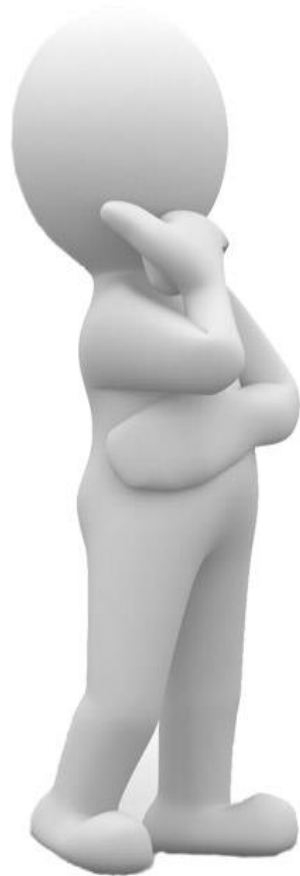


BLOODBORNE PATHOGEN COURSE



Hamilton County Health Department
Health Education Division
www.hamiltoncounty.in.gov

The Learner Will Be Able To...

- Recall three bloodborne pathogens
- Describe modes of bloodborne pathogen transmission
- Understand how bloodborne pathogen exposure occurs
- Understand methods to prevent transmission of bloodborne pathogens
- Review information which assists staff maintain compliance with the bloodborne pathogen standard





School Staff Training

Why?

- All school staff must be trained

When is training needed?

- Upon initial assignment
- At least annually thereafter
- Whenever new or modified tasks or procedures affect a worker's occupational exposure

Additionally!

- Workers must have an opportunity for an in- person Q&A session with the trainer
- Training must be presented during workers' working hours, be offered at the educational level and in a language that workers understand
- Documentation of training event must be signed by worker after each training



A yellow sticker with a black arrow pointing left and the text "SIGN HERE" in black capital letters.



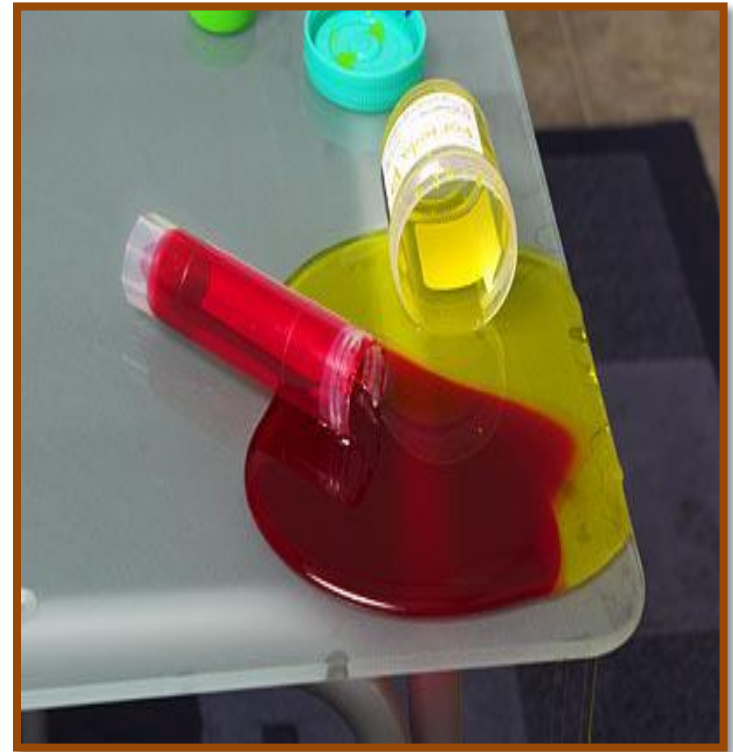
What Are Bloodborne Pathogens?

- Bloodborne pathogens are infectious microorganisms in human blood that can cause disease in humans
- Bloodborne Pathogens Include:
 - Hepatitis B (HBV)
 - Hepatitis C (HCV)
 - Human Immunodeficiency Virus (HIV)



Universal Precautions...

- Treat **All** human blood and certain human bodily fluids as if they are infectious
- Must be observed in all situations where differentiation between body fluid types is difficult or impossible - **all body fluids shall be considered potentially infectious materials**



How Are Diseases Transmitted...

- Direct Contact:
 - Body Fluids
- Indirect Contact:
 - Objects With Body Fluids
- Airborne:
 - From The Air
- Vector-borne:
 - Animals And Insects



Occupational Exposure...

- Reasonable anticipated contact with blood or body fluids
- May result from performance of an employee's duties
- Contact occurs through:
 - Skin
 - Eyes
 - Mucous membranes



Contaminated...

Presence or the reasonably anticipated presence of blood or other potentially infectious material on an item or surface



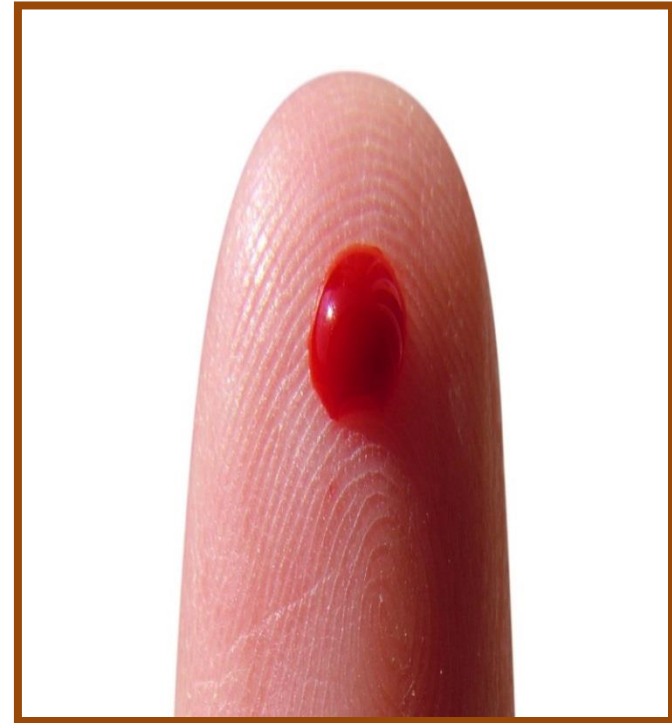
Bloodborne Pathogens Modes of Transmission.....

