Infection Control

NHS
Worcestershire Health and Care
NHS Trust

Blood Borne Contamination Incident Guidelines

(includes management of bites, needlesticks and other contamination incidents)

(Linked to Infection Prevention and Control)

This guidance must be applied following an inoculation/skin piercing incident. It reflects national guidelines from Department of Health; General Medical Council; Royal College of Nursing and Health and Safety Executive. It sets out to promote adherence to best practice with regard to infection prevention and control and compliance with the Health and Social Care Act 2008 (updated 2015) in addition to promoting, so far as is reasonably practicable, that appropriate actions are taken to prevent blood borne contamination incidents and ensure that if they occur appropriate management can be implemented. These guidelines include information on actions:

- to minimise the risk of these injuries
- actions to take at time of injury
- actions to take following an injury (role specific)
- actions to take if a patient presents with an injury

Advice is available from the Infection Prevention and Control Team on 01386 502552 or out of hours from the on call medical microbiologist via switchboard at either Worcestershire Royal Hospital or the Alexandra Hospital Redditch.

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BLOOD BORNE CONTAMINATION INCIDENT GUIDANCE
(includes management of bites, needlesticks and other contamination incidents)

Document Type	Infection Prevention and Control Guidelines
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Responsible Group	Infection Prevention and Control Committee
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Learning and Development

Worcestershire Health and Care NHS Trust recognises the importance of ensuring that its workforce has every opportunity to access relevant training. The Trust is committed to the provision of training and development opportunities that are in support of service needs and meet responsibilities for the provision of mandatory and statutory training.

All staff employed by the Trust are required to attend the mandatory and statutory training that is relevant to their role and to ensure they meet their own continuous professional development.

QUICK REFERENCE GUIDE

For quick reference the guide below is a summary of actions required. This does not negate the need for the people involved in the process to be aware of and to follow the detail of this policy.

1. Wherever possible the use of sharps should be avoided and safer devices used where appropriate. Sharps injuries and contamination incidents should be prevented wherever possible by appropriate use and implementation of standard precautions such as good hand hygiene; appropriate use of personal protective equipment (PPE) (e.g. gloves), safe handling and disposal of needles and other sharp instruments, appropriate management of spillages and handling and disposal of waste. Health and Safety (Sharp Instruments in Healthcare) Regulations 2013 outlines the need to avoid the unnecessary use of sharps; use of safer sharps which incorporate protection mechanisms; prevent recapping of needles; placement of secure containers and instructions for safe disposal of medical sharps close to the work area. All staff are responsible for promoting and ensuring compliance.

2. After a needlestick injury or other type of sharps injury (e.g. bite, blade) or contamination/inoculation incident there is a risk of transmission of blood borne viruses (BBV) including Hepatitis B, Hepatitis C and Human Immunodeficiency Virus (HIV) from an infected patient (source) to health care workers (and vice versa to a lesser extent). It is imperative that incidents are managed correctly.

3. After a sharps injury or contamination/inoculation incident: allow the puncture site to bleed; wash the wound/exposed area with soap and water; in the case of a splash to the eyes, irrigate eyes with sterile water (before and after contact lens removal) for splashes to the mouth rinse thoroughly with drinking quality water. In hours, inform Occupational Health, out of hours attend an open MIU or A&E for further assessment. Inform manager and report incident on electronic reporting system.

4. All incidents that are reported for medical review (MIU, A&E or Occupational Health) will be fully assessed and managed as set out in this guidance. This will include a risk assessment of the incident, blood sample collection for long term storage from the injured individual and arrangement of a BBV virus screen from the source patient if known. Affected Trust staff should contact Occupational Health at the time of injury or on the next working day to arrange final review and follow up in addition to medical management at time of injury.

5. If the source patient is known to be HIV positive or at high risk of HIV, the recipient must be assessed for the provision of HIV Post Exposure Prophylaxis (PEP). If the sharps injury is 'high risk' (deep injury; visible blood on the device causing injury) and the source is HIV positive or at high risk of HIV, PEP will be prescribed. This will be done at time of medical review in A&E or MIU and is overseen by the on call medical microbiologist, information is included in this guidance for staff information and counselling.

6. If HIV PEP is required, timing is crucial and ideally it should be started within 1-2 hours of the incident but can be given later (it is generally not recommended beyond 72 hours post exposure). Overall, however, the risk of acquiring HIV infection following occupational exposure to HIV-infected blood is low (approximately 1 in 300).

7. If the source patient is a carrier of hepatitis B, the recipient must receive a booster dose of Hepatitis B vaccine or, if unvaccinated, must commence an accelerated course of hepatitis B vaccine and be considered for Hepatitis B immunoglobulin, recommendations contained within guidance.

8. There is a requirement for the Trust to liaise with the Health and Safety Team if the incident involves a source patient with a known blood borne virus and with the Health and Safety Executive (HSE) via Reporting Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) and to Public Health England.

PLEASE ALSO REFER TO FLOW CHART POSTER

Blood Borne Contamination Incident Policy for use in Worcestershire Health and Care NHS Trust

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A FLOW CHART POSTER ACCOMPANIES THIS GUIDANCE

Introduction

This protocol and guidance applies following an inoculation/skin piercing incident or any incident involving potential transmission of blood borne viruses to Worcestershire Health and Care Trust staff and to assist in the management of patients who present within this type of injury within a Trust setting. It does not apply to staff employed in General Practice, care home or school settings unless they are an employee of the Trust however key principles of management must be adopted. If cases such as these and in all other non Trust staff presenting with this type of injury including local authority staff, emergency service workers or members of the public present they should be managed as per principles of this document (see Annex 1) which relates to the management of injuries within Minor Injuries Unit settings.

