A vaccine is given in one dose to those two years of age and older, with a booster dose 6 to 12 months later. Mild side effects include soreness at the injection site, headaches, nausea and fatigue. Consult your doctor or other health care provider about whether you should receive the HAV vaccine.

Hepatitis B

The hepatitis B vaccine is given in the standard adult dose of three injections at 0, 1 and 6 months. Mild side effects include soreness or swelling at the injection site, fever, headache and dizziness. At this point, the U.S. Public Health Service does not recommend a booster dose.

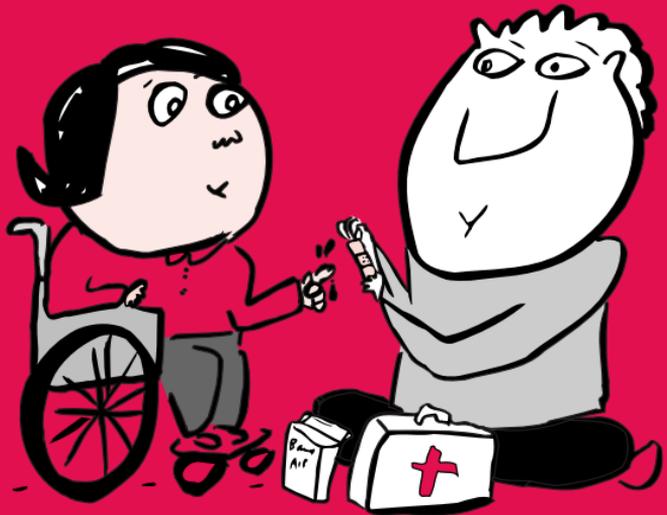


The OSHA Bloodborne Standard requires that the hepatitis B vaccine be provided free of charge, during working hours, and within 10 days of employment to school employees identified as those who “reasonably anticipate exposure to blood on the job.” It is up to each public employer, or school district in this case, to decide which job categories fall under this definition (Class I).

The classification varies widely from state to state and district to district. For example, some districts define Class I employees as school nurses, clinic assistants, special education teachers and assistants, and custodial staff. Others include first aid first responders such as school secretaries. Still other districts are

Sam the Special Ed Assistant works daily with severely disabled children – students who are vulnerable to injury, likely to have special medical needs, and dependent on adults for personal care.

On many days Sam is the person assigned to do medical procedures that involve



contact with blood and other body fluids. Sam needs to know how to protect himself and the students in his care.

Sally the Security Guard keeps the school safe and the students protected. Her presence helps prevent dangerous situations, like fights in the hallway or on the school grounds. She is



the staff person who often knows when a student has a problem at school or at home –

and kids trust her as an adult they can

talk to. Sally is prepared to

practice universal precautions and knows where to find the first aid kits in the school building.

more inclusive and include any employee who gives first aid, such as classroom teachers and paraprofessionals.

The remaining employees who are not Class I fall under Class II, and the hepatitis B vaccine is *recommended* but not required. Some Class II school employees, and employees in states not covered by OSHA or a similar state law, have negotiated with their school district to provide the vaccine free of charge since their jobs do put them at risk of blood exposure. Other local NEA affiliates have had to file grievances with OSHA and most of these efforts have been successful.

IF YOU ARE EXPOSED



It's important for you to know your school's policy and exposure control plan for infectious disease so that if you are exposed to blood, and possibly HIV or hepatitis, you know where to report the exposure, what treatment you can receive, and how to minimize the risk of infection.

Under the OSHA standard you have a right to a confidential post-exposure medical evaluation and follow up at no cost to you. Your exposure control plan should include a designated medical facility to handle occupational exposures. If you have NOT been vaccinated against HBV prior to the exposure, your employer should provide you with the vaccine within 24 hours.

IT IS CRITICAL THAT YOU REPORT THE EXPOSURE INCIDENT IMMEDIATELY.

Back to James...

You rushed to help James and didn't have gloves on your hands. Blood was everywhere. You helped him stop the bleeding on his finger and then realized that you also had a cut on your hand. There's been an exposure — for you and for James. What should you do now?



