
**Blood Borne Contamination Incident Policy for use in
Worcestershire non Acute NHS Settings**

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A FLOW CHART POSTER ACCOMPANIES THIS POLICY

A: Introduction

This policy applies following an inoculation/skin piercing incident to Worcestershire Community and Mental Health NHS Trust staff (until 31 March 2002) and staff employed by Wyre Forest Primary Care Trust. From 1 April 2002 the policy will apply to staff employed by the PCTs operational from that date and staff employed by the Worcestershire Mental Health NHS Trust. It does not apply to staff employed in General Practice. It reflects the current national guidelines (Department of Health 1997, UK Health Departments 1998 and 2000, Medical Devices Agency 2001 and RCN 2001).

The aim of the policy is 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 Department, 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 (1995).

The principles of this policy should be applied to all inoculation/skin piercing or mucous membrane contamination incidents that present in Minor Injuries Departments. This could include emergency services or local authority staff or members of the general public. Annex 1 gives advice to staff in Minor Injuries Departments about how to deal with these incidents.

Responsibilities

- It is the individual member of staff's responsibility to prevent such incidents where possible by following Infection Control measures and using the personal protective equipment provided.
- It is the ward/departmental manager's responsibility to ensure adequate provision of appropriate personal protective equipment and access to the relevant policies and procedures to reduce the risk of exposure occurring.

Measures to reduce the risk of blood borne contamination incidents occurring are detailed on page 2 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 Surgery - 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.

B Action to be taken by Member of Staff

1. INOCULATION INJURY <ul style="list-style-type: none">• Encourage the wound to bleed.• Do not suck the wound.• Wash thoroughly with soap and water. (Do not use an alcohol swab)• Cover with a sterile waterproof dressing.	1. SPLASHES TO MOUTH OR EYES <ul style="list-style-type: none">• Rinse thoroughly with plenty of running water.
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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 an accident/incident form.

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

at; Princess of Wales Community Hospital,
Stourbridge Road,
Bromsgrove.
☎ 01527 48 8145

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:

Alexandra Hospital, Redditch
Ronkswood Hospital, Worcester
Kidderminster General Hospital (not open 24 hours a day)
Evesham Community Hospital
Pershore Cottage Hospital (not open 24 hours a day)
Tenbury and District Community Hospital

NB: 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 the A & E staff treating them.

C 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 sent to the Pathology Department labelled "**needle stick/skin piercing injury - for storage.** **Ensure the name of the source of injury (this may be a patient or member of staff) 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. Check member of staff's Hepatitis B immunisation record. If necessary give Hepatitis B booster, commence accelerated course and/or refer for immunoglobulin.
6. If a significant risk of possible HIV infection is identified via the risk assessment of the source and type of exposure, the medical microbiologist must be contacted.
7. 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.
8. If source patient is unknown but likely to be high risk for Hepatitis C then arrange blood samples as for Hepatitis C positive source patient.
9. 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.
10. Counsel member of staff if appropriate regarding level of risk, taking into account their immunisation status. Further support or advice may be needed.
11. Ensure that an accident/incident form has been completed.
12. If appropriate, take the opportunity to re-address issues of safe practice, avoidance of such incidents and the use of personal protective equipment.

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

D. Action to be taken in A & E Department or Minor Injuries Unit

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.

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.
2. A 10 ml (clotted) blood sample should be taken from the injured member of staff as per section C.
 - An assessment will be made as to the need for Hepatitis B immunisation and/or Hepatitis B Immunoglobulin - See Appendix 1. The decision for post exposure treatment should be based on the risk assessment and history of immunisation status as follows;
 - **Hepatitis B Vaccine should be administered** if the member of staff:-
 - (a) Has no history of previous vaccination for Hepatitis B,
 - (b) Is part way through a vaccination programme,
 - (c) The date of the last Hepatitis B booster is more than 5 years.
 - If a significant risk for hepatitis C is identified it is essential that the relevant Occupational Health department is informed and blood tests are arranged as detailed on page 4.
 - If a significant risk of possible HIV infection is identified via the risk assessment of the source and 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.

may be contacted

via switchboard at either:- Worcester Royal Infirmary

or Alexandra Hospital

3. When Post Exposure Prophylaxis for HIV is to be given, it should be administered within 1-2 hours of exposure if possible (Appendices 4 & 6).
4. Support and information must be made available to the staff member (Appendix 5).
5. 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.