This protocol reflects the current national guidelines (Department of Health 1997, 2008, UK Health Departments 1998 and 2000, Medical Devices Agency 2001 and RCN 2001) and aims to ensure that risks of occupational exposure to infection are minimised. For this purpose action to be taken by the member of staff, Occupational Health Departments, A&E/Minor Injuries Unit, Pathology Department and clinical staff are described.

A blood borne contamination incident involves **any** exposure to blood or body fluid from:-

- A sharps injury
- A bite injury
- Splashing into the eyes or mouth
- Contamination of broken skin

These incidents **must always** be properly followed up because of the risk of infection from blood borne viruses. Wilson (2019).

The principles of this guidance should be applied to all inoculation/skin piercing or mucous membrane contamination incidents that present in Minor Injuries Unit.

Responsibilities

- It is the individual member of staff's responsibility to prevent such incidents where possible by following infection prevention and control measures and using the personal protective equipment provided including consideration of safer sharps.
- It is the ward/departmental manager's responsibility to ensure adequate training and provision of appropriate personal protective equipment and equipment including safety devices and access to the relevant guidance to reduce the risk of exposure occurring.

Measures to reduce the risk of blood borne contamination incidents occurring are detailed on page 3 and should be part of routine practice for all staff. New products are also available which can reduce the risk of a sharps injury. These devices incorporate safety features designed to:-

- Provide a barrier between the hands and needle after use (automatically retracting finger/heel lancets).
- Allow the clinicians hand to remain behind the needle at all times (needles and syringes with integrated safety devices).
- Remain in place during and after disposal (vacutainer barrel and needle to be disposed of as a single unit).
- Be simple and self evident to operate and require no training.

All those involved in the management of inoculation, skin or mucous membrane exposure with blood or body fluids contaminated with blood must follow the procedure outlined in the following policy.

Measures to reduce the risk of blood borne contamination incidents/needle stick type injuries occurring in daily practice.

Before use

- All sharps boxes should be CE marked and conform to British Standard 7320 UN Standard 3291.
- Ensure the sharps box is correctly assembled and labelled with the department, date and person who assembled it.
- Appropriately sized boxes should be available at all locations where sharps are used. They should be placed on a level surface, bracketed to trolleys or mounted on walls at shoulder height. Sharps boxes must be stored away from the public.
- If being transported by community staff, sharps boxes should be transported in a closed position and stored safely in the boot of a car, brackets are available to secure bins.
- Boxes should be taken to the point of use.
- Safety devices should be considered where possible.

During use

- Staff should be competent in the procedure that they are carrying out.
- Appropriate protective clothing should be worn.
- No attempts should be made to re-sheath needles prior to disposal.
- Where needles are required to be removed from a syringe, an appropriate device should be used e.g. on the sharps bin, if possible needles and syringes (including vacutainers) should be discarded as a single unit.
- Close sharps box opening in between each use. Never move an open sharps box.
- When carrying sharps boxes always use the handle.

After use

- Disposal is the responsibility of the user and should be immediately after use into an approved container.
- Fill sharps box to the fill line only – never overfill the box or decant sharps into another box.
- Do not leave full sharps boxes for disposal by other staff.
- If a sharp has been accidentally dropped it must be recovered and disposed of properly. If the search is unsuccessful the individual should ensure that other people using the area are informed so they can take care. It is particularly important to notify cleaning staff of the possible danger. The person in charge of the area should be notified and a record kept until the sharp has been found and properly disposed of.
- The container must be locked and labelled prior to disposal. It must be stored in a secure place whilst awaiting collection for incineration.

Risk Reduction in Surgical/Dental Procedures - The risk of exposure to blood and body fluids is increased during surgery and invasive procedures:-

- Avoid passing sharp instruments by hand.
- Only one person at a time should have contact with sharps.
- Use a neutral area to reduce the risk when passing instruments.
- Do not leave sharps exposed in the work place.
- Use instruments not fingers to retract and hold tissues.
- Use instruments to handle needles and remove sharps.
- Aim sharps away from yourself.
- Remove sharp suture needles before tying suture.
- Use instruments to tie sutures not fingers.
- Use blunt needles, clips and blades where possible.

SECTION ONE – ACTIONS **A. Action to be taken by Member of Staff**

1. INOCULATION INJURY	1. SPLASHES TO MOUTH OR EYES
• Encourage the wound to bleed. • Do **not** suck the wound. • Wash thoroughly with soap and water. (Do **not** use an alcohol swab or gel) • Cover with a sterile waterproof dressing.	• Rinse mouth thoroughly with plenty of running water. • Irrigate eyes thoroughly with sterile water, if relevant this should be before and after contact lens removal.

2. Note identity and diagnosis of source patient involved, (if known).

3. Report incident to manager or senior member of staff present, in order that a risk assessment of the source patient can be undertaken.

4. Ensure completion of electronic Trust incident report.

5. Refer to Fact Sheet for further information (Appendix 5).

Immediately following the incident contact the Trust's Occupational Health Department at;

Working Well Centre, Newtown Road, Worcester WR5 1JF

Tel 01905 760963 or 01905 760694 internal 34752 or 34757

Email: wah-tr.OccupationalHealth@nhs.net

Out of hours i.e. evenings, weekends and public holidays the member of staff should attend their nearest A&E or Minor Injuries Department at any of the following:

Worcestershire Royal Hospital (A&E)
Alexandra Hospital, Redditch (A&E)
Kidderminster Hospital (not open 24 hours a day) (MIU)
Evesham Community Hospital (not open 24 hours a day) (MIU)
Malvern Hospital (not open 24 hours a day) (MIU)
Tenbury and District Community Hospital (MIU)

PLEASE NOTE: It is the responsibility of every member of staff to know their Hepatitis B immune status, so that in the event of an inoculation incident they will be able to give this information to staff overseeing their management.

