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Bloodborne Pathogens & Communicable Diseases

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M600 - Fashion Institute
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Course Objectives



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- What are Bloodborne Pathogens?
- Why are they harmful?
- OSHA Bloodborne Pathogen Standard
- How does the standard apply at the school-level?
- What must you do to protect yourself and your workers?
- Communicable disease in the school setting



What is a bloodborne pathogen

Bloodborne pathogens are infectious microorganisms in human blood that can cause disease in humans.



What is other potentially infectious materials (OPIM)?

Other potentially infectious materials (OPIM) means any other body fluids including semen, vaginal secretions, cerebrospinal fluid, etc that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids.

Body Fluids: What Body Fluids Transmit Bloodborne Diseases?



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Blood CAN transmit:

- - HIV
- Hepatitis B
- Hepatitis C
- Other rarer diseases

Urine, tears, sweat, vomit
CANNOT transmit bloodborne
diseases (unless contaminated
with blood). These fluids may
transmit some other diseases.

Semen/vaginal fluid CAN transmit:

- HIV
- Hepatitis B
- Hepatitis C



Casual Contact CANNOT Transmit
Bloodborne Diseases

How Can I Get Infected at Work?



 Helping with certain medical tasks.



- A bite from a child or a parent.
- Breaking up fights.
- Diapering, toileting, feeding, cleaning up vomit.







The ABCs of Bloodborne Diseases



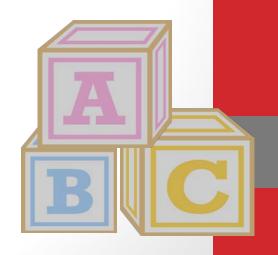
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A. AIDS/HIV

B. Hepatitis B

C. Hepatitis C



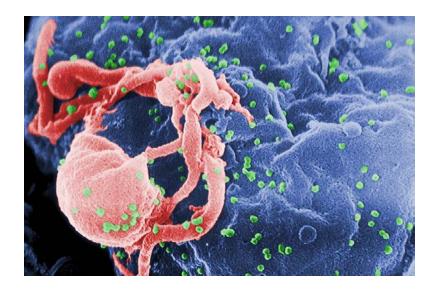
AIDS/HIV



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- HIV is a virus that attacks the immune system.
- When your immune system doesn't function well due to HIV, you can develop other diseases. This is called AIDS.
- HIV is fragile. It is killed by sun, alcohol and bleach. It lives for less than one hour outside the body only in wet blood.





Hepatitis B



- Virus that attacks the liver.
- Symptoms include jaundice, fever, weight loss, weakness.
- Hepatitis B is stronger than HIV. It can live outside the body in dried blood for 7 days.
- Easily prevented by vaccine.







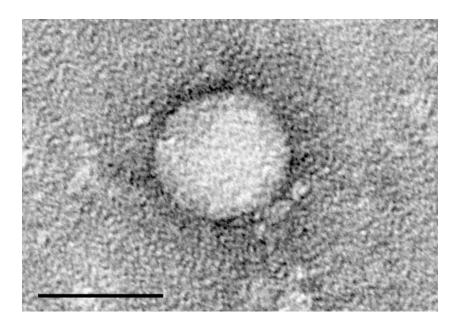
Hepatitis C



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- Virus that attacks the liver.
- No symptoms for up to 20 years, but those infected can still transmit the virus.
- Once symptoms occur, it s very serious because the liver is so damaged.
- No vaccine exists.





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<u>Purpose:</u> To prevent needlesticks and exposure to blood and body fluids that contain blood.



WHAT IS REQUIRED:

- Identify workers at risk.
- Develop and implement a written program to protect workers (Exposure Control Plan)
- > Training Workers.
- Provide Hepatitis B vaccination.
- > Practice Universal Precautions.
- Provide gloves, masks and other personal protective equipment.
- Provide prompt evaluation and treatment when exposed.



