Ashford and St. Peter's Hospitals
NHS Foundation Trust

MANAGEMENT OF BODY FLUID EXPOSURE (BFE)

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In consultation with: Consultant Virologist

Status: Approval date: December 2023

Ratified by: Control of Infection Committee

Review date: December 2026

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History

Issue	Date Issued	Brief Summary of Change	Author
1	September 2000		Dr Angela Shaw
2	October 2009	Review	Tina Kendall
3	October 2013	Review	Tina Kendall
4	March 2016	Review	Tina Kendall
5	August 2020	Title changed from "Management of needlestick, sharps, human bites and contamination accidents (inoculation injuries) policy". General review	Justine Johnson Nadine Williams
5.1	June 2023	Changes to the PEP supplies and pack sizes – urgent amendment only	Nicki Lewis (pharmacist)
6	December 2023	Comprehensive review	Nadine Williams

For more information on the status of this document, please contact:	Nadine Williams Occupational Health Manager
Policy Author	Nadine Williams
Department/Directorate	Occupational Health
Date of issue	December 2023
Review due	December 2026
Ratified by	Infection Control Committee
Audience	All new or existing staff that are exposed to body fluids in their role within the Trust.

Contents

See also: Policy for the Management of healthcare Waste
Control of Substance Hazardous to health (COSHH)
Standard Precautions Policy
Health and Safety Policy

1. Introduction

This policy sets out the procedures in place with Ashford and St Peters NHS Foundation Trust for the management of Occupational exposure to blood and other bodily fluids where there is a risk of transmission of blood borne viruses (BBVs). Examples can be needle-stick; sharps; human bites and contamination accidents.

Although there are potentially more than 20 pathogens that can be transmitted via bodily fluid exposure (BFE), this policy focuses on the most common viruses which cause chronic lifelong infection with high plasma viral loads and which may be readily transmitted by bodily fluid exposure in a health care setting, known an occupational exposure to i.e. hepatitis B (HBV), hepatitis C (HCV) and human immunodeficiency virus (HIV).

Occupational body fluid exposure (BFE) is an incident that occurs in the course of work. Certain occupational groups such as health and social care workers, police and other emergency workers are at risk of sustaining a BFE in the line of their duties.

The risk of transmission though percutaneous exposure from a known infected Source is as follows:

HBV (if Source is highly infectious i.e. HBe Ag positive and Recipient is not immune) = 1 in 3 HCV =1 in 30
HIV = 1 in 333 (source known to be HIV positive and not on suppressive antiretroviral therapy)
The risk of HIV transmission though mucocutaneous exposure is 1 in 1000 (source known to be HIV positive and not on suppressive antiretroviral therapy)

For human bites, the risk of HIV transmission if the source is known to be HIV positive and not on suppressive antiretroviral therapy is < 1 in 10,000.

Post exposure prophylaxis (PEP) is available to help prevent occupational acquisition of HIV and HBV, however the mainstay of hepatitis B prevention for healthcare workers is immunisation. There is no effective PEP for HCV exposures, although early diagnosis and antiviral treatment is almost certainly beneficial.

This Policy covers risk assessment of a BFE accident, managing a BFE including the follow ups and practical issues pertinent to BFE management.

2. Scope

This Policy applies to the clinical management of all Ashford and St Peters NHS Foundation Trust staff as well as students, volunteers, agency, honorary, contract and Trust bank staff working on Trust premises and external clients purchasing BFE provision from Ashford and St Peters NHS Foundation Trust Occupational Health Service (OHS) who may sustain a body fluid exposure. Henceforth they are collectively referred to as ‘employee’ unless specifically otherwise stated.

3. Purpose

This policy will ensure there is a clear process in place for the management of Body Fluid Exposure (BFE) which includes needlestick, sharps, human bites and contamination accidents.
The policy contains all the appropriate documentation, including risk assessments, flow charts and information sheets required to manage an incident. The policy ensures that the Trust meets UK Health Security Agency requirements in managing such incidents.