Risk Assessment of the Injury to Assist Staff in their Actions (see Appendix 2)

Percutaneous/mucous membrane exposure i.e. blood or blood stained body fluids involved: • Needlestick injury. • Bone fragment penetration. • Human bite where skin breaks contaminated with source blood. • Exposure of broken skin abrasions, cuts, lacerations, eczema. • Splash exposure to mucous membrane e.g. the mouth or eye.	**SIGNIFICANT** Report and take immediate action.
• Exposure to stale/dried blood or body fluids e.g. needle found in a rubbish bag or other unknown source. Proceed as above and report to OH for appropriate follow up including Hepatitis B.	**MODERATE** Report, Hep B follow up.
Blood in contact with intact skin • Bites/Scratches where no exchange of blood. • Exposure of worker to other body fluids not contaminated with blood i.e. urine; faeces; saliva; vomit. • Needlestick or sharp which is clean and not contaminated with blood or body fluids.	**MINOR** Report, reassure recipient, no specific follow up.

SECTION ONE – ACTIONS **B. Action to be taken by the Occupational Health Department**

It is essential to obtain a detailed history of the incident and carry out a full risk assessment. The record of action (Appendix 1) must be completed.

1. Arrange follow up as below if significant risk of Hepatitis B, Hepatitis C or HIV infection.
2. Counsel member of staff regarding level of risk, taking into account employee's immunisation status.
3. A 10 ml (clotted) blood sample should be taken from the injured member of staff if not already taken and should be sent to the Pathology Department labelled ***"needlestick/skin piercing injury - for storage".*** **Ensure the name of the source of injury (this may be a patient or member of staff or unknown if this is the case) is clearly stated on the pathology request form under clinical details.** It should be noted that staff have the right to refuse this test, if they choose to do so. Counselling will be offered and the Occupational Health notes will record this and state they have declined to have blood taken.
4. Record clearly in the Occupational Health notes the factors that lead to the risk assessment conclusion.
5. **HEPATITIS B** Check member of staff's/injured persons Hepatitis B immunisation record. If necessary give Hepatitis B booster **(a single booster dose should be offered to all fully immunised individuals, 5 years after completion of the primary course)**, commence accelerated course and/or refer for immunoglobulin as appropriate. **If source is known or found to be Hepatitis B sAg positive** management will depend on immunisation status of exposed person (see Table below, from Immunisation against Infectious Disease (updated 2017)) available on line https://www.gov.uk/government/collections/immunisation-against-infectious-disease-the-green-book

	Significant exposure			Non-significant exposure	
HBV status of person exposed	**HBsAg positive source**	**Unknown source**	**HBsAg negative source**	**Continued risk**	**No further risk**
≤ 1 dose HB vaccine pre-exposure	Accelerated course of HB vaccine* HBIG × 1	Accelerated course of HB vaccine*	Initiate course of HB vaccine	Initiate course of HB vaccine	No HBV prophylaxis. Reassure
≥ 2 doses HB vaccine pre-exposure (anti-HBs not known)	One dose of HB vaccine followed by second dose one month later	One dose of HB vaccine	Finish course of HB vaccine	Finish course of HB vaccine	No HBV prophylaxis. Reassure
Known responder to HB vaccine (anti-HBs > 10mIU/ml)	Consider booster dose of HB vaccine	Consider booster dose of HB vaccine	Consider booster dose of HB vaccine	Consider booster dose of HB vaccine	No HBV prophylaxis. Reassure
Known non-responder to HB vaccine (anti-HBs < 10mIU/ml 2–4 months post-immunisation)	HBIG × 1 Consider booster dose of HB vaccine A second dose of HBIG should be given at one month	HBIG × 1 Consider booster dose of HB vaccine A second dose of HBIG should be given at one month	No HBIG Consider booster dose of HB vaccine	No HBIG Consider booster dose of HB vaccine	No prophylaxis. Reassure

*An accelerated course of vaccine consists of doses spaced at zero, one and two months.
A booster dose may be given at 12 months to those at continuing risk of exposure to HBV.
Source: PHLS Hepatitis Subcommittee (1992).

PLEASE NOTE: Immunoglobulin should be given to Hepatitis B vaccine non-responders if the source is known or found to be Hepatitis B sAg positive.

6. **HEPATITIS C** If **source patient is Hepatitis C positive**, arrange future samples from member of staff: EDTA blood sample for PCR at 6 and 12 weeks and clotted blood sample at 12 and 24 weeks for anti-HCV.

   If **source patient is unknown treat** as if possible Hepatitis C. Risks linked to HIV and Hepatits B will also require assessment and will depend upon the circumstances of the injury. For example, the risk where injury occurs as a result of needles discarded in the community containing old dried blood is significantly lower than incidents involving fresh blood. **For all unknown sources arrange blood samples for the injured member of staff as for Hepatitis C positive source patient.** If source **known not to be infected with Hepatitis C** then baseline serum from member of staff will be stored. Obtain follow up serum if signs or symptoms of liver disease develop.

7. **If source patient known or strongly suspected to be HIV positive**, post exposure prophylaxis (PEP) for the member of staff should be considered (see below). Follow up serology will be co-ordinated via Sexual Health Services. If appropriate, especially if a new diagnosis of HIV infection is made, the source patient should also be referred to the Genito-urinary medicine clinic. Contact details must be obtained from the patient and referral will be made on the next working day by one of the consultant microbiologists.

8. Counsel member of staff if appropriate regarding level of risk, taking into account their immunisation status. Further support or advice may be needed.

9. Ensure that incident has been reported on Trust electronic system.

10. If appropriate, take the opportunity to discuss issues linked to safe practice, avoidance of such incidents and the use of personal protective equipment. Inform Trust Infection Prevention and Control Team on 01386 502552 or ext. 32552 of any issues where clinical practice requires further review or consideration. Ensure member of staff has fact sheet for information (Appendix 5).