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Step 1: Appoint a (Site Employee Safety Administrator (SESA)



- Principal appoints a SESA
- SESA should be an administrative level person
- He/she will be responsible for:
 - Maintaining the School's compliance
 - Categorizing at-risk employees who may come in contact with blood or other potentially infectious materials (OPIM)
 - Following up with training to at-risk employees
 - Scheduling Hepatitis B Vaccination
 - Point person in any bloodborne pathogen related incidents



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Depending on Job Title and specific Job Duties, a list will be automatically generated for all of the school's employees by the BBP CT.

 The SESA must identify all employees whose work is likely to involve routine contact with blood or OPIM (At-Risk Employees)

| Category A | Category B | Category C |
|--|-------------------------------------|--------------------|
| All D/75 Staff,, etc) | Principals and assistant Principals | Classroom Teachers |
| Designated CPR/First Aid responder or Epi- Pen Administrator | Custodians | |
| School nurses | Lab Teachers | |
| | PE Teachers | |

 *If an Employee feels he or she belongs in different category, the SESA has the authority to change his or her category as needed.



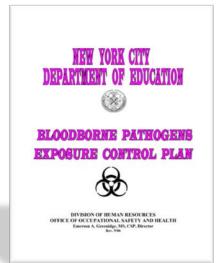
> Step 3: Complete the Exposure Control Plan

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- A generic exposure control plan can be downloaded and made site specific when the SESA completes the prompts provided by the BBP CT.
- A completed site specific Exposure Control Plan Poster should then be printed and posted on the Health and Safety Bulletin Board.



Link to blank template:

http://schools.nyc.gov/NR/rdonlyres/FCF562AD-4A5E-441F-975E-

EFCC4119D551/0/NYCDO EBLOODBORNEPATHOG ENSEXPOSURECONTRO LPLAN20062007.pdf







What is an Exposure Control Plan?

An Exposure Control Plan is the focal point of any bloodborne pathogens exposure prevention program. It details in writing *your* plan for reducing exposures to blood and explains what steps to take if an exposure occurs. The plan specifies all steps taken *your* facility to protect *your* workers.

Why is an Exposure Control Plan Important?

First — and most important — your Exposure Control Plan helps you protect your workers from exposure to bloodborne pathogens.

Your Exposure Control Plan must be:

- •Specific to your facility
- Updated yearly, and
- Accessible to workers.





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Written policy for protecting employees from bloodborne pathogens exposures

Administration of bloodborne pathogens program

Be sure to designate a responsible individual.

Employee exposure determination

Include a list of all job classifications in which employees are most likely exposed to blood and body fluids and a second list of job classifications in which employees may be exposed to blood and body fluids.

Hepatitis B vaccination provisions Universal precautions

Treat all blood and other body fluids as if they are infectious.

Employee education and training

Be sure to include both initial and annual training.

Facility-specific methods for control of bloodborne pathogens

Engineering controls (e.g., safer sharps)

Work practice controls (housekeeping, hand washing, labeling, and disposal procedures)

Personal protective equipment (PPE)

Post-exposure reporting, evaluation, counseling, and follow-up procedures Procedures for evaluating circumstances surrounding an exposure incident Recordkeeping, including compliance monitoring and annual plan updates



>Step 4: Train At-Risk Employees



- Once the at-risk-employees have been categorized by the SESA, the employee will receive an email to his or her DOE email address.
- Employees will receive a link to an internet based training session
- Must be released (for duration of training) and completed during school time
 - * New At-Risk-Employees must receive the training and be offered the Hepatitis B Vaccine within 10 days of assignment. * All At-Risk Employees must receive ANNUAL training.
- Training should include UNIVERSAL PRECAUTION.

Universal Precaution



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All blood or body fluids are considered infectious; therefore, each employee who performs any procedure related to blood or other body fluids must adhere to all necessary precautions.





>Step 6: In-house PPE and Housekeeping



- Provide Personal Protective Equipment (PPE)
 - Example: Gloves, aprons and sleeves must be provided to employee free of charge.
- Housekeeping
 - All surfaces contaminated with blood or OPIM must be decontaminated with a bleach solution or EPA approved disinfectant.
 - A cleaning schedule must be posted in medical and change rooms.
 - SESA will develop a cleaning schedule.

Prevention is Protection and It's Easy!