Following any **exposure to another person's blood** you should *immediately* follow these three basic steps:

-  **FLUSH** the exposed area with water
-  **WASH** the area thoroughly with soap and water
-  **REPORT** the incident within 1-2 hours to the person responsible for managing exposures

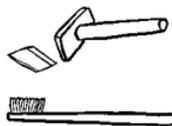
Post-exposure prophylaxis = taking medication to prevent disease after exposure to an infectious organism.

An occupational exposure should be treated as a medical emergency. Guidelines from the U.S. Public Health Service specifically outline the types of situations where *post-exposure prophylaxis* is recommended (dependent on the nature of exposure, amount of blood or body fluids involved, medical history of the source individual, etc). In these cases, post-exposure prophylaxis should be started as soon as possible, preferable within a few hours after the exposure.

If it is unknown whether the source individual is infected with HIV, HBV, or HCV, that person's blood can be tested, but only after legal consent is obtained. Results of the testing will be made available to the exposed employee and the employee will be made aware of applicable laws and regulations concerning disclosure of the identity and infectious state of the source individual.

OUTSIDE THE WORKPLACE

Bloodborne pathogens can be transmitted through risky behaviors outside of the workplace.



Hepatitis B & C can be transmitted by sharing razor blades or toothbrushes with someone who has HBV or HCV infection.

Sexual intercourse is a significant mode of transmission for HIV and HBV. Therefore, it is important to know the facts about sexually



transmitted diseases and how to prevent their transmission. For more information on sexual risk and prevention, call the CDC AIDS Hotline or the Business and Labor Resource Service listed in the Resource Section.

For parents, the NEA Health Information Network has developed the “Can We Talk?” Training Manual and Family Activity Book on talking with children about sexuality, healthy relationships and disease prevention.

CONCLUSION

We all know how quickly cold and flu viruses spread through a school. While bloodborne diseases are much harder to catch than airborne infections, the consequences can be more serious. School personnel need to know their risks, how to protect themselves, and what kinds of equipment and training they can receive.

Ask your local NEA affiliate president or UniServ director for help and support on workplace policy, education and training.

Or contact the NEA Health Information Network for materials, training and technical assistance.



Rate Your School's H.Q.

(Health Quotient)

- ☐ Staff bathrooms have adequate handwashing facilities including warm water, soap in pump dispensers, and towels.
- ☐ Staff are provided with at least one pair of gloves and know whom to ask for extra pairs.
- ☐ The gloves provided at school fit well and are of adequate quality.
- ☐ School personnel, including all educational support staff, are informed each year about universal precautions.
- ☐ *For school personnel who work with health-impaired students needing airway suctioning, diapering, or other procedures involving potential contact with body fluids:* staff are informed about the possibility of HIV, HBV, and HCV transmission, and have been offered hepatitis B vaccine at no charge.
- ☐ There is an age-appropriate K to 12 health education curriculum that includes information about universal precautions. For example, kindergartners are warned about not touching needles, glass or any other sharp objects, and to avoid touching other people's blood.
- ☐ Student bathrooms have adequate handwashing facilities including running water, soap in pump dispensers, and towels.
- ☐ Cold packs used for student injuries are disposable, or if reused, are enclosed in disposable plastic bags to prevent cross-contamination.
- ☐ Physical education teachers are provided with adequate first aid supplies to deal with minor injuries including washing facilities.

EXTRA CREDIT:

- ☐ *In late elementary/middle school:* students and parents are informed about immunizations recommended for adolescents.

Courtesy of Lynda Boyer Chkanroong, RN, MPH, San Francisco Unified School District

RESOURCES

NEA Health Information Network
202-822-7570 • 800-718-8387
www.neahin.org

CDC Hepatitis Hotline
888-4HEPCDC • 888-443-7232
www.cdc.gov/ncidod/diseases/hepatitis/hepatitis.htm

Occupational Safety and Health Administration (OSHA)
202-219-8151 • www.osha.gov

CDC Business and Labor Service
800-458-5231 • Fax: 888-282-7681 • www.brta-lrta.org

CDC National AIDS Hotline
1-800-342-AIDS • www.ashastd.org/nah/nah.html

National Association of School Nurses
207-883-2117 • www.VRmedia.com/nurses

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