All blood borne/body fluid contamination incidents will require immediate attention as treatment may need to be instigated within a very short period of time and must therefore be fast tracked for assessment and management.

1. It is essential to obtain a detailed history of the incident and carry out full risk assessment. The record of action taken (see Appendix 1) must be completed and risk assessment outcomes documented on clinical record.
2. A 10 ml (clotted) blood sample should be taken from the injured member of staff if not already taken and should be sent to the Pathology Department labelled ***"needlestick/skin piercing injury - for storage".*** **Ensure the name of the source of injury (this may be a patient or member of staff or if unknown if this is the case) is clearly stated on the pathology request form under clinical details.** It should be noted that staff have the right to refuse this test, if they choose to do so.
3. Check member of staff's/injured persons Hepatitis B immunisation record. If necessary give Hepatitis B booster **(a single booster dose should be offered to all fully immunised individuals, 5 years after completion of the primary course)**, commence accelerated course if not vaccinated and/or refer for immunoglobulin as appropriate. **If source is known or found to be Hepatitis B sAg positive** management will depend on immunisation status of exposed person (see Table on page 5, from Immunisation against Infectious Diseases (updated 2017) available on line). The decision for post exposure treatment should be based on the risk assessment and history of immunisation status. If source is known or found to be Hepatitis B sAg positive, management will depend on immunisation status of exposed person (see table in section C) from green book.
4. If a significant risk for **Hepatitis C** is identified or the source patient is unknown it is essential that the relevant Occupational Health department for the member of staff is informed (if injury relates to a member of the public their GP must be informed) of need for follow up blood tests to include EDTA blood sample for PCR at 6 and 12 weeks and clotted blood sample at 12 and 24 weeks for anti-HCV.
5. If a significant risk of possible HIV infection is identified via the risk assessment of the source patient taking into account the type of exposure (Appendix 1 and 2), the on call designated person **MUST** be contacted **IMMEDIATELY** for advice on the appropriate course of treatment/action to be taken.
   NB: Pregnancy testing if appropriate.

   DESIGNATED PERSON:- On call medical microbiologist.
   Contact via switchboard at either:- Worcestershire Royal Hospital
   or Alexandra Hospital, Redditch
6. When Post Exposure Prophylaxis for HIV (Appendix 3) is recommended and this has been agreed, it should be administered within 1-2 hours of exposure if possible (Appendix 4 details telephone record sheet; Appendix 6 is a fact sheet for staff; Locations of PEP are detailed in Appendix 8). It is generally not recommended beyond 72 hours post exposure.
7. Support and information must be made available to the member of staff (Appendix 5 details a fact sheet and Appendix 7 provides contact for support).
8. Advise the member of staff to notify their Occupational Health Department (OHD) themselves on the next working day or leave their details on the answerphone. This enables the OHD to ensure that the appropriate course of action has been taken. MIU staff where it is a member of Trust staff injured should also inform Occupational Health of the actions taken.

SECTION ONE – ACTIONS **D. Action to be taken by Manager/Senior Member of Staff**

Ensure that member of staff has received appropriate first aid treatment, including referral to MIU A&E and/or Occupational Health and that a 10ml (clotted) blood sample has been taken. (*ref section C)*.
Counselling and support are available (Appendix 7).

1. Undertake initial risk assessment of the source patient for Hepatitis B, Hepatitis C and HIV infection using the questionnaire in Appendix 2. The risk assessment must be documented in the patient notes. It should be explained to the patient that investigation for all these viruses is routine after an inoculation incident.

2. Arrange for 10ml (clotted) blood sample from source patient with consent for Hepatitis B, Hepatitis C and HIV testing. (This must be cross referenced to member of staff's blood sample).

3. The patient's clinical team must be contacted as a priority to take a blood sample from the source patient, with consent, for serological testing for Hepatitis B, C and HIV. Consent must be obtained, and the request form must specifically mention HIV, and bear a legible signature.

4. If the assessment identifies the source patient as providing a risk of infection with a blood borne virus, the Medical Microbiologist and source patients medical staff must be contacted immediately.

5. Notify the A&E Team, MIU staff or Occupational Health Adviser treating the injured member of staff of the risk assessment outcome immediately.

6. Ensure the incident has been reported on Trust electronic system.

7. Keep an appropriate record of all action taken in the source patient's notes.
The following details should be noted;

- A brief description of the incident.
- Identity of the injured staff member.
- Source patient risk assessment undertaken and either no risk identified or clinical team notified for further assessment.

8. If the source patient is unknown;

- Undertake a risk assessment for the likelihood of a high risk source for Hepatitis B, C or HIV, ensure A&E, MIU or Occupational Health Advisor are aware.
- Always treat as potential risk for Hepatitis B and Hepatitis C and advise A&E, MIU or Occupational Health Advisor to arrange for blood samples from staff at 6, 12, and 24 weeks for Hepatitis C in addition to a Hepatitis B booster/rapid course of vaccine if indicated.
- If specific risk factors exist and the contamination/inoculation injury is considered to be high risk e.g. hollow bore needle likely used for IV drugs or contaminated with visible blood, ensure that the team overseeing management of the incident is informed.

Please reassure both staff and source patient that the incident will be dealt with in strictest confidence at all times.

SECTION ONE – ACTIONS E. Action to be taken by Clinical Staff (Doctor/Dentist) involved in the care of the source patient where a risk of blood borne infection has been identified.

All action taken **must** be documented in the source patients notes.
It is essential that the Medical Microbiologist is involved in the following process.

1. Undertake further assessment of the source patient to confirm there are specific risk factors for potential infection with a bloodborne virus.