- Use Universal Precautions assume everyone could be infected.
- Wear gloves when coming into contact with any blood or body fluids.
 - Gloves in all sizes and powder-free if needed.
- Wash your hands before you put your gloves on and after you take them off.
 - Access to running water and soap
- Get the Hepatitis B vaccine.



This is your right under the law!

Blood and Body Fluids: Properly Remove Disposable Gloves



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1 PINCH GLOVE

Pinch the palm side of one glove near your wrist. Carefully pull the glove off so that it is inside out.



2 SLIP TWO FINGERS UNDER GLOVE

Hold the glove in the palm of your gloved hand. Slip two fingers under the glove at the wrist of the remaining gloved hand.



3 PULL GLOVE OFF

Pull the glove until it comes off, inside out. The first glove should end up inside the glove you just removed.



4 DISPOSE OF GLOVES AND WASH HANDS

After removing the gloves:

- Dispose of gloves and other personal protective equipment (PPE) in a proper biohazard container.
- Wash your hands thoroughly with soap and running water, if available. Otherwise, rub hands thoroughly with an alcohol-based hand sanitizer if hands are not visibly soiled.



> Step 5: Provide Hepatitis B Vaccinations



- Once at-risk employees have completed online training:
 - They will be offered the Hepatitis B vaccine (free of charge) via email from DOE email account
 - SESA must schedule an appointment during school time for vaccinations to take place.



Step 7: Post Exposure follow-up



- Any employee, regardless of category, must be offered the opportunity to seek free medical attention if he or she has been exposed to blood or other potentially infectious materials.
- An employee can go to designated Health and Hospital Corporation (HHC) facilities or to his or her own doctor.



>Step 7: Post Exposure follow-up



- If there has been a bloodborne pathogens exposure, the employee should:
 - Wash the affected are with soap and Water IMMEDIATELY.
 (Needlestick or blood splash in the eye or mouth should be flushed with water).
 - Notify the Chapter Leader and SESA.
 - Get a "P-Card" from school to get free transportation to and from an HHC facility or personal physician.
 - Receive a "Post-Exposure Medical Services Referral" form to receive free treatment at the HHC facility or from one's personal physician.
 - Receive a copy of the "DOE Exposure Incident Package"
 - Go to a designated HHC facility or personal physician for treatment
 - There are no out-of-pocket expenses for treatment at an HHC facility. The out-of-pocket expenses for co-pays for treatment by one's personal physician will be reimbursed by the DOE.

Health and Hospital Corporation (HHC)

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| HEALTH AND HOSPITALS CORPORATION FACILITIES | | | | | | |
|---|---|----------------------------------|--|--|--|--|
| | Bellevue Hospital Center | 462 First Ave. | 212-562-4347 / 4141 212-423-6466 / 6262 | | | |
| Manhattan | Metropolitan Hospital Center | 1901 First Ave. | | | | |
| | Harlem Hospital Center | 506 Lenox Ave. | 212-939-2250 / 1000 | | | |
| Bronx | Lincoln Medical & Medical Health Center | 234 E. 149th Street | 718-579-5200 / 5000 | | | |
| | Jacobi Medical Center | 1400 Pelham Parkway S. | 718-918-5800 / 5000 | | | |
| | North Central Bronx Hospital | 3424 Kossuth Ave. | 718-519-3000 / 5000 | | | |
| Brooklyn Staten Island | Kings County Hospital Center | 451 Clarkson Ave | 718-245-4637 / 3131 | | | |
| | Coney Island Hospital | 2601 Ocean Parkway, | 718-616-4400/ 3000 | | | |
| | Woodhull Medical & Mental Health Center— | 760 Broadway | 718-963-8442 / 8000 | | | |
| Queens | Elmhurst Hospital Center | 79-01 Broadway, Elmhurst | 718-334-4000 | | | |
| | Queens Hospital Center | 82-70 164th Street, Ja- maica | 718-883-3090 | | | |







>Step 8: Recordkeeping



- Recordkeeping
- SESA need to keep will keep records of employee:
 - Training and vaccination
 - Vaccine acceptance or declination
 - All email notifications
 - Non-responsive employees
 - Records must be made available to representatives from PESH and employee representative (Chapter Leader) with employee's consent.
- Records must be kept at school.