Contaminated sharps exposure in UK healthcare work is confirmed by UK Health Security Agency (UKHSA) as the most common mode of occupational exposure to BBVs, though transmission rates remain low as a proportion of reported incidents.

This policy on the management of BBV exposures, which will specify the local arrangements for risk assessment, advice, and the provision of PEP. The policy ensures that adequate 24-hour cover is available. Primary responsibility for the management of HCW BBV exposures should lie with the OHS in hours however, it is recognised that OHS is not 24/7 and has a local arrangements internally for 'Out of hours' cover provided by the Trust Accident & Emergency (A&E) departments.

This Policy reflects the UK Guideline for the use of PEP for HIV (BASHH Guidelines) and also takes into account the guidance produced by the British Medical Association (BMA) with regards to testing adults who lack the capacity to consent in the event of a needlestick injury.

4. Glossary of Terms Used

AIDS	Acquired immune deficiency syndrome
ASPH	Ashford and St Peters Foundation Trust
ART	Antiretroviral Therapy
BBV	Blood borne virus
BD	Twice Daily
βHCG	Beta Human Chorionic Gonadotropin
BFE	Body Fluid Exposure
BNF	British National Formulary
COHORT	The Occupational Health IT Management Database
CSF	Cerebrospinal fluid
DATIX	Safety learning Event Reporting Form (Datix)
DOB	Date of Birth
DH	Department of Health
ED	Emergency Department
EPP	Exposure Prone Procedures
FBC	Full Blood Count
FME	Forensic Medical Examiner
GDC	General Dental Council
GMC	General Medical Council
γGT or GGT	Gamma Glutamyl Transpeptidase
GUM	Genitourinary medicine
HBe Ag	Hepatitis B e Antigen
HBe Ab	Hepatitis B e Antibody

HBIG	Hepatitis B Immunoglobulin
HBV	Hepatitis B virus
HBs Ab	Hepatitis B surface Antibody
HBs Ag	Hepatitis B surface Antigen
HCV	Hepatitis C virus
HCV Ab	Hepatitis C Antibody
HCV RNA	Hepatitis C Ribonucleic acid
HCW	Health Care Worker
HIV Ag/Ab	HIV Antigen/ Antibody
HIV	Human immunodeficiency virus
HSE	Health and Safety Executive
IM	Intramuscular
IVDU	Intravenous drug users
LFTs	Liver Function Tests
LMP	Last Menstrual Peroid
MSM	Men who have sex with men
Mucocutaneous exposure	Mucous membranes i.e mouth, nose, eyes or non-intact skin have been contaminated by body fluids from a patient
NMC	Nursing and Midwifery Council
NSAID	Nonsteroidal Anti-inflammatory Drugs
OHA	Occupational Health Advisor
OHP	Occupational Health Physician
OHS	Occupational Health Service
PEP	Post exposure prophylaxis
PPE	Personal Protective Equipment
PO	Per Oral Daily
Percutaneous exposure	Used sharp object or human bite has broken the skin
PWID	People who inject drugs
Recipient	The person who has sustained a BFE
Source	The individual who is the origin of the body fluid

TDS	Three Times a Day
U&E's	Urea & Electrolytes
UPSI	Unprotected Sexual Intercourse
UKHSA	UK Health Security Agency

5 Roles and Responsibilities Trust

Ensure the health, safety and welfare at work of employees and of all those connected with the Trust's activities in line with the Health and Safety at Work Act and where available review the use of appropriate safer needle devices.

Employers have a legal duty to ensure the health and safety of their employees through appropriate risk assessment, risk management, training and education.

Ensure Compliance where practicable with the EU Directive 'On the prevention of Sharp injuries in the UK Hospital and Healthcare sector' 2010/32EU

Line managers are responsible for undertaking risk assessment to identify activities that carry the risk of sustaining a BFE and put measures in place to eliminate or reduce the risk.

Those employees who are at risk of BFE should receive adequate training to prevent BFE and be aware of the actions to be taken if they have sustained a BFE.