E. Action to be taken by Manager/Senior Member of Staff

Ensure that member of staff has received appropriate first aid treatment, including referral to the Occupational Health or Accident & Emergency Department and that a 10ml (clotted) blood sample has been taken. (*ref section C*).
Counselling and support are available (Appendix 3).

1. Arrange for 10ml (clotted) blood sample from source patient with consent for Hepatitis B and C testing. (This must be cross referenced to member of staff's blood sample.)
2. Undertake initial risk assessment for Hepatitis B, Hepatitis C or HIV using the questionnaire in appendix 2.
3. Notify the A & E Doctor or Occupational Health Adviser treating the injured member of staff of the risk assessment outcome immediately.
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. Ensure the accident/incident form has been completed.
6. Keep 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.
7. If the source patient is unknown,
 - Undertake a risk assessment for the likelihood of a high risk source for Hepatitis B, C or HIV.
 - If high risk for Hepatitis C (eg. penetrating hollow bore sharps injury with fresh blood very likely to be from an injecting drug abuser) then advise occupational health A&E department who will arrange for blood samples from staff at 6, 12, and 24 weeks.

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

F. 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/or HIV infection.
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 3.
5. Arrange appropriate medical follow up and counselling if the patient/client blood sample is positive for Hepatitis B, C or HIV.

If the source patient is unable to or refuses to give verbal consent for testing, the doctor treating the source patient should notify their A&E colleagues treating the member of staff. The on call medical microbiologist should be informed and will assist in any decisions. The guidance offered by the General Medical Council (1998) will then be considered.

NB: 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.

REFERENCES

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DEPARTMENT OF HEALTH. 2000. *HIV post exposure prophylaxis: Guidance from the UK Chief Medical Officers' Expert Advisory Group on AIDS*. July 2000. London.

GENERAL MEDICAL COUNCIL. 1998. *Protecting Patients, Guiding Doctors - Serious communicable diseases*. pg. 4 - 5. para. 8 - 11.

MEDICAL DEVICES AGENCY 2001. MDA SN2001(19) *The Safe Use and disposal of sharps*.

ROYAL COLLEGE OF NURSING 2001. *Be Sharp Be Safe*. RCN London.

UK HEALTH DEPARTMENTS. 1998. *Guidance for Clinical Health Care Workers: Protection against infection with blood borne viruses*. Wetherby.

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This policy was initially developed by a working party with representatives from the Worcestershire Acute Hospitals NHS Trust, Worcestershire Community and Mental Health NHS Trust and Worcester Health Authority.

STRICTLY CONFIDENTIAL – BLOOD BORNE CONTAMINATION INCIDENT

**RECORD OF ACTION TAKEN BY ACCIDENT & EMERGENCY OR
OCCUPATIONAL HEALTH DEPARTMENT**

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

WARD/DEPT.....

STAFF HEP B STATUS.....

If known;

SOURCE PERSON I.D.....

(Name & DOB)

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

.....

High risk body fluid involved	Low risk body fluid involved
<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Urine • Vomit • Saliva • Faeces <p><i>Unless they are visibly contaminated with blood or other high risk body fluids.</i></p>

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

1. Consent obtained for HBV/HCV testing Yes/No
2. Source person (patient) risk assessment for HIV done 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 (if known) Yes/No
6. If source patient unknown, risk assessment of situation undertaken for Hepatitis B, C and HIV. Yes/No
7. Staff blood taken for storage Yes/No
8. Staff consent obtained for HIV test Yes/No
9. Referral to appropriate Physician arranged by Occupational Health in the event of HCV or HIV positive result. Yes/No
10. Referral for follow up counselling (if appropriate) Yes/No
11. Post Exposure Prophylaxis (PEP) used 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, Princess of Wales Community Hospital, Bromsgrove**

Relevant follow up will be arranged and the information will be retained in the member of staff’s personal records.

