Blood Borne Viruses in the Workplace Code of Practice

Reviews and Revisions

Date	Reason	Reviewer	Next review date	Approved by
13/01/2016	Review	D Wealleans	January 2018	D Ford
Nov 2018	Update Northumbria logo	J Hall	November 2020	E Pritchard
30/07/2019	Review	A Swinburne	July 2021	E Pritchard

Introduction

Blood borne Viruses (BBV's) are viruses that some people carry in their blood and which may cause severe disease in certain people and few or no symptoms in others.

The main BBV's of concern are:

- Hepatitis B virus (HBV), hepatitis C virus and Hepatitis D virus, which all cause hepatitis, a disease of the liver.

- Human immunodeficiency virus (HIV) which causes acquired immune deficiency syndrome (AIDS), affecting the immune system of the body.

Risk of Transmission

Those persons deemed to be at risk due to their occupation are:

- Medical teaching and research staff
- Some laboratory staff
- Facilities Services Assistants
- Security staff
- Cleaning staff
- Grounds staff
- Plumbers
- First-aid workers

Blood borne pathogens such as Hepatitis B Virus, HBV can be transmitted through contact with infected human blood and other potentially infectious body fluids.

It is important to know the ways exposure and transmission are most likely to occur in your particular situation, be it providing first aid to a student in the classroom, handling blood samples in the laboratory, cleaning up blood from a hallway or picking up discarded syringes.

HBV is most commonly transmitted through:

- 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
- Contact with contaminated waste- especially in the case of hepatitis B, which can last in dried body fluids for as long as 7 days.

In most work or laboratory situations, transmission is most likely to occur because of accidental puncture from contaminated needles, broken glass, or other sharps; contact between broken or damaged skin and infected body fluids; or contact between mucous membranes and infected body fluids.

For example, if someone infected with HBV cut their finger on a piece of glass, and then you cut yourself on the now infected piece of glass, it is possible that you could contract the disease. Anytime there is blood-to-blood contact with infected blood or body fluids, there is a slight potential for transmission.

Unbroken skin forms an impervious barrier against blood borne pathogens. However, infected blood can enter your system through:

- Open sores
- Cuts
- Abrasions
- Acne
- Any sort of damaged or broken skin such as sunburn or blisters

Blood borne pathogens may also be transmitted through the mucous membranes of the

- Eyes
- Nose
- Mouth

For example, a splash of contaminated blood to your eye, nose, or mouth could result in transmission.

How to Avoid Contamination:

Gloves should be made of nitrile, rubber, or other water impervious materials.

If glove material is thin or flimsy, double gloving can provide an additional layer of protection. Also, if you know you have cuts or sores on your hands, you should cover these with a bandage or similar protection as an additional precaution before donning your gloves.

You should always inspect your gloves for tears or punctures before putting them on. If a glove is damaged, don't use it! When taking contaminated gloves off, do so carefully. Make sure you don't touch the outside of the gloves with any bare skin, and be sure to dispose of them in a proper container so that no one else will come in contact with them, either.

Remember to use universal precautions and treat all blood or potentially infectious body fluids as if they are contaminated.

Avoid contact whenever possible, and whenever it's not possible to avoid contact, wear the personal protective equipment identified in the activity risk assessment. Refer to the Personal Protective Equipment code of practice for details of the type and standard of equipment that should be used.

If you find yourself in a situation where you have to come in contact with blood or other body fluids and you don't have any standard personal protective equipment handy, you can improvise. Use a towel, plastic bag, or some other barrier to help avoid direct contact.

Hygiene Practices:

Hand washing is one of the most important (and easiest) practices used to prevent transmission of blood borne pathogens. Hands or other exposed skin should be thoroughly washed as soon as possible following an exposure incident. Use soft, antibacterial soap, if possible. Avoid harsh, abrasive soaps, as these may open fragile scabs or other sores.

Hands should also be washed immediately (or as soon as feasible) after removal of gloves or other personal protective equipment. Because hand washing is so important, you should familiarize yourself with the location of the hand washing facilities nearest to you.

Laboratory sinks, public restrooms, janitor closets, and so forth may be used for hand washing if they are normally supplied with soap. If you are working in an area without access to such facilities, you may use an antiseptic cleanser in conjunction with clean cloth/paper towels or antiseptic towelettes. If these alternative methods are used, hands should be washed with soap and running water as soon as feasible.

If you are working in an area where there is reasonable likelihood of exposure, you should never:

- Eat
- Drink
- Smoke
- Apply cosmetics or lip balm
- Handle contact lenses
- No food or drink should be kept in refrigerators, freezers, shelves, cabinets, or on counter tops where blood or potentially infectious materials are present.
- You should also try to minimize the amount of splashing, spraying, splattering, and generation of droplets when performing any procedures involving blood or potentially infectious materials, and you should NEVER pipette or suction these materials by mouth.