Summary



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- You can be infected with HIV, Hepatitis B or Hepatitis C if the virus enters your bloodstream.
- Use Universal Precautions. Assume everyone is infected.
- Wear gloves and wash your hands.
- Get the Hepatitis B vaccine.





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Bugs, Bites & Other Childhood Diseases

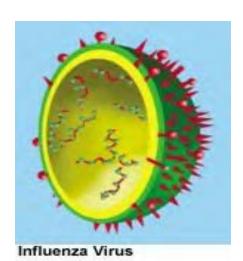
MICROBES UNDER THE **MICROSCOPE**

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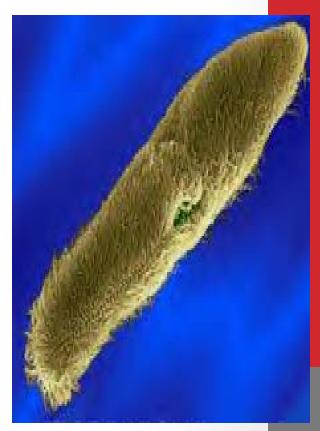




Penicillin Mold Fungus



 Streptococci Bacteria



Protozoa

COMMON DISEASES & INFECTIONS WITH THEIR MICROBIAL CAUSES

| | Bacteria | Fungus | Protozoa | Virus |
|---------------------------|-----------------|---------------|-----------------|--------------|
| Athlete's foot | | | | |
| Chickenpox | | | | |
| Common cold | | | | |
| Diarrheal disease | | | | |
| <mark>Flu</mark> | | | | |
| Genital herpes | | | | |
| Malaria | | | | |
| Meningitis | | | | |
| Pneumonia Pneumonia | | | | |
| Sinusitis | | | | |
| Skin diseases | | | | |
| Strep throat | | | | |
| Tuberculosis Tuberculosis | | | | |
| Urinary tract infection | | | | |
| Vaginal infections | | | | |
| Viral hepatitis | | | | |

INCUBATION PERIOD







- Incubation is the period between exposure to the microbe and when infection or disease occurs and the symptoms actually begin.
- There are people who may be infectious for some illnesses and able to spread the infection during the incubation period, but are without symptoms themselves.
- For example, Fifth's Disease is a mild rash, spread by exposure to airborne droplets.
 However, the incubation period is <u>prior</u> to the onset of the rash.

Acute vs. chronic conditions



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A chronic condition In an acute condition develops and worsens over an extended symptoms appear and change or worsen rapidly, as in a heart attack period of time, as in atherosclerosis *ADAM.



•MODES OF TRANSMISSION

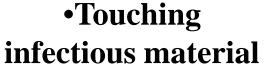
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•Through the air







Pets & tiny critters



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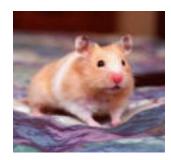






TICK
Babesiosis • Ehrlichiosis • Lyme Disease • Relapsing Fever
Colorado Tick Fever • Rocky Mountain Spotted Fever









Second line of defense

Adaptive Immunity (acquired)

- Cellular (cytotoxic)
- Humoral (antibodies)

Innate Immunity (natural)

- Macrophages, neutrophils, eosinophils, basophils, monocytes
- The complement system

First line of defense

Non-specific Physical & Chemical Defenses

- Barriers: skin, mucous membranes, stomach acid, lysozyme in tears
- Expulsion: Coughing, sneezing, vomiting, diarrhea







Handwashing

Experts agree that the single most effective practice to prevent the spread of germs is good handwashing



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- Upon arrival at work.
- Before handling food or feeding children.
- After using the toilet.
- Before and after assisting a child in using the toilet.
- After changing diapers.
- After contact with runny noses, vomit or saliva.
- After handling pets
- After removing gloves.
- Before going home.