The Occupational Health Service and Health and Safety Team support the Trust (and external clients in accordance with the Service Level Agreements) to meet their legal requirements including undertaking risk assessments, risk management and provision of training at induction or periodic training in conjunction with the infection prevention and control team. The training must emphasise:

- Avoiding BFEs
- Using Standard Infection Control Precautions (Universal Precautions)
- Undertaking Risk Assessments
- Using PPE and safe sharps, where appropriate
- Applying First Aid measures in the event of a BFE
- Prompt reporting of BFE to the OH Service during working hours or the Emergency Department (ED) outside of working hours
- Attending follow up appointments

5.1 All Employee in prevention of Inoculation injuries

Extreme care must be taken to ensure that needles and other sharp instruments are handled safely to prevent inoculation accidents. It is the responsibility of all staff to ensure that used needles and other sharps are immediately placed in sharps containers. Never carry sharps in your hand, always use a suitable receiver or take a sharps box to the bedside. Never leave sharps for others to clear away.

Following injection of drugs, the syringe with attached needle should immediately be placed into a sharps container. Remove needles from syringes only when essential using the appropriate device on the sharps container. Do not re-sheath needles manually.

Vacutainers are recommended for taking blood samples. The vacutainer needle, together with the guard should be immediately discarded into a sharps container. The guards should not be reused.

Never place sharps or needles (including IV giving sets which may tear the bag) into plastic waste bags as this action may cause injury to others. Do not overfill sharps containers. When two thirds full, securely close the container completing the appropriate section on the front of the container, tag and place at a waste collection point.

6 Prevention of contamination accidents

For their own protection staff should cover any cuts, open lesions etc. on exposed areas of the body with a waterproof dressing. If contact with blood or other body fluids is anticipated, gloves should be worn. Visors or goggles are recommended if splashing is likely.

7 Management of BFE by Occupational Health Service

The Occupational Health Service (OHS) supports the Trust (and external clients in accordance with the Service Level Agreement) to meet their legal requirements, including undertaking risk assessments, risk management and provision of training at induction or periodic training in conjunction with the Infection Control Team.

8 Duties / Responsibilities for Specialist Departments

8.1 ED St. Peters Hospital or RMO/Staff Grade at Ashford Hospital

See risk assessment form and flow chart Appendix A

- Complete Trust Risk Assessment/Action form following potential blood borne virus (BBV) exposure incident in health care worker or other injured person. (See Appendix A, also available in Useful Documents via Trustnet)

- Obtain details of the incident including the details of the source patient if known, and establish if the exposure is high risk or not and if the person exposed has ever had a response to the Hepatitis B Virus (HBV) vaccine (if so what is their HBV antibody level) or is a known Non-responder to the HBV vaccine.

- Give staff member Hepatitis B vaccine according to the schedule outlined in the Trust Risk Assessment/Action Form. Give the individual a booster dose of the Hepatitis B vaccination if they have not received one within the past 12 months.

- Take a base-line serum sample (5-10 mls clotted blood in 1 gold top bottle) and send to Pathology. This sample should be tested for HIV and Hep C Ab, consideration should also be given to hepatitis B surface antibodies if necessary.

- Include on the form details of the exposed person's HBV immunisation status and what prophylaxis has been given. Please state on the form that the blood is from the exposed person and also state the name of the patient involved if known. This information will ensure both samples can be linked, for Example

Berkshire and Surrey Pathology Service (BSPS) – Electronic Request – Source patient

Patient details:

Request details:

Clinical details: inoculation injury "source patient", write recipient details (staff member name and DOB)

Virology: HIV, HepBsag, Hep C

BSPS– Electronic Request – Recipient (staff member)

Patient details:
Request details:
Clinical details: inoculation injury "recipient"
Details of post exposure prophylaxis given; Hep B, tetanus
Write source patient details (recipient, hospital number, name and DOB)
Virology: HIV, HepC Ab and HBsAb if required

Administer hepatitis B vaccine prophylaxis if they are unsure of their status, Occupational health will follow up to either complete the course or check their antibodies post Hepatitis B vaccine Booster.