HUMAN IMMUNE DEFICIENCY VIRUS (HIV) - ARE YOU AT RISK?

Certain viruses like HIV are carried in the blood. If a nurse, doctor or other health care worker is exposed to blood from an infected patient (e.g. a needlestick injury), then it is possible for the infection to be passed on.

Whenever a member of staff has an injury involving a patient's blood, it is routine practice to assess the risk of HIV infection in that patient. This is done to enable appropriate protection to be offered to the staff member, but it also helps patients to identify their own risks. If you have HIV, then it is important for you to know. Beneficial treatments are available, and you will be able to help other members of your family or other close contacts.

Please read the following carefully, and if you fall into any of the groups described, tell the person who has given you this card (you do not need to give specific details if you do not wish to). If you have any further questions, please discuss them with the staff.

1. You, or your partner, are known to be HIV positive.
2. You, or your partner, have ever injected yourselves with drugs.
3. You, or your partner, have been advised not to give blood.
4. You, or your partner, have had tattoos, acupuncture, or body piercing performed.
5. You, or your partner, have haemophilia or a related blood clotting disorder needing clotting factor concentrates.
6. You, or your partner, have been sexually active in Africa (excluding North Africa), Far East or Indian Sub-continent.
7. You, or your partner, have visited a STD, GUM, or VD clinic.
8. You, or your partner, have been homosexually active.
9. You, or your partner, have received multiple blood transfusions, or received a blood transfusion abroad.

If you think any of these risks apply to you, then we would like, with your consent, to test a sample of your blood for the human immune deficiency virus (HIV).

You do not have to do this, but if you have identified yourself to be at risk, it would be in your interest to be tested.

All tests are done in strict confidence, and you will be informed of the result.

**COUNSELLING SERVICES AVAILABLE FOR FOLLOW UP SUPPORT AND HIV
PRE-TEST INFORMATION.**

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.

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

Clinical Nurse Specialist HIV/Sexual Health
 Worcestershire Community and Mental Health NHS Trust
 1 Britannia Court
 Britannia Road
 Worcester
 WR1 3DF
Tel (01905) 681746
Mobile (07778) 196778

Clinical Nurse Specialist Sexual Health Unit
 Worcestershire Community and Mental Health NHS Trust
 1 Britannia Court
 Britannia Road
 Worcester
 WR1 3DF
Tel (01905) 681745
Mobile (0777) 5794930

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 5 of the Blood Borne Contamination Incident Policy). It is therefore essential that they are contacted without delay whenever the possibility of occupational HIV exposure is being seriously considered.**
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. (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. Prophylactic treatment *for an initial period of four weeks* should include the following;
 - Zidovudine 250mg, per oral, 12 hourly.
 - Lamivudine (3TC) 150mg, per oral, bd.
 - Indinavir (Protease inhibitor) 800mg, per oral, tds.
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 in cases of the highest risk exposure.
9. Ensure accident form is completed.

BACKGROUND INFORMATION POST EXPOSURE PROPHYLAXIS (PEP) AFTER OCCUPATIONAL EXPOSURE TO HIV

1. In a recent retrospective case-control study among health care workers (HCW's) Zidovudine post exposure prophylaxis was associated with a 79% decrease in the risk for HIV seroconversion after percutaneous exposure to HIV infected blood.
2. Failures of Zidovudine PEP have occurred.
3. The average risk for HIV infection from all types of reported percutaneous exposure to HIV infected blood is 0.3%.
4. This risk is increased for exposures involving:
 - i) a deep injury to the HCW
 - ii) visible blood on the device causing injury
 - iii) a device previously placed in the source patient's vein/artery
 - iv) a source patient with late stage HIV disease (i.e. high titre HIV)
5. The risk after mucous membrane exposure to HIV infected blood is approximately 0.1%.
6. The risk after skin exposure to HIV infected blood is < 0.1%.