2. Ensure that a 10ml clotted blood sample is taken with verbal consent from the source patient for testing of Hepatitis B, Hepatitis C and HIV infection and awareness for the reason for the test and consent is documented.

If the patient refuses testing, is unable to give or withholds consent because of mental illness, disability or other reason, advice should be sought from a medical consultant in Microbiology, Infectious diseases or genito-urinary medicine/sexual health services. Staff within the team that are managing the injured member of staff must be informed of this and consultant staff will then consider the guidance offered in *Serious Communicable Diseases* issued by the General Medical Council and supported by GMC (1998; 2008 and 2013).

If appropriate, PEP may be offered to the injured person (member of staff) until consent for source patient testing has been obtained and the result is known or a detailed assessment of the severity of the health risk can be undertaken with input from appropriate specialists.

3. The specimen should then be sent to the Pathology Laboratory for testing and storage. **Ensure the name of the injured staff member is clearly stated on the specimen form under the clinical details section.**

4. Counselling and support are available from specialists listed in Appendix 7.

5. Arrange appropriate medical follow up and counselling for the source patient if their blood sample is positive for Hepatitis B, C or HIV infection. This should be via Genito-urinary Medicine Clinics (Sexual Health Clinics).

PLEASE NOTE: If the healthcare worker sustaining the injury is one of the clinical staff (doctor) involved in the care of the source patient, it is preferable the above action is taken by a colleague however it is acknowledged that within community settings this may not always be possible.

SECTION ONE – ACTIONS **F. Action to be taken by the Laboratory**

1. Any specimen received for investigation following needlestick accident should be given the code NSI and cross referenced to ensure source and injured person can be matched if both samples received.
2. All specimens requesting storage following NSI should be retained for a minimum of 6 months but generally for 2 years.

SECTION TWO

Review Process Each injury reported on electronic incident report system will be followed up and reviewed to enable trends linked to cause to be identified and action taken. Summary data will be reported to Health and Safety Committee (all incidents reported) and Infection Prevention and Control Committee if linked to infection or lack of standard precautions. A review of practices and knowledge for clinical staff is included in the infection prevention and control audit programme.

Training in the management of inoculation incidents and measures to prevent them is included by the Infection Prevention and Control Nurses on induction and during ongoing training for relevant staff groups, specific training is also available for Trust MIUs.

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This policy was initially developed by a working party with representatives from the Worcestershire Acute Hospitals NHS Trust and other NHS Health Providers in Worcestershire. It has been added to and updated and remains consistent with secondary care guidance in Worcestershire.

STRICTLY CONFIDENTIAL – BLOOD BORNE CONTAMINATION INCIDENT

RECORD OF ACTION TAKEN BY MINOR INJURIES UNIT STAFF, ASSESSING MEDIC OR OCCUPATIONAL HEALTH DEPARTMENT

NAME.....**D.O.B**.....

WARD/DEPT.....

STAFF HEP B STATUS.....

If known; **SOURCE PERSON I.D NAME**.....

SOURCE PERSON NHS NO.....**D.O.B**.....

RISK ASSESSMENT (please delete those not relevant)

Type of injury;

1) Percutaneous injury (from needles, instruments, bone fragments, etc)

2) Exposure of broken skin (abrasions, cuts, eczema, etc)

3) Exposure of mucous membranes including the conjunctivae of the eye.

Comments

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High risk body fluid involved	**Low risk body fluid involved**
• Blood • Amniotic Fluid • Vaginal Secretion • Semen • Human Breast Milk • Cerebral Spinal Fluid • Peritoneal Fluid • Pleural Fluid • Pericardial Fluid • Synovial Fluid • Saliva in association with dentistry • Unfixed tissues and organs	• Urine • Vomit • Saliva • Faeces ***Unless they are visibly contaminated with blood or other high risk body fluids.***

INDICATE ALL BODY FLUIDS INVOLVED ON ABOVE TABLE AND REFER TO RISK MATRIX IN APPENDIX 2 FOR FURTHER DETAILS

NAME.....**D.O.B**.....

1.	Consent obtained for HBV/HCV testing	Yes/No
2.	Source person (patient) risk assessment for HIV completed using tool	Yes/No
3.	Source person identified as a risk	Yes/No
4.	Consent for testing for HIV – (source person)	Yes/No
5.	Source person's blood taken for Hepatitis B, C and HIV (if known)	Yes/No
6.	If source patient unknown, risk assessment undertaken for BBVs	Yes/No
7.	Staff blood taken for storage	Yes/No
8.	Staff consent obtained for HIV test if applicable	NA/Yes/No
9.	Referral to Occupational Health and/or appropriate Team if HIV or Hepatitis C positive source patient result	Yes/No
10.	Post Exposure Prophylaxis (PEP) required based on risk and discussed	Yes/No
11.	PEP taken	Yes No
12.	Referral for follow up counselling (if appropriate)	Yes/No

13. Whether or not PEP is taken if HIV risk identified follow up blood tests arranged? NA/Yes/No

Signature of person making assessment.....

Print name.....Dept.....

Date.....

PLEASE ENSURE THE COMPLETED FORM IS RETURNED WITHOUT DELAY, SEALED IN AN ENVELOPE AND MARKED 'IN STRICT CONFIDENCE' TO:

Occupational Health Department, Working Well Centre, Newtown Road, Worcester

PLEASE INFORM OCCUPATIONAL HEALTH BY PHONE OF ASSESSMENT AND OUTCOME

☎ 01905 760963 internal 34752

Completion of this form and ensuring when completed by departments other than Occupational Health, that Occupational Health are informed to ensure relevant follow up. This information will be retained in the member of staff's personal record held by Occupational Health.

INOCULATION INCIDENT RISK ASSESSMENT CRITERIA **APPENDIX 2**

A **significant exposure** to risk of Blood Borne Virus transmission through an inoculation incident occurs where a **significant injury is associated with high risk material**.

1. Significant injuries include:

- Percutaneous injury involving visible damage to the skin with a needle or other sharp instrument sufficient to draw blood.
- Contact of blood or bodily fluid with:
  - mucous membranes of the eyes or the mouth OR non-intact skin.
- Human bite where source had visible blood round mouth.
- Scratch where source had visible blood around fingers/nails prior to scratching.

2. Non-significant injuries include:

- Superficial graze not breaking the skin.
- Exposure to intact undamaged skin.
- Exposure to sterile or uncontaminated sharps.

3. High risk materials include:

- Blood.
- Amniotic fluid.
- Cerebral-Spinal Fluid (CSF).
- Human breast milk.
- Pericardial, peritoneal, pleural, or other fluids from burns or skin lesions.
- Any other body fluid containing visible blood.
- Saliva in association with dentistry.
- Vaginal secretions / semen.
- Unfixed tissues and organs.

4. Low risk materials include (unless blood stained):

- Urine.
- Vomit.
- Saliva.
- Faeces.

5. Non-significant exposures do not require any further action, although opportunity should be taken to offer Hepatitis B immunisation if this has not already been undertaken.

6. If a **significant exposure** has occurred, the status of the source (if known) should be assessed with regard to Hepatitis B, C and HIV. It is the responsibility of the member of staff to oversee and fulfil the review process requirements.

RISK FACTORS INCLUDE FOR		
HEPATITIS B	**HEPATITIS C**	**HIV**
• Intravenous drug misuse • Men who have sex with men People with Hepatitis B infected mothers or sexual partners	• Receipt of unscreened blood or untreated plasma products in the UK prior to September 1991 and 1995 respectively. • Intravenous drug misuse. • Involvement as a healthcare worker in exposure prone (invasive) medical procedures in parts of the world where infection control procedures may have been inadequate, or with populations with a high prevalence of Hepatitis C e.g. Egypt.	• Intravenous drug misuse • Haemophilia or a related blood clotting disorder needing clotting factor concentrates. • People who have been sexually active in Africa (excluding North Africa), Far East or Indian Sub-continent. • Men who have sex with men • Patient or partner has received multiple blood transfusions, or received a blood transfusion abroad. • People with HIV infected mothers or sexual partners.

APPENDIX 3

USE OF ANTI VIRAL PROPHYLAXIS FOR POTENTIAL OCCUPATIONAL HIV EXPOSURE INCIDENTS

1. If risk assessment concludes that although not known positive HIV, there is a significant possibility of exposure, the need for prophylaxis should be considered.

2. **The following action should only be taken after consultation with the designated person on call (previously identified on page 8 of this document (Consultant Medical Microbiologist). It is therefore essential that they are contacted without delay whenever the possibility of occupational HIV exposure is being seriously considered either during office hours on 01905 763333 (ext 30673) or out of hours as the on call medical microbiologist via switchboard at either Worcestershire Riyal Hospital or the Alexandra Hospital, Redditch.**

3. Subject to informed verbal consent, obtain blood specimen from source patient and arrange for HIV testing.

4. Arrange specialist counselling for member of staff, (via a Consultant Physician, GU Consultant or other appropriate person). Apart from discussing the risk of infection from the incident, this should include discussion of sexual contact, pregnancy, breast feeding, and being a blood, semen or organ donor in the period until follow up blood tests show that infection has not occurred.

5. Subject to informed written consent (in Occupational Health record), obtain blood specimen from member of staff and arrange for storage.

6. A health care worker will not normally be required to modify their work practices after such an incident, pending results of the follow up blood tests.

7. Initial prophylactic treatment should include the following:

   Truvada (tenofovir 245mg and emtricitabine 200mg) once daily
   AND Raltegravir (400mg) twice daily

8. The prophylaxis should ideally be initiated **within one or two hours** of the incident occurring, although undefined benefit may result from initiating therapy after a longer interval particularly in cases of high risk exposure. It is not generally recommended beyond 72 hours of exposure.

9. Ensure incident form is completed and relevant paperwork has been completed to demonstrate clinicial decisions and ownership.

PLEASE NOTE: Use of Drugs in Pregnancy
Department of Health guidance states “Pregnancy does not preclude the use of HIV PEP” and that “there have been no indications of particular problems for the babies of HIV-infected women who have become pregnant while already on antiretroviral medications, but it should be noted that there is limited information for some of the newer drugs”. Further discussion with Microbiology/ GU Medicine/Infectious Diseases Consultant is therefore recommended. MIU staff must ensure on discussion of PEP that information linked to pregnancy is obtained and communicated.

PLEASE COMPLETE BELOW IF SIGNIFICANT RISK INCIDENCE AND ON DISCUSSION PEP IS INDICATED

STRICTLY CONFIDENTIAL

Record of the telephone instruction to administer post exposure prophylaxis following inoculation injury

EXPOSED PERSON:

NAME: _____ DATE OF BIRTH: _____

ADDRESS: _____

_____

_____ TEL NO: _____

JOB TITLE (If appropriate): _____

SITE/WARD/DEPARTMENT (if appropriate): _____

If known:

SOURCE PERSON:

NAME: _____ DATE OF BIRTH: _____

NAME OF MICROBIOLOGY/GU MEDICINE/INFECTIOUS DISEASES CONSULTANT:

_____

DATE & TIME OF CONTACT WITH MICROBIOLOGY/GU MEDICINE/INFECTIOUS DISEASES CONSULTANT: _____

DATE: _____ TIME: _____

DETAILS OF CONVERSATION HELD: _____

_____

_____

PEP PACK ISSUED?: Yes/No

PEP pack contains: 5 Truvada (tenofovir 245mg/emtricitabine 200mg) labelled “take one tablet ONCE a day” **and** 10 x Raltegravir 400mg tablets labelled “take ONE tablet TWICE a day”.