- Contact the on-call Virology Consultant via switchboard if the exposure is significant for HIV (i.e. the source patient has risk factors as listed in Appendix C or if there is any advice required regarding hepatitis B or C exposure. They will contact the clinical team caring for the source patient and ascertain whether further action is required.

- Complete the appropriate section of the Incident Report Form and advise the person who sustained the injury to attend the Occupational Health Department the next working day.

8.2 Duties / Responsibilities of the Infection Control Nurses

- Once informed by Occupational Health follow up any inoculations injuries which have resulted from poor practice or were avoidable accidents.

- Provide sharps awareness training where appropriate.

- Coordinate the sharps bin audit which is carried out annually by the sharps bin supplier and provide the results of the audit and subsequent any action plan (if required) to the H&S committee.

8.3 Duties / Responsibilities of the Consultant Virologist

- In liaison with Occupational Health and/or ED and/or RMO/Staff Grade (Ashford), advise on any additional treatment that may be required for the person exposed, such as Hepatitis B immunoglobulin.

- Liaise with Occupational Health about follow up screening for BBVs for the exposed person.

- Ensure prompt processing and reporting of BBV serology tests from recipient and source testing.

8.4 Duties / Responsibilities of Pharmacy

- Maintain stocks of HIV PEP in the appropriate departments throughout the Trust.

- Provide appropriate information regarding medication used in HIV PEP treatment – See Appendix F, Patient Information Leaflet for Post Exposure Prophylaxis (PEP) Kits.

- Provision of Post Exposure Prophylaxis for Humans Bites in line with NICE guidelines and Trust Microguide.

8.5 Duties / Responsibilities of the Health, Safety and Security Advisor

- Once informed by Occupational Health ensure High risk incidents are reported under RIDDOR. Where indicated and undertake appropriate follow up regarding investigation into the incident for RIDDOR requirements.

9.0 Risk Assessment and Initial Management of BFE

9.1 Action to be taken if an inoculation injury occurs. The Recipient notifies the OHS of the BFE

The OHA / Nurse should advise on the following:

- Perform first aid*

For skin exposure, the site should be wash with soap and water
Small wounds and punctures may also be cleansed with antiseptic, for example an alcohol-based hand hygiene solution. Alcohol is virucidal to HIV, HBV and HCV. Other antiseptics such as iodophors, chloroxylenol, and chlorhexidine also inactive HIV.

- For puncture wounds, the wound should be gently encouraged to bleed, but not scrubbed or sucked, and should be washed with soap and water.

- In case of mucosal exposure, the exposed mucous membrane should be flushed with a copious amount of water.

- Eyes should be irrigated with saline or water, both before and after removal of contact lens.

- Attend OHS as soon as possible (having notified manager/supervisor) **ideally within one hour** of exposure as PEP, if required, will be most effective if given early.

- Note and bring to the OHS details of the source, i.e. source (patients) name, date of birth, hospital number, local of the patient concerned, contact details of the person in charge of the patient (source) if possible .

- For St. Peters Hospital staff report to the Occupational Health (OH) Department immediately. If Occupational Health is closed, report immediately to (ED) Emergency Department.

- For Ashford Hospital staff contact the OH department via ext 2404 immediately. If the OH department is closed contact the On-Call RMO/Staff Grade Doctor in Ashford Hospital immediately via bleep 5945 and/ or attend ED at SPH for risk assessment.

- Complete the online incident / accident reporting form (datix manager and complete online Datix incident report form.

FOR YOUR OWN PROTECTION DO NOT DELAY, ACT IMMEDIATELY

9.2 The Recipient attend the OH Service

The OHA / Nurse should

1. Check if First Aid for BFE has been performed (as outlined above)
2. Undertake an initial risk assessment to **assess the exposure and the source** using the specific health surveillance (SHS) outcome from on OH IT System

9.2.1 Recipient attends the OHS

- Undertake an initial