Needles:

- Needles or other sharps should not be bent, recapped, or moved except as noted below:
- Needles may be recapped only by using a mechanical device.

- Needles should be moved only by using a mechanical device or tool such as forceps, pliers, or broom and dustpan.
- Never break or shear needles.
- Needles should be disposed of in labelled sharps containers only.
- Sharps containers shall be closable, puncture-resistant, leak-proof on sides and bottom, and must be labeled or color-coded.
- When sharps containers are being moved from the area of use, the containers should be closed immediately before removal or replacement to prevent spillage or protrusion of contents during handling or transport.

Broken Glassware:

- Broken glassware that has been visibly contaminated with blood must be sterilized with an approved disinfectant solution before it is disturbed or cleaned up.
- Glassware that has been decontaminated may be disposed of in an appropriate sharps container: i.e. closable, puncture-resistant, leak-proof on sides and bottom, with appropriate labels.
- Broken glassware should not be picked up directly with the hands.
- Sweep or brush the material into a dustpan.
- Uncontaminated broken glassware may be disposed of in a closable, puncture resistant container such as a cardboard box or coffee can.

If you discover, or are informed of a discarded "sharp" the procedure in Appendix 1 of this document must be followed.

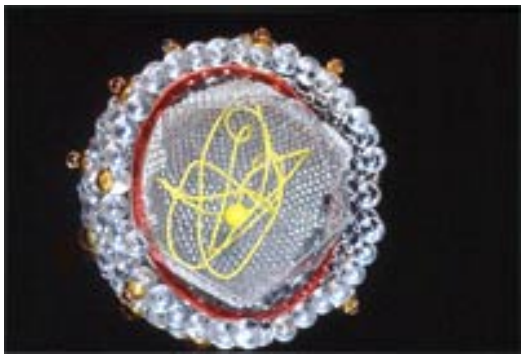
Exposure to body fluids:

In an emergency situation involving blood or potentially infectious materials, you should always use Universal Precautions and try to minimize your exposure by wearing gloves, splash goggles, pocket mouth-to-mouth resuscitation masks, and other barrier devices.

If you are exposed, however, you should:

- Wash the exposed area thoroughly with soap and running water. Use non-abrasive, antibacterial soap if possible.
- If blood is splashed in the eye or mucous membrane, flush the affected area with running water for at least 15 minutes.
- Report the exposure to your supervisor as soon as possible.
- You may also request blood testing or the Hepatitis B vaccination if you have not already received it.

Immunisation:



There is no treatment for Hep-B. Anyone experiencing acute illness as described above needs to rest and avoid alcohol, while their body fights off the virus. There is a vaccine for Hep-B which is available to all those considered to be at risk, including health care workers, laboratory workers, and those working with human secretions and blood products.

Hepatitis B vaccinations, including the course of 3 injections and the HBV booster for those having had the full course previously is as follows:

Vaccination 1

Vaccination 2 is given 4 - 6 weeks after vaccination 1. It is essential that this is given NO LATER than 6 weeks after the first or it will affect the efficacy of the course.

Vaccination 3 is given 6 months after the first vaccination

A blood test is taken after 2 months from the last vaccination to determine the blood titre level, and whether there has been a response to the vaccination programme.

If your titre is low or there has been no response it is advised that you have an additional booster vaccination, followed by another blood test.

If you are an employee of the University working with human blood, tissue or body fluids, please contact the Occupational Health Department to arrange a vaccination review.

APPENDIX 1

Reporting Procedures on Discovering Sharps

Upon discovery, or being informed of a 'sharp', all staff should follow this procedure:

1. Do NOT attempt to handle the 'sharp'.

2. Report the 'sharp' to your line manager or supervisor giving an accurate description of the 'sharp' and its location. If you cannot contact a line manager immediately, then report the 'sharp' directly to Security on 3999.

3. Where possible, arrange for the 'sharp' to be guarded or isolate the area until a member of Security arrives to deal with the situation.

4. In the event you have to leave the location before Security arrives, do not attempt to conceal or cover over the 'sharp'.

Emergency First Aid Procedure Following a Needle Stick Injury

If you pierce or puncture your skin with a **used** needle, follow this first aid advice immediately:

1. Encourage the wound to bleed by gently squeezing, DO NOT suck the wound.

2. Hold the wound under cold running water.

3. Wash the wound using running water and plenty of soap, DO NOT scrub the wound whilst you are washing it.

4. Pat the wound dry and cover it with a waterproof plaster or dressing.

5. Contact your Line Manager or Supervisor immediately and complete an Accident/Incident Report.

6. You should seek medical advice from your nearest A&E within one hour of sustaining the injury.