NAME OF PERSON COMPLETING FORM: _____

DATE: _____ TIME: _____

NAME OF PERSON ADMINISTERING PRESCRIPTION: _____

DATE: _____ TIME: _____

PLEASE ENSURE THE COMPLETED FORM IS RETAINED WITH THE ED/MIU RECORDS (AND IF MEMBER OF STAFF, A COPY SUBMITTED TO THE OCCUPATIONAL HEALTH DEPARTEMNT WITHOUT DELAY). THIS WILL ENABLE RELEVANT FOLLOW UP TO BE ARRANGED

BLOOD BORNE CONTAMINATION INCIDENT – FACT SHEET **APPENDIX 5**

You have had an accident involving a patient's blood or body fluid which could affect you in the future. The Trust has put in place a system to make sure that any risks to you are minimised. This fact sheet describes what you must do, and what will happen over the next few weeks.

YOUR IMMEDIATE ACTIONS

- By the time you are reading this YOU will have already washed the area with lots of running water and applied a waterproof dressing if applicable. DO NOT suck the wound or clean with alcohol gel or an alcohol wipe.
- Tell your line manager/supervisor immediately.
- Ensure an electronic incident form has been completed.
- Make sure a specimen of blood is collected from you for storage (this is not tested) either by Occupational Health, Minor Injuries or A&E in case it is needed as a record at a later time.
- Contact Occupational Health, Working Well Centre, Newtown Road, Worcester WR5 1JF (Direct Dial: **01905 760694** or **01905 760963** internal **34752** or **34757** **Email**: wah-tr.OccupationalHealth@nhs.net).

WHAT WILL HAPPEN NEXT?

Your manager will make arrangements to trace the patient whose blood or body fluid has caused the contamination incident if we know who this is. The patient (the source) will then be investigated.

IF THE SOURCE IS KNOWN

- The source will be tested and you will be informed of the need for any further investigation of yourself. If the source is negative, nothing more need happen.
- If the source is positive for any blood borne virus, Occupational Health will arrange to investigate you further and refer you for appropriate advice and management.
- Remember that if you are a healthcare worker or exposed to blood and body fluids as part of your role, you will already have been offered immunisation against Hepatitis B. Your immunisation status will be known.

IF THE SOURCE IS UNKNOWN

You will be offered follow up for 6 months for a range of blood borne viruses through Occupational Health. It is however your responsibility to ensure that Occupational Health have up to date contact details, and to keep your appointments.

WHAT ABOUT HIV?

If the source is known and thought to be at risk of being HIV positive, you may be advised to take some protective tablets (PEP) for up to a month, depending on the degree of risk and the time interval between the incident and the treatment. This will be discussed in full with you at the time and is a decision based on risks which include those of the source patient and the circumstances and significance of your injury.

REMEMBER

Blood borne viruses are a significant risk to health. The chance that you will acquire one as a result of this incident is small but not negligible. You can help yourself by keeping in touch with Occupational Health and acting on their recommendations.

Take some time to think about the circumstances of your injury, whether it could have been avoided, whether you need to review your practices or whether there is something that could be changed to minimise the risk of further injuries in the future. You can discuss this further with the Infection Prevention and Control Nurses on 01386 502552 or ext 32552.

FACT SHEET FOR HEALTHCARE WORKER/PERSON EXPOSED TO HIV INFECTED BLOOD APPENDIX 6

1. Most occupational/needlestick or other inoculation injuries resulting in exposure to HIV do **not** result in transmission of infection.
2. There is evidence that antiviral drugs given **soon** after exposure significantly decrease this small risk but infections have still occurred despite these drugs being given.
3. Much of the information we have is based on single drug treatment with Zidovudine but evidence suggests that combination therapy with 2 or 3 drugs has better anti-viral activity. This updated protocol has been adopted in June 2010.
4. Knowledge about efficacy and toxicity of these drugs used in this way is limited.
5. If you are or if you may be pregnant, (ie more than 10 days since onset of last period and not using adequate contraception), then knowledge about toxicity is even more limited.
6. The final decision as to whether you take these drugs or not is yours.
7. Whether or not you take PEP you should consider careful medical follow-up and blood tests for HIV antibodies at baseline and in 3 and 6 months. This can be undertaken by the Occupational Health Department/Sexual Health Unit.
8. You may wish to consider other issues such as avoiding possible sexual transmission to your partner during the period of follow up and you can discuss these confidentially with staff at the Sexual Health Unit, Worcester on (01905) 681744 or contact staff in the Arrowside Unit, Redditch on (01527) 516398 (and ask for the Health Adviser or Sister).
9. **The months following the exposure incident may be a time of uncertainty and anxiety and you may need help – this is available from staff in the Occupational Health Department or via Sexual Health/Genito-Urinary medicine Teams based in Arrowside or Worcester.**

COUNSELLING SERVICES AVAILABLE FOR FOLLOW UP SUPPORT **APPENDIX 7**

This is a confidential service which is available to all staff. Any of the Specialists below may be accessed by members of staff regardless of which Trust they are employed by.

NB Referral available during office hours only and after a risk assessment has been completed.

Clinical Nurse Specialist
Worcestershire Royal Hospital
Charles Hastings Way
Worcester
WR5 1DD
Tel: 01905 763333 Ext: 33113 or 01905 733240 Mobile: 07778196778 or 07501487655

The Health Adviser
Arrowside Unit – Department of Genito-Urinary Medicine
Worcestershire Health and Care Trust
Woodrow Drive
Redditch
B98 7UB
Tel: 01527 516480 (direct line)
Tel: 01527 516398 (reception/appointments)

Senior Nurse
John Anthony Centre
Newtown Road
Worcester
WR5 1HN
Tel: 03001231731 or 01905 763333 ext. 38400

WORCESTERSHIRE HEALTH AND CARE TRUST SITES

EVESHAM COMMUNITY HOSPITAL Minor Injuries Unit.

MALVERN COMMUNITY HOSPITAL Minor Injuries Unit.

PRINCESS OF WALES COMMUNITY HOSPITAL Minor Injuries Unit.

HMP HEWELL Medical wing (for use in prison only).

TENBURY AND DISTRICT COMMUNITY HOSPITAL Minor Injuries Unit. Main IM drug cupboard.

WORCESTERSHIRE ACUTE HOSPITALS TRUST

ALEXANDRA HOSPITAL SITE Emergency Department.

WORCESTERSHIRE ROYAL HOSPITAL Emergency Department.

KIDDERMINSTER HOSPITAL Minor Injury Unit.

BLOOD BORNE CONTAMINATION INCIDENTS IN THE COMMUNITY including human bites and needle sticks

A blood borne contamination incident involves **any** exposure to blood or body fluid from:-

- A sharps injury
- A bite injury
- Splashing into the eyes or mouth
- Contamination of broken skin

These incidents **must always** be properly followed up because of the risk of infection from blood borne viruses. Wilson (2019).

These incidents are not uncommon in the community, many exposures result from people failing to dispose of used needles and syringes safely. The risk of acquiring a blood borne viral infection following exposure to infected blood is low but is obviously related to the carrier level within the locality. Epidemiological studies have indicated the average risk of acquiring an infection after an incident occurring when the source is known to be infected with a blood borne virus is as follows (cited in Damani 1997):-

Hepatitis B which is estimated to be between a 5-30% risk of infection
Hepatitis C which is estimated to be between a 3-10% risk of infection
HIV which is estimated to be between a 0.2-0.5% risk of infection.

The injured person may well be concerned about acquiring these infections. Hepatitis B is by far the greatest risk. However immunisation is available which considerably reduces the risk of actual infection occurring. The risk of Hepatitis C and HIV infection occurring is obviously a lot lower.

What to do:-

Assess the situation and carry out the necessary first aid

- If recent injury, encourage bleeding and cleanse wound thoroughly.
- Antibiotic therapy should be considered for human bite wounds that puncture the skin because of the possibility of bacterial infection.
- If the needle stick injury is caused by dirty needles found on the ground etc. ask about the person's tetanus protection.

Reassure

- Address any concerns that they may have regarding a blood borne infection. Above statistics can be used. If there is a significant risk of possible blood borne infection it may be appropriate to refer the individual to the counselling services listed in Appendix 7 of the Trust's Blood Borne Contamination Incident Policy relating to staff.

The source

- If there has been a significant exposure e.g. a deep injury, visible fresh blood on the device that caused the injury, and a source patient cannot be identified, the risk should be assessed on an individual basis. This will be by informed consideration of the circumstances of the exposure and the epidemiological likelihood of Hepatitis C or HIV in the source. In the vast majority of exposures it would be difficult to justify the use of anti-viral drugs/post-exposure prophylaxis (PEP).

Take blood from the injured person

- A 10ml clotted blood sample should be collected from the injured person – this is stored and not tested. (No test is appropriate immediately after the incident due to the incubation period of viral infections). The sample is therefore stored to be used in comparison with any future specimens should the injured person develop further symptoms.
- If the source is unknown or thought to be a high risk of being Hepatitis C positive or known to be infected with Hepatitis C future samples of blood will be needed from the injured person. This can be carried out by their GP and involves EDTA blood samples for PCR at 6 and 12 weeks and a clotted blood sample at 12 and 24 weeks for anti-HCV. If a blood sample is found to be positive appropriate anti-viral therapy may be commenced by the GP at this time.
- Only rarely is it possible to obtain blood from the source patient, as the majority of times it is impossible to identify this person. It is not appropriate to examine needles found in the community but arrangements should be made to ensure that they are disposed of promptly and safely.

Immunisations

- If the injured person has been previously immunised against Hepatitis B (e.g. some members of the emergency services, local authorities) ask about their immunisation status.
- If the immunisation status is not known or a long time has elapsed since last immunisation give Hepatitis B booster and advise that their immune status should be checked in two months by their GP.
- If known to be recently immune to Hepatitis B and there is no significant risk of other blood borne viral infections offer reassurance.
- If the injured person has never been immunised begin a rapid course of Hepatitis B vaccine given at 0, 1 and 2 months after the incident. The second and third doses can be given by the patients GP. A blood test to check vaccine response should be advised 2 months after last dose of vaccine.
- **Hepatitis B immunoglobulin** is rarely required in addition to Hepatitis B vaccine. It can be considered in high risk situations – e.g. a fresh bite or fresh blood inoculation incidents where the injured person is deemed to be at a high risk of having a blood borne virus. This needs to be discussed with the on call consultant medical microbiologist via switchboard at Worcestershire Acute Hospitals Trust.
- If a significant risk of HIV is identified the on call medical microbiologist must be contacted and the administration of PEP considered.

If the risk of the injured person acquiring a blood borne infection is high or staff are unsure what action to take the on-call medical microbiologist must be contacted immediately via the hospital switchboard.

REFERENCE

DAMANI N. 2019. *Manual of Infection Control Procedures*. Fourth Edition. Oxford University Press. Oxford.

WESTON D, BURGESS A, ROBERTS S. 2017. *Infection Prevention and Control at a Glance*. John Wiley and Son. Chichester.

WILSON J. 2019. *Infection Control in Clinical Practice*. Third Edition. Elsevier Limited.