PREVENTION: VACCINATION



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•Here are some examples of vaccinations:

- Childhood vaccines: measles, mumps & rubella
- Chickenpox
- Tetanus
- Diphtheria
- Flu
- Hepatitis B

PREVENTION: CUSTODIAL CLEANING



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NEW YORK STATE MANDATES "GREEN CLEANING









GUIDELINES AND SPECIFICATIONS FOR THE PROCUREMENT AND USE OF ENVIRONMENTALLY SENSITIVE CLEANING AND MAINTENANCE PRODUCTS FOR ALL PUBLIC AND NONPUBLIC ELEMENTARY AND SECONDARY SCHOOLS IN NEW YORK STATE AND FOR THE PROCUREMENT AND USE OF ENVIRONMENTALLY PREFERRED CLEANING PRODUCTS FOR STATE AGENCIES/PUBLIC AUTHORITIES IN NEW YORK STATE

• These Guidelines and Specifications were developed in consultation with representatives of the Department of Environmental Conservation, Department of Health, Department of Labor and State Education Department, as directed by Chapter 584 of the Laws of New York, 2005 and Executive Order No. 134, 2005. (Even though EO 134 is a distinct and separate document, the guidelines and specifications established for the New York State school districts, along with the approved cleaning product lists developed as a result of the legislation that required all schools to use green cleaning products, are also applicable for the selection and use of cleaning products for State Agencies under EO134.)

Purpose of Guidelines and Specifications

•The primary focus of this process is to protect children and employee health by enabling schools to select products that clean effectively and minimize any adverse impacts on children and employee health and the environment. Even more so than adults, children can be vulnerable to, and may be severely affected by, exposure to chemicals, hazardous wastes, and other environmental hazards.

Common childhood illnesses encountered in schools

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Common Cold & Impetigo

Influenza

Conjunctivitis

Chickenpox

Ringworm

Fifth Disease

Pediculosis (Lice)

Whooping Cough

Strep Throat

COMMON COLD/INFLUENZA



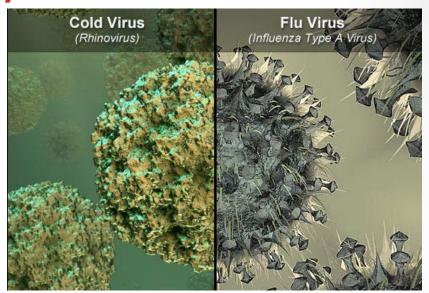
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- •Viruses are Transmitted by:
 - Direct Contact
 - Inhaling Air-Borne Droplets
 - Indirect Contact
 with Hands and
 Articles Freshly
 Soiled







CHICKEN POX



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- •Adults are at a Higher Risk of Complication:
- HIV Infected Individuals can Develop Shingles Soon After Infection
- Newly Infected Pregnant
 Women can Pass the Virus to a Fetus
- The CDC now Recommends that School Staff who have Never had Chicken Pox be Immunized



FIFTH DISEASE



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•Children are Most Infectious before the Rash Appears.

•A Newly Infected
Mother whose Fetus
Becomes Infected May
Develop Anemia and a
Swelling of the Fetus,
Leading to Many Organ
Complications and Can
be Fatal.

STREP THROAT and SCARLET FEVER



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- Untreated Infected People can
 Transmit the Bacteria for 2-3 Weeks
- Both Strep Throat and Scarlet Fever are Effectively Treated with Antibiotics
- Treatment with Antibiotics will End Transmission within 24 Hours
- •Group A strep bacteria can live in a person's nose and throat. The bacteria spread through contact with droplets from an infected person's cough or sneeze.

IMPETIGO







- •Strep can also Cause Impetigo
- •A Bacterial Skin
 Infection that Occurs
 around the Mouth, Nose,
 and Throat
- Spread by Direct
 Contact with Infected
 Skin
- Treated with Antibiotics

CONJUNCTIVITIS

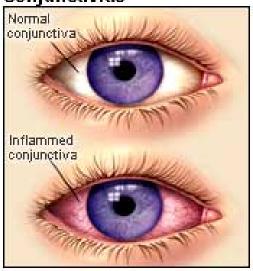


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Conjunctivitis



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- •Also Known as "Pink Eye"
- It can be a <u>Viral</u>, <u>Bacterial</u>, <u>or Fungal Infection</u>
- Prevention with Good Hygiene: Keep Hands Clean and Away from Eyes.
- Viral and Bacterial forms are Highly Contagious and Spread by Direct or In-direct Contact