- Sexual contact
- Sharing of needles
- From mothers to their babies at or before birth
- Accidental puncture from contaminated needles, broken glass, or other sharps
- Contact between broken or damaged skin and infected body fluids
- Contact between mucous membranes and infected body fluids
- Anytime there is blood-to-blood contact with infected blood or body fluids



Other Potentially Infectious Materials (OPIM)...

- Blood products
- Semen
- Vaginal secretions
- Cerebrospinal fluid
- Pleural fluid (lung fluid)
- Synovial fluid (fluid from your joints)
- Amniotic fluid (uterine fluid)
- Peritoneal fluid (fluid that fills your body cavity)
- Saliva in dental settings
- *Any body fluid that is visibly contaminated with blood*



Not All Body Fluids Are Infectious...

These body fluids are infectious **ONLY** if blood is present in them:

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



Transmission Potential...

- Contact with another person's blood or bodily fluids that may contain blood
- Mucous membranes: eyes, mouth, nose
- Non-intact skin
- Contaminated drug equipment
- Contaminated sharps/needles



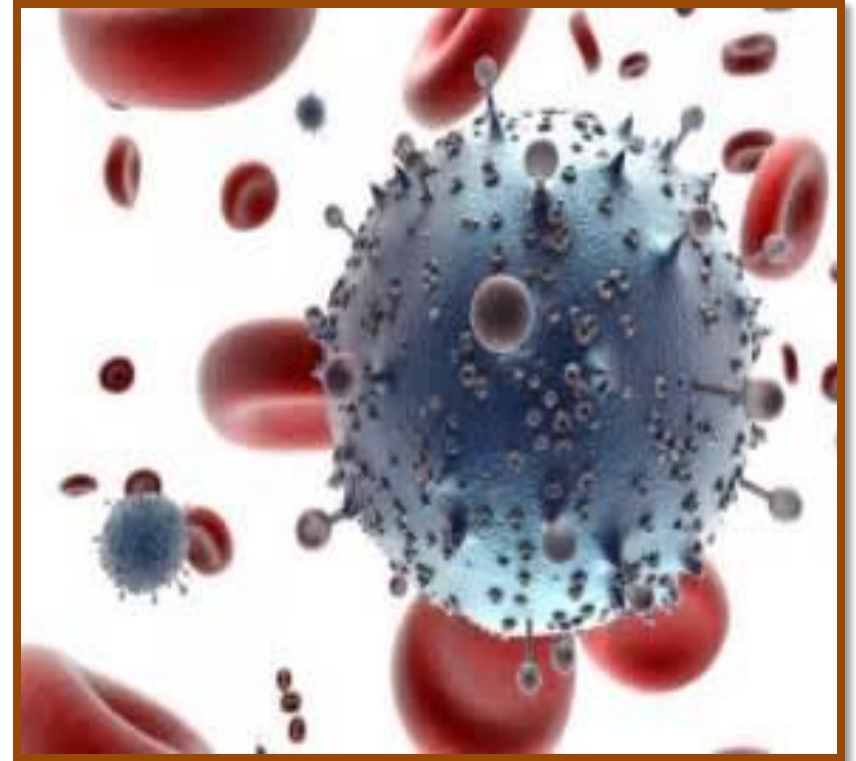
Transmission Potential...

- Infected blood can enter your body through:
 - Open Sores
 - Lacerations (Cuts)
 - Abrasions
 - Acne
 - Any damaged or broken skin, such as sunburn or blisters



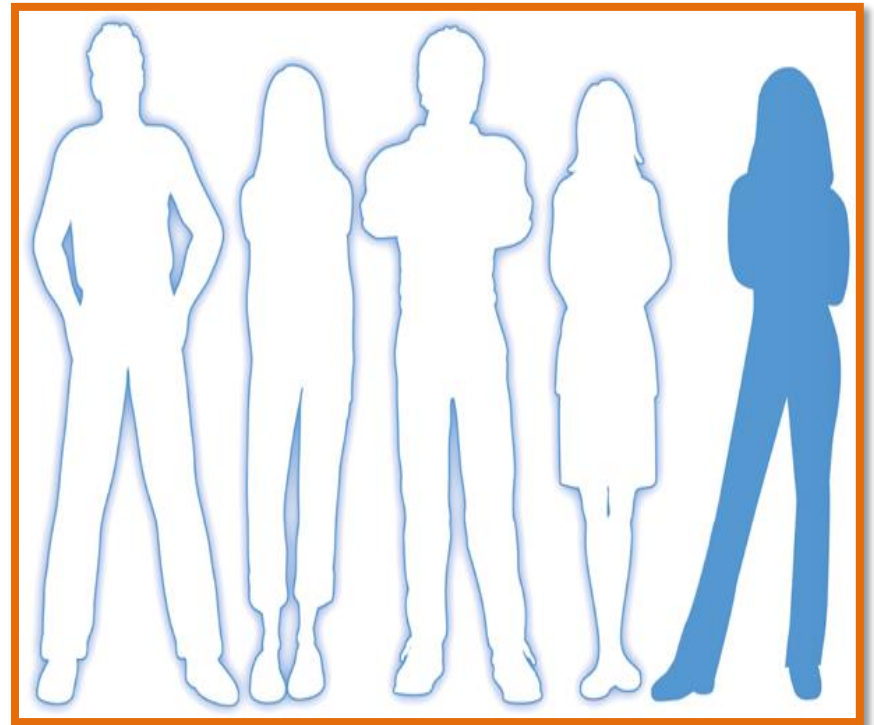
HIV...

- Attacks the immune system
- Can only live outside the body for a few minutes
- In 2015, an estimated 39,393 people were diagnosed with HIV infection in the United States (CDC)
- In 2016, there were 413 people newly diagnosed with an HIV infection in Indiana (ISDH, 12/31/2016)
- In 2016, Indiana had a total of 5,981 cases of HIV (ISDH, 12/31/2016)



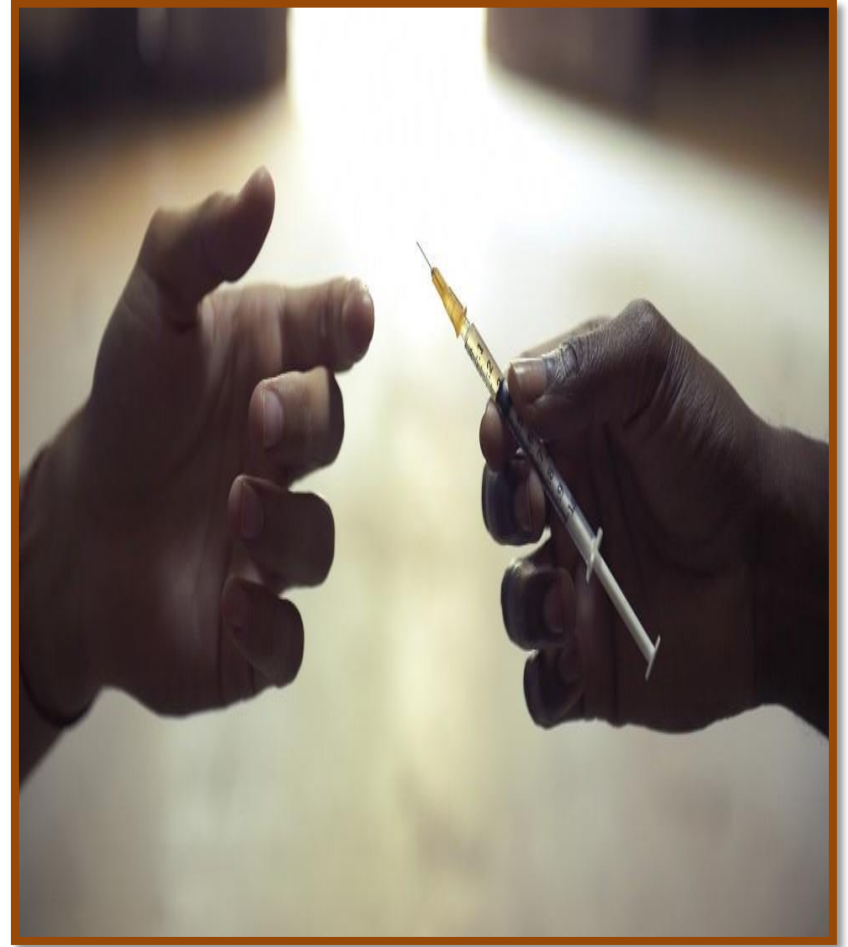
HIV/AIDS...

- Every nine-and-a-half minutes, another person in the United States becomes infected with HIV (CDC)
- Approximately 1 in 5 who are HIV+ do not know they are infected with the disease
- HIV will develop into AIDS within approximately 10 years
- No cure or vaccine to prevent HIV- only prevention



Transmission Of HIV...

- Sexual contact
- Sharing needles or drug equipment
- Pregnancy, childbirth and breastfeeding
- Contact with other body fluids
- Body piercing and tattooing



HIV Is NOT Spread By...

- Casual Contact
- Saliva
- Sweat
- Spit
- Tears
- Air
- Insects



HIV To AIDS...

1

Acute infection

flu-like symptoms that occur within first 2-4 weeks of contracting HIV infection

2

Clinical latency

chronic HIV infection after acute infection stage, can last for decades

3

AIDS

occurs when CD4 cell count falls below 200 cells/mm³, and vulnerable to opportunistic infections



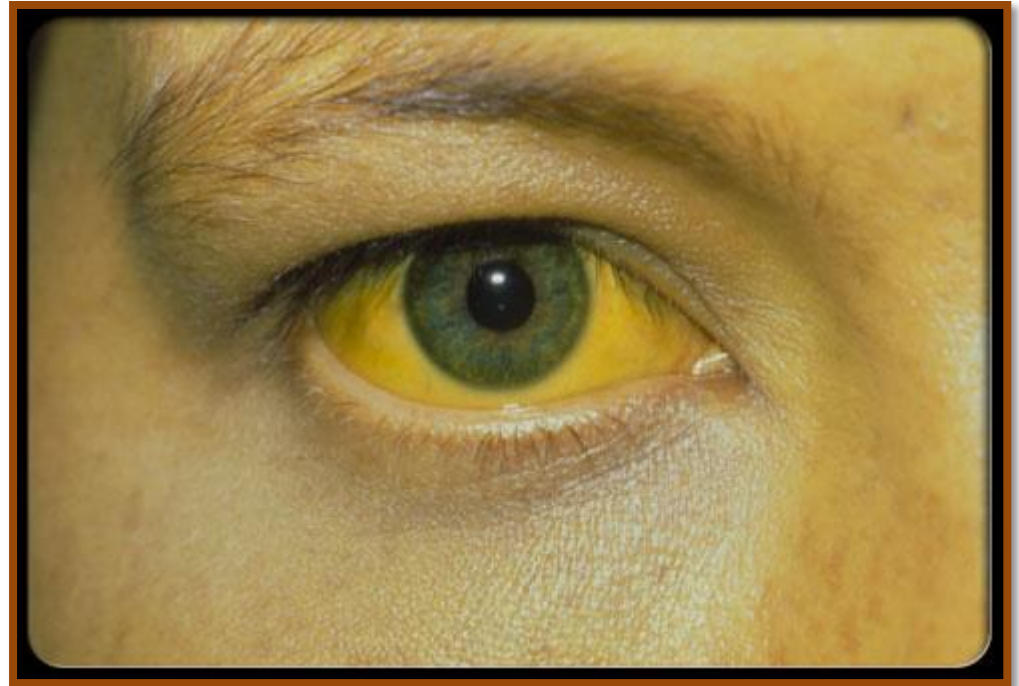
Hepatitis B...

- A virus that infects the liver
- HBV can live outside the body for 7 days
- 90% of adults contracting the disease will recover and develop immunity
- Up to 10% of adults who contract the disease will not recover and will have chronic Hepatitis B



Symptoms of Hepatitis B...

- Fever
- Fatigue, Joint Pain
- Loss of appetite
- Nausea/Vomiting
- Abdominal Pain
- Dark Urine/ Jaundice
- Clay-Colored Stools



Hepatitis B Transmission...

- Infants born to infected mothers
- Sex partners of infected persons
- Men who have sex with men
- Sharing toothbrushes, razors and fingernail clippers



Hepatitis B Transmission...

- Injected or inhaled drugs
- Tattoos and body piercings
- Traveling to countries where HBV is common
- History of being in jail or prison
- Hemodialysis



Hepatitis B Vaccine...

- No risk of developing Hepatitis B from the vaccine
- The vaccine is 90%+ effective
- The vaccine is given in three doses:
 - Dose # 1 - Initial dose
 - Dose # 2 - 30 days after dose 1
 - Dose # 3 - 4 months after dose 2



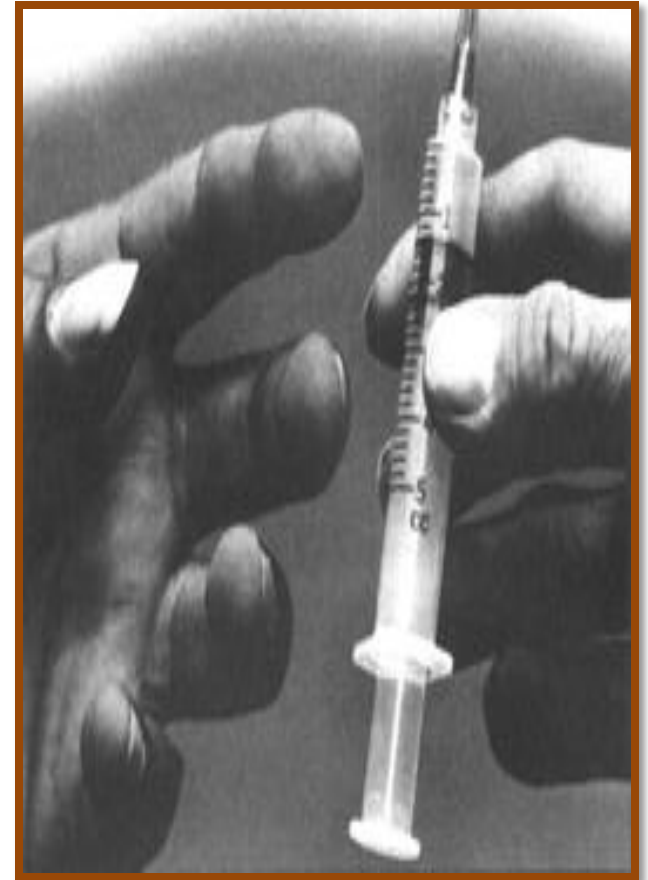
Hepatitis C...

- The most chronic bloodborne disease in the United States.
- An estimated 2.7-3.9 million people in the United States have chronic Hepatitis C (CDC)
- 80% of people have no signs or symptoms
- May remain undetected in the body for years



Risk Groups For Hepatitis C...

- Most commonly occurs in people who have:
 - Received a blood transfusion before 1992
 - Shared needles/drug equipment
 - Tattoos/body piercing
 - Been born to a mother who has Hep. C
 - Shared nail clippers or toothbrush with a person who has Hep. C
- As many as 90% of drug abusers are infected with Hep C within 5 years of first injecting (ISDH)
- Risk of sexual transmission appears to be low



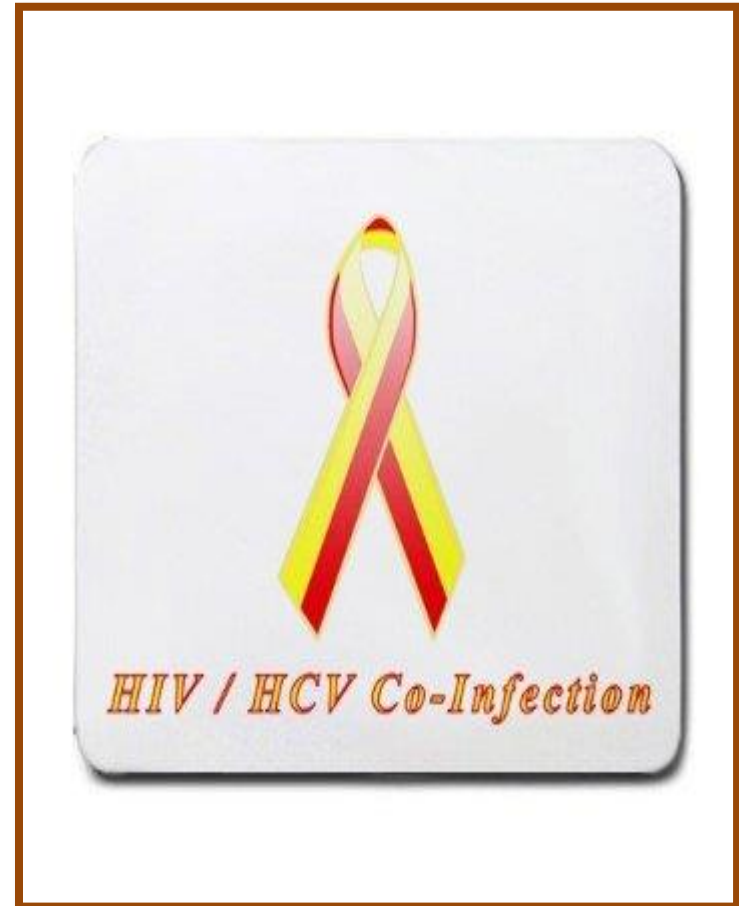
Signs & Symptoms of Hepatitis C...

- Fever
- Fatigue
- Dark Urine
- Clay-Colored Stools
- Nausea/Vomiting
- Joint Pain
- Jaundice
- In those people who do develop symptoms, the average time period from exposure to symptom onset is 14-180 days (Average is 45 days)



Co-Infection...

- Some people are infected with both HIV and Hepatitis C
- CDC estimates that 300,000 people are co-infected in the United States
- 50%-90% of injection drug abusers are infected with both HIV and Hepatitis C (CDC)



Your Exposure Potential...

All school staff are at some risk for exposure to bloodborne pathogens, however, some staff are at a higher risk due to their job description

High Risk Exposure Potential...

Jobs:

- School Nurses
- School Secretaries
- School Coaches/Trainers
- School Custodians
- School Bus Drivers

Tasks:

- Post-Accident Cleanup
- Administering First-Aid
- Janitorial or Maintenance Work
- Handling of any Waste Products



What Is Included In An Exposure Plan?

- Introduction/Purpose of the Plan
 - Why do we have or need a plan
- Program Management
 - Who is responsible for the plan
 - Who reviews the plan each year
- Exposure Determination
 - Job classifications that are at risk



What Is Included In An Exposure Plan?

- **Compliance:**
 - Who is responsible to make sure staff are safe
 - Personal protective equipment (PPE)
 - Work practice controls
 - Personal hygiene (handwashing)
- **Housekeeping:**
 - How to clean up a spill
- **Medical Waste:**
 - How to deal with medical waste
 - Red bags
 - Sharps



What Is Included In An Exposure Plan?

- Hazardous Communication:
Labels and signs
- Training and Record Keeping:
Within 10 days of hire
Every year thereafter
- Sharps Log:
How a person was stuck
- Appendix:
OSHA definitions
Exposure forms



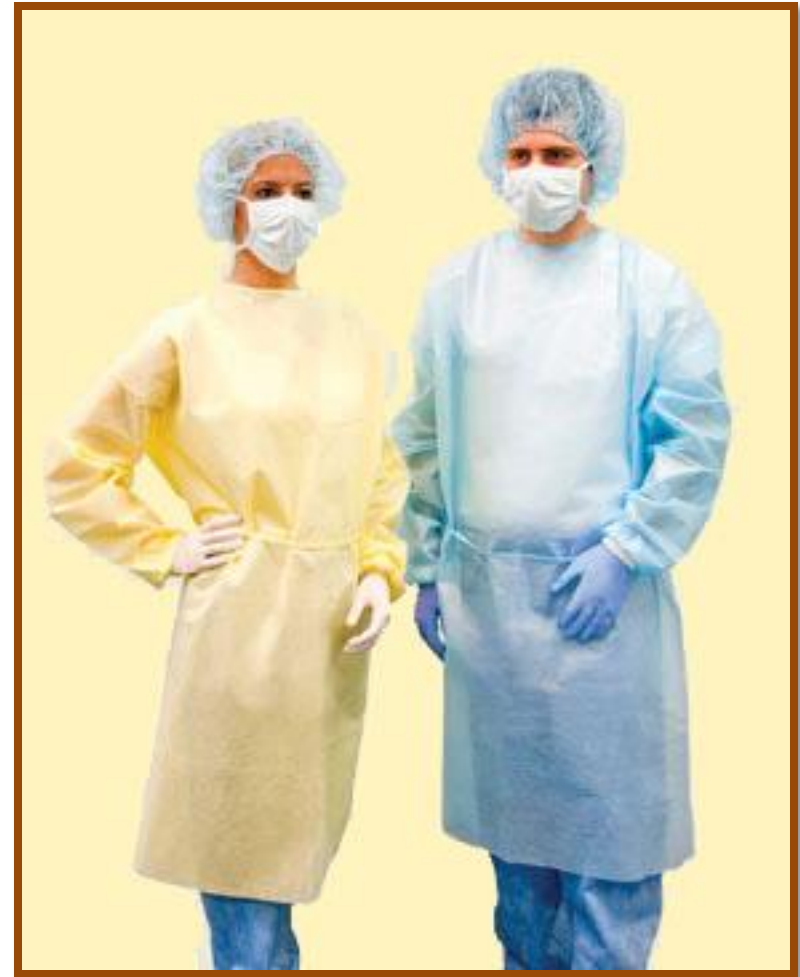
What Is Included In An Exposure Plan?

- Hepatitis B Vaccination Program:
 - Which job classifications are at high risk for occupational exposure
 - **Schools must offer hepatitis B vaccine to those staff members considered in the high risk category**
 - Schools must develop and complete a hepatitis B vaccine consent form for each staff member whose job classification is at high risk for occupational exposure
- Post Exposure Evaluation and follow-up:
 - What to do after an exposure occurs
- Record Keeping:
 - What information will be kept
 - What information is needed



Personal Protective Equipment...

- Anything that is used to protect you from contact with a person's blood or body fluids
- They include:
 - Latex or Nitrile gloves
 - Goggles or Face Shield
 - CPR Mask
 - Aprons
 - N95 mask and Respirators



PPE Rules...

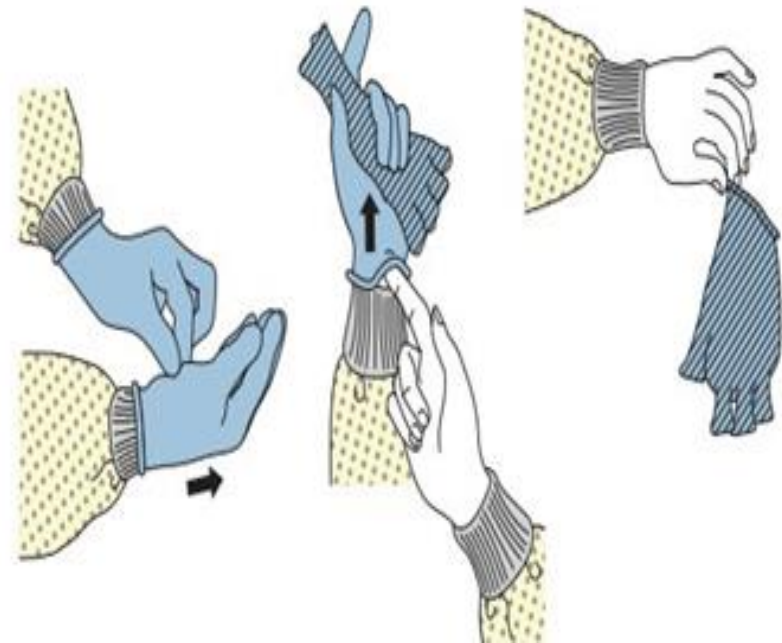
- Always wear appropriate PPE in an exposure situation, which at a minimum would be gloves
- Remove and replace gloves that are torn, punctured, or has lost the ability to function as a barrier to body fluids
- Remove and properly dispose of gloves before leaving the work area
- Wash your hands when you take off gloves



How To Take Off Gloves...

1. GLOVES

- Outside of gloves are contaminated!
- If your hands get contaminated during glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Using a gloved hand, grasp the palm area of the other gloved hand and peel off first glove
- Hold removed glove in gloved hand
- Slide fingers of ungloved hand under remaining glove at wrist and peel off second glove over first glove
- Discard gloves in an infectious* waste container



Source: CDC



Hand Washing...

- Wash hands immediately after removing gloves
- Use an antibacterial soap
- A hand antiseptic can be used, but wash with soap and water as soon as possible afterward



How To Wash Your Hands...



1. Wet hands



2. Use liquid soap



3. Lather, rub and count to 15



4. Rinse



5. Towel or air dry hands



6. Turn off taps with towel or your sleeve



Hand Antiseptic....



1. Place a drop of alcohol-based hand sanitizer, the size of a dime in your palm.



2. Rub hands together; palm to palm.



3. Rub back of each hand with palm and interlaced fingers of the other hand.



4. Rub around each thumb clasped in the opposite hand.



5. Rub fingertips of each hand backward and forward in the opposite hand.



6. Keep rubbing until your hands are dry. Paper towels are not needed.



Regulated Medical Waste...

- Liquid or semi-liquid blood or other potentially infectious materials and sharps
- Must be placed in closeable leak-proof container built to contain all contents during handling, storage, transport or shipping and be appropriately labeled or color-coded



Decontamination Procedures...

- Use appropriate personal protective equipment
- Absorb grossly bloody materials with absorbent materials and place in a tied, red bag
- Decontaminate mop, broom or dust pan in a bleach solution



Decontamination...

- When cleaning up surfaces, use a diluted bleach solution or other approved EPA solution
- If you use bleach, you need to use **1:10 Bleach solution**
- Put on your gloves
- Do an initial wipe up of the spill
- Spray the disinfectant and allow it to stand for 10 minutes, then wipe up



Decontamination...

- Dispose of all wipes in a biohazard container
- Gloves should be taken off and disposed of in a biohazard container
- Wash your hands!



Contaminated Laundry...

- Contaminated laundry must be handled as little as possible and gloves must be worn:
 - Bag or contain at its location of use
 - Place and transport in bags or containers that are labeled or color-coded
 - Place in a container that will prevent soak-through to the exterior



Signs and Labels...

Labels must include the universal biohazard symbol, and the term “Biohazard” must be attached to:

Any trash that contains blood contaminated materials such as bloody tissues, bandages, gauze, gloves



What is an exposure incident?

- Any specific incident which occurs while providing job duties that results in blood or OPIM (other potentially infectious materials) enter the body via:

-Non-intact skin

-Mucous membranes (eyes, nose, mouth)

-Parenteral route



Exposure Incident...

- **Keep Calm!**
- Tell a supervisor **ASAP**
- If body fluid enters eyes or mouth, **wash with water for 20 minutes**
- If body fluid comes in contact with broken or chapped skin or needle stick, **wash with soap and water for 20 minutes!**
- Report the incident as described in your school district Exposure Control Plan
- **If You Do Have A True Exposure, You Have TWO HRS. To Start Treatment!**



Exposure Incident...

- Post-Exposure Evaluation:
 - Confidential medical evaluation
 - Document route of exposure
 - Identify source individual
 - Test source blood (with consent)
 - If source can not be identified, your blood will be tested
 - Results provided to exposed employee by the health care provider



Exposure Incident...

Example

Document exposure incidents according to your school exposure control plan

HAMILTON COUNTY INJURY REPORT			
NAME	INJURED NAME:		HOME PHONE: () () ()
	ADDRESS:		WORK PHONE: () () ()
EMPLOYEE	CITY:		STATE: ZIP CODE:
	DEPARTMENT:	DEPARTMENT #:	DIVISION:
LOCATION	JOB TITLE:		SUPERVISORS NAME:
	WAS SUPERVISOR NOTIFIED AS SOON AS POSSIBLE: YES NO IF NO WHY?		
WITNESS	DATE OF INJURY:	TIME OF INJURY:	AM PM DATE REPORTED:
	LOCATION OF OCCURRENCE:		
INJURED BODY PARTS	WITNESS NAME:		WITNESS PHONE: () () ()
	WITNESS ADDRESS:		CITY: STATE: ZIP CODE:
NATURE OF INJURY	<input type="checkbox"/> HEAD	<input type="checkbox"/> NECK	<input type="checkbox"/> ARM L R <input type="checkbox"/> LEG L R <input type="checkbox"/> FOOT L R
	<input type="checkbox"/> FACE	<input type="checkbox"/> BACK	<input type="checkbox"/> HAND L R <input type="checkbox"/> KNEE L R <input type="checkbox"/> TOE
DESCRIPTION	<input type="checkbox"/> EYE L R	<input type="checkbox"/> CHEST	<input type="checkbox"/> FINGER <input type="checkbox"/> ANKLE L R <input type="checkbox"/> OTHER
	<input type="checkbox"/> ABRASION	<input type="checkbox"/> BRUISE	<input type="checkbox"/> FRACTURE <input type="checkbox"/> FOREIGN BODY <input type="checkbox"/> BEE / WASP STING
CONDITIONS	<input type="checkbox"/> LACERATION	<input type="checkbox"/> SPRAIN	<input type="checkbox"/> BURN <input type="checkbox"/> HEAT INJURY <input type="checkbox"/> LOSS OF CONSCIOUSNESS
	<input type="checkbox"/> PUNCTURE	<input type="checkbox"/> STRAIN	<input type="checkbox"/> POISON IVY / OAK <input type="checkbox"/> COLD INJURY <input type="checkbox"/> OTHER
FACTS	<input type="checkbox"/> DEFECTIVE TOOLS OR EQUIPMENT <input type="checkbox"/> SLIPPERY OR UNSAFE SURFACE <input type="checkbox"/> COMBATIVE INJURY TO OFFICER		
	<input type="checkbox"/> POOR HOUSEKEEPING	<input type="checkbox"/> UNSAFE DESIGN OR CONSTRUCTION	<input type="checkbox"/> HAZARDOUS WEATHER OR ENVIRONMENT
CIRCUMSTANCES	<input type="checkbox"/> IMPROPERLY GUARDED EQUIPMENT	<input type="checkbox"/> HAZARDOUS STORAGE	<input type="checkbox"/> CONTACT WITH POISONOUS PLANTS, INSECTS, CHEMICALS, SKIN IRRITANTS
	<input type="checkbox"/> IMPROPER VENTILATION (DUST, FUMES, ETC.)	<input type="checkbox"/> HAZARDOUS DRESS OR APPAREL	<input type="checkbox"/> INVESTIGATION REVEALS THAT ACCIDENT BEYOND CONTROL OF INJURED
FACTS	<input type="checkbox"/> TAKING UNSAFE POSITION OR POSTURE	<input type="checkbox"/> UNSAFE LOADING, MIXING	<input type="checkbox"/> FAILURE TO OBSERVE SAFETY
	<input type="checkbox"/> USING UNSAFE EQUIPMENT	<input type="checkbox"/> FAILURE TO USE PERSONAL PROTECTIVE EQUIPMENT	<input type="checkbox"/> LACK OF TRAINING OR KNOWLEDGE
CIRCUMSTANCES	<input type="checkbox"/> MAKING SAFETY DEVICES INOPERATIVE	<input type="checkbox"/> WORKING ON MOVING OR DANGEROUS EQUIPMENT	<input type="checkbox"/> TRAINING EXERCISE
	<input type="checkbox"/> FAILURE TO SECURE OBJECTS	<input type="checkbox"/> DISTRACTING, TEASING OR HORSEPLAY	<input type="checkbox"/> OTHER
CIRCUMSTANCES	DESCRIBE ANY MECHANICAL, PHYSICAL, OR ENVIRONMENTAL CONDITION THAT CONTRIBUTED TO THIS OCCURRENCE:		
	DESCRIBE ANY PERSONAL FACTORS THAT CONTRIBUTED TO THIS OCCURRENCE:		
CIRCUMSTANCES	WHAT CORRECTIVE ACTION WILL BE TAKEN TO PREVENT RECURRENT:		
	WHAT AUTHORITIES WERE CONTACTED, IF ANY (i.e. police, fire, etc.):		CASE #:
CIRCUMSTANCES	TREATING MEDICAL FACILITY:		PHYSICIAN IF KNOWN:
	<input type="checkbox"/> NO MEDICAL TREATMENT	<input type="checkbox"/> MINOR: BY EMPLOYER	<input type="checkbox"/> MINOR: CLINIC / HOSPITAL <input type="checkbox"/> EMERGENCY CARE
CIRCUMSTANCES	SUPPLEMENTAL ATTACHED: YES NO		SIGNATURE: DATE:
	SAFETY / RISK MANAGEMENT PHONE: (317) 770-1878 FAX: (317) 770-6647 FORM HSDPM 26.1		



Worker's Compensation...

Example

Indiana Worker's Compensation First Report must be included in all exposure incident reporting

INDIANA WORKER'S COMPENSATION FIRST REPORT OF EMPLOYEE INJURY, ILLNESS State Form 34401 (R9 / 3-01)				FOR WORKER'S COMPENSATION BOARD USE ONLY		
Please return completed form electronically by an approved EDI process.				Jurisdiction	Jurisdiction claim number	Process date
NOTE: Your Social Security number is being requested by this state agency in order to pursue its statutory responsibilities. Disclosure is voluntary and you will not be penalized for refusal.						
EMPLOYEE INFORMATION						
Social Security number	Date of birth	Sex <input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Unknown	Occupation / Job title	NCCI class code		
Name (last, first, middle)		Marital status <input type="checkbox"/> Unmarried <input type="checkbox"/> Married <input type="checkbox"/> Separated <input type="checkbox"/> Unknown	Date hired	State of hire	Employee status <input type="checkbox"/> Paid Day of Injury <input type="checkbox"/> Salary Continued	
Address (number and street, city, state, ZIP code)			Hrs / Day	Days / Wk	Avg Wg / Wk	
Telephone number (include area code)			Wage \$	Per	<input type="checkbox"/> Hour <input type="checkbox"/> Day <input type="checkbox"/> Week <input type="checkbox"/> Month <input type="checkbox"/> Year <input type="checkbox"/> Other	
Number of dependents						
EMPLOYER INFORMATION						
Name of employer Hamilton County Board of Commissioners		Employer ID# 35-6000-151	SIC code	Insured report number		
Address of employer (number and street, city, state, ZIP code)		Location number	Employer's location address (if different)			
Attn: Safety and Risk Management Department 1717 East Pleasant Street Suite 150 Noblesville, IN 46060		Telephone number (317) 770-1976				
		Carrier / Administrator claim number	Report purpose code			
Actual location of accident / exposure (if not on employer's premises)						
CARRIER / CLAIMS ADMINISTRATOR INFORMATION						
Name of claims administrator Alternative Service Concepts		Carrier federal ID number	Check if appropriate <input type="checkbox"/> Self Insurance			
Address of claims administrator (number and street, city, state, ZIP code) PO Box 221558 Louisville, KY 40252-1558		<input type="checkbox"/> Insurance Carrier <input checked="" type="checkbox"/> Third Party Admin.	Policy / Self-insured number			
Telephone number 1-800-289-1060			Policy period		From To	
Name of agent		Code number				
OCCURRENCE / TREATMENT INFORMATION						
Date of Inj / Exp.	Time of occurrence <input type="checkbox"/> AM <input type="checkbox"/> PM	Date employer notified	Type of injury / exposure		Type code	
Last work date	Time workday began	Date disability began	Part of body		Part code	
RTW date	Date of death	Injury / Exposure occurred on employer's premises? <input type="checkbox"/> Yes <input type="checkbox"/> No	Name of contact		Telephone number	
Department or location where accident / exposure occurred			All equipment, materials, or chemicals involved in accident			
Specific activity engaged in during accident / exposure			Work process employee engaged in during accident / exposure			
How injury / exposure occurred. Describe the sequence of events and include any relevant objects or substances.						Cause of injury code
Name of physician / health care provider						INITIAL TREATMENT <input type="checkbox"/> No Medical Treatment <input type="checkbox"/> Minor: By Employer <input type="checkbox"/> Minor: Clinic / Hospital <input type="checkbox"/> Emergency Care <input type="checkbox"/> Hospitalized > 24 Hours <input type="checkbox"/> Future Major Medical / Lost Time Anticipated
Name of witness		Telephone number	Date administrator notified			
Date prepared	Name of preparer	Title	Telephone number			



**IF IT'S WET AND NOT YOURS,
DO NOT TOUCH IT WITHOUT
GLOVES!**



**KEEP
CALM**

AND

**DON'T TOUCH
BODILY FLUIDS**



In Review - OSHA Specifies

The following points must be covered in Bloodborne Pathogen and Universal Precautions training and therefore ALL employees should KNOW:

- Where to access a copy of the OSHA Bloodborne Pathogen Standard (Law) with explanation
- Where they can obtain a copy of their employer's exposure control plan and an explanation of the plan
- What actions to take and who to contact should there be an emergency involving blood or OPIM
- The steps to take should an exposure incident occurs, the method of reporting and the medical follow-up that will be made available
- The post-exposure evaluation and follow-up required of employer following an exposure incident
- Opportunity for all employees to have interactive Q & A session with trainer



Sources...

- Centers For Disease Control and Prevention
- HIV. Gov
- IOSHA
- Indiana State Department Of Health
- OSHA
- Medical Reserve Corps