The risk for skin contact is probably higher for contact that is:

prolonged
involves an extensive area
where skin integrity is compromised
involves a higher HIV titre

7. There is limited information on the potency and toxicity of antiretroviral drugs in uninfected persons receiving PEP.

In HIV infected patients combination therapy has greater antiretroviral activity than monotherapy without significant increased toxicity.

Zidovudine	250mg 12 hourly	-	consider in all regimens as only agent with data supporting efficacy as PEP. Best established drug with CNS penetration.
Lamivudine (3TC)	150mg bd	-	increases retroviral activity and is active versus Zidovudine resistant strains.

Adding a protease inhibitor further increases antiretroviral activity and should therefore be given as a matter of course where the risk assessment process identifies there is a significant risk of HIV exposure and prophylaxis is to be given.

The drug of choice is: Indinavir, 800mg, per oral, tds.

Other options include Saquinavir and Ritonavir which are not as readily available and in the case of Ritonavir are known to cause drug interactions and have a high incidence of short term adverse effects.

A shortage of data exists on **long term** toxicity of any of these drugs in persons not infected with HIV.

Zidovudine use in HCW's

Short term toxicity associated with higher doses includes

GIT symptoms (Gastro-intestinal tract)
fatigue
headache

Short term toxicity of other drugs in this situation is not well characterised

In HIV infected

- | | | |
|------------|---|--|
| Lamivudine | - | GIT symptoms |
| | - | Pancreatitis (rare) |
| Indinavir | - | GIT symptoms |
| | - | kidney stones (in 0.8% in 1st four weeks limited by increasing fluid intake to 1.5 litres per day) |
| | - | recent report of cases of haemolytic anaemia, possibly associated with use of Indinavir |
| | - | contraindicated with certain other drugs including some non sedating antihistamines |

In Pregnancy

Zidovudine in 2nd and 3rd trimesters and in early infancy is not associated with serious adverse effects in mothers/infants.

Safety of Zidovudine in 1st trimester)	
)	- limited data
Safety of other drugs during pregnancy)	

The drugs discussed above have all been licensed for the treatment of HIV infection but not for its prevention. For this reason they may be prescribed only for PEP on a "named patient" basis. As more anti-retroviral drugs are developed it is likely that other drugs or combinations of drugs will become the preferred regimen for PEP.

APPENDIX 5

**INFORMATION FOR HEALTHCARE WORKERS (HCW) EXPOSED TO HIV
INFECTED BLOOD**

1. Most occupational exposures to HIV do **not** result in infection transmission.
2. There is evidence that antiviral drugs given **soon** after exposure may decrease this 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 antiviral activity.
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 (i.e. more than 10 days since onset of last period and not using adequate contraception) then knowledge about toxicity is even more limited (especially drugs other than Zidovudine).
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 taken the Occupational Health Department.
8. You may wish to consider other issues such as avoiding possible sexual transmission to your partner during the period of follow up. The months following the exposure incident may be a time of uncertainty and anxiety and you may need help and you can discuss all these issues in confidence with staff listed in appendix 3.

LOCATION OF SUPPLIES OF POST-EXPOSURE PROPHYLAXIS (PEP)

WORCESTERSHIRE COMMUNITY AND MENTAL HEALTH TRUST SITES

EVESHAM COMMUNITY HOSPITAL Casualty Department

MALVERN COMMUNITY HOSPITAL PCC room

PERSHORE COTTAGE HOSPITAL In the Pharmacy refrigerator

HMP BLAKENHURST Medical wing (for use in prison only)

TENBURY AND DISTRICT COMMUNITY HOSPITAL Main IM drug cupboard

WORCESTERSHIRE ACUTE HOSPITALS TRUST

ALEXANDRA HOSPITAL SITE Emergency drug cupboard

WORCESTER HOSPITALS Ronkswood Hospital, Ward 15 (EMU)

KIDDERMINSTER HOSPITAL GP Centre till 22.00 hrs

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 (1995).

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 3 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 can not 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 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 medical microbiologists 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.N. 1997. *Manual of Infection Control Procedures*. GMM. London.

WILSON J. 1995. *Infection Control in Clinical Practice*. Bailliere Tindall. London.