RINGWORM



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- Ringworm is a <u>Fungal</u>
 Infection affecting: the Scalp,
 Skin, Fingers, Toenails, or
 Feet
- Ringworm of the Scalp makes the Hairs Become Brittle and Break Off, Leaving a Bald, Scaly Patch.
- Person to Person
 Transmission and Contact
 with Contaminated Items

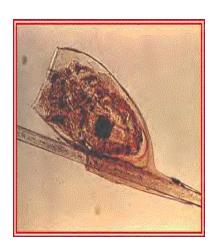


Lice



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•Larvae attached to hair shaft

- Spread by Direct Contact with an Infected Person or with the Objects they Use
- Treatment is a Thorough Examination and Use of a "Nit Comb"



Adult Louse

Reportable Disease



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•Article 11 of the NYC Health Code requires that a number of diseases and conditions, which have the potential to adversely affect the health of the general public are reported. The code requires that physicians, hospitals and institutions, clinical laboratories and other designated professionals report these diseases to the NYC Department of Health.

Outbreaks

•Section 11.03 of the NYC Health Code defines a suspected outbreak among 3 or more persons of any disease or condition and of any unusual manifestation of a disease in an individual should be reported to the DOH immediately.

Paraprofessionals Contract





Effective October 13, 2007 through October 31, 2009

Article Nineteen — Leaves

Article Nineteen — Leaves

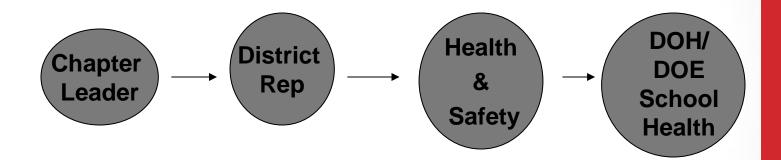
A. Sick Leave

- 4. Paraprofessionals serving in schools shall not suffer loss of sick leave days for absence due to illness from the following children's diseases: rubeola (measles), epidemic parotitis (mumps) and varicella (chicken pox). It is understood that this paragraph does not apply to rubella (German measles).
- **5.** The Board will approve absences without loss of sick bank days for paraprofessionals who contract Hepatitis B as a result of working with children who have been evaluated as presenting a substantial risk of exhibiting acting out behavior.
- **6.** Employees who are absent due to allergic or positive reaction from a skin test shall not suffer loss of sick leave days.

Reporting Procedures

- UFT CELEBRATING TOWN 500 PAGE SOLVERS
- United Federation of Teachers
- Once confirmed, a letter/DOH fact sheet may be sent out to the staff and parents by the DOH/DOE School Health
- The DOH/DOE School Health may also meet with the staff





Reporting Procedures







Reporting of Communicable Diseases and Suspected Outbreaks to the Department of Health and Mental Hygiene (DOHMH)

General Guidelines

Health

For immediate reporting of any suspected or confirmed illness caused by a potential biological threat agent (e.g., anthrax, smallpox, tularemia or plague) or other disease of urgent public health concern (e.g., avian influenza or SARS), please call the following numbers and ask to speak to the DOHMH Doctor on Call:

Business Hours (Monday through Friday 9 AM to 5 PM): Call the Bureau of Communicable Disease at 212-788-9830

At all other times (Nights, weekends or holidays): Call the Poison Control Center at 1-212-POISONS (212-764-7667)

NOTE: Section 11.03(b) of the New York City Health Code require the immediate reporting by telephone of a suspected outbreak among 3 or more persons of any disease or condition (whether it is listed below or not), and of any unusual manifestation of disease in an individual.

Bureau of Communicable Diseases

Telephone: 212-788-9830

Fax: 212-788-4268

http://www.health.ny.gov/forms/instructions/doh-389_instructions.pdf

Course Objectives



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- What are Bloodborne Pathogens?
- Why are they harmful?
- OSHA Bloodborne Pathogen Standard
- How does the standard apply at the school-level?
- What must you do to protect yourself and your workers?
- Communicable disease in the school setting

Contact Us



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