

BACKGROUND

Bloodborne pathogen (BBP) exposures remain a significant occupational health concern for healthcare workers. Human Immunodeficiency Virus (HIV), Hepatitis B Virus (HBV), and Hepatitis C Virus (HCV) are the primary pathogens of concern following occupational exposures. Recent institutional data showed an increase in reported BBP exposures, underscoring the need for greater awareness of exposure prevention, reporting requirements, and post-exposure management.

PURPOSE

The purpose of this knowledge enhancement project is to increase healthcare workers' awareness of BBP transmission risks, post-exposure management, and institutional reporting requirements, while emphasizing the importance of prompt reporting after occupational exposures.

METHODS

Current Centers for Disease Control and Prevention (CDC) guidance, occupational health literature, and institutional BBP exposure data were reviewed. Exposure trends, reporting timeliness, and exposure circumstances were analyzed. When exposures involved potentially preventable safety concerns, Employee Health collaborated with the Safety Department to provide timely education and reinforce safe work practices with affected employees.

KNOW THE RISK. TAKE THE RIGHT PRECAUTIONS. BLOODBORNE PATHOGENS RISK OF TRANSMISSION

Blood or other potentially infectious materials can transmit serious diseases. Understand the risk. Protect yourself and others.

PATHOGEN	RISK OF TRANSMISSION AFTER PERCUTANEOUS INJURY (NEEDLESTICK)	RISK OF TRANSMISSION AFTER MUCOUS MEMBRANE EXPOSURE (SPLASH TO EYES, NOSE, MOUTH)	ABOUT THE PATHOGEN
HEPATITIS B VIRUS (HBV)	HIGH RISK 6–30% (Average ~23–30%)	LOW RISK <0.1%	- Can cause acute and chronic liver disease, cirrhosis, and liver cancer. - Vaccine is available.
HEPATITIS C VIRUS (HCV)	MODERATE RISK ~1.8%	VERY LOW RISK <0.1%	- Can cause acute and chronic liver disease, cirrhosis, and liver cancer. - No vaccine, but curable with treatment.
HUMAN IMMUNODEFICIENCY VIRUS (HIV)	LOW RISK ~0.3% (1 in 300)	VERY LOW RISK <0.1%	- Attacks the immune system and can lead to AIDS. - Treatment can control the virus and prevent transmission.

ALWAYS PROTECT YOURSELF

- Wear appropriate PPE
- Use safe work practices
- Prevent needlesticks
- Wash hands thoroughly
- Get vaccinated (Hepatitis B)
- Report exposures immediately

STANDARD PRECAUTIONS WORK. YOUR SAFETY, THEIR SAFETY. EVERY TIME.

Learn more from trusted sources:
 CDC – www.cdc.gov/niosh/healthcare/risk-factors/bloodborne-infectious-diseases.html
 OSHA – www.osha.gov/bloodborne-pathogens

Sources: CDC/NIOSH Bloodborne Infectious Diseases in Healthcare Settings (2024) OSHA Bloodborne Pathogens Standard (29 CFR 1910.1030)

POST-EXPOSURE MANAGEMENT

ACT FAST. PROTECT HEALTH. PREVENT INFECTION.

Timely evaluation and follow-up after a blood or body fluid exposure can prevent infection and improve outcomes.

POST-EXPOSURE MANAGEMENT STEPS

- IMMEDIATE FIRST AID**
 - Wash affected area with soap and water.
 - Flush eyes, nose, or mouth with water or saline.
 - Do not squeeze or scrub.
- REPORT PROMPTLY**
 - Complete the electronic exposure reporting form on the Intranet.
 - If the exposure is not reported, Employee Health is not informed.
- MEDICAL EVALUATION**
 - Go to Trauma ER to have a physician give a professional medical evaluation.
 - Assess exposure type, source patient risk factors, and your health status.
- BASELINE TESTING**
 - Source patient testing (if available).
 - Exposed employee baseline labs as indicated.
- POST-EXPOSURE PROPHYLAXIS (PEP)**
 - Determine need for PEP based on risk assessment.
 - Start as soon as possible—ideally within hours.
 - Provide medication and education.
- FOLLOW-UP & MONITORING**
 - Complete follow-up testing as recommended.
 - Monitor for symptoms.
 - Document outcomes.

TIME MATTERS: The sooner an exposure is reported and evaluated, the more effective post-exposure interventions can be.

WHEN IS POST-EXPOSURE PROPHYLAXIS (PEP) RECOMMENDED?

PATHOGEN	WHEN PEP IS RECOMMENDED	TIME TO START PEP
HEPATITIS B VIRUS (HBV)	- If the source is HBsAg positive or unknown and the exposed person is not immune. - Provide Hepatitis B vaccine ± Hepatitis B Immune Globulin (HBIG) based on vaccination status.	AS SOON AS POSSIBLE Ideally within 24 hours.
HEPATITIS C VIRUS (HCV)	- No PEP medication is recommended. - Early identification of infection allows for timely evaluation and treatment if needed.	N/A Follow-up testing is recommended.
HUMAN IMMUNODEFICIENCY VIRUS (HIV)	- If the source is HIV positive or of unknown status (high risk). - Provide antiretroviral medications.	AS SOON AS POSSIBLE Ideally within 72 hours. Do not delay.

CDC www.cdc.gov/niosh/healthcare/risk-factors/bloodborne-infectious-diseases.html
OSHA www.osha.gov/bloodborne-pathogens
EPINet www.ice-epinet.org

TIME MATTERS. REPORT PROMPTLY.

The **sooner** an exposure is reported and evaluated, the **more effective** post-exposure interventions can be.

WHY TIMELY REPORTING IS CRITICAL

WHEN THE EXPOSURE IS NOT REPORTED				WHEN THE EXPOSURE IS REPORTED PROMPTLY		
DELAYED CARE Post-exposure medications (PEP) are most effective when started early.	HIGHER RISK Delay increases the risk of infection and complications.	INCOMPLETE EVALUATION Important testing and follow-up may be missed.	RISK TO OTHERS Undiagnosed infections can be unknowingly transmitted.	EARLY CARE Timely evaluation and treatment improve outcomes and effectiveness of PEP.	COMPLETE EVALUATION Appropriate testing, risk assessment, and follow-up care are ensured.	SAFER WORKPLACE Protects you, your coworkers, patients, and your community.

YOUR VOICE PROTECTS LIVES. REPORT BLOOD OR BODY FLUID EXPOSURES PROMPTLY.

- Every report helps us identify risks, prevent future exposures, and keep our workplace safe.
- Protect yourself. Protect others. Make timely reporting a priority.

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RESULTS

Institutional BBP exposure data identified trends in exposure type, reporting timeliness, and contributing factors. Reviews of exposure events demonstrated opportunities for intervention when preventable safety concerns were identified. Timely education and counseling were provided to affected to reinforce safe work practices, exposure prevention strategies, and reporting expectations

CONCLUSIONS

Bloodborne pathogen exposures require prompt recognition, reporting, and intervention to reduce occupational risk. Increased awareness regarding BBP transmission risks, reporting expectations, and exposure prevention strategies may support safer work practices and facilitate rapid occupational health follow-up.

REFERENCES

CDC/NIOSH. *Bloodborne Infectious Diseases in Healthcare Settings: Risk Factors*. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health.

OSHA. *Bloodborne Pathogens and Needlestick Prevention*. Occupational Safety and Health Administration. Bloodborne Pathogens Standard, **29 CFR 1910.1030**.

International Safety Center. *EPINet Report for Blood and Body Fluid Exposures*, 2024. EPINet surveillance data, 39 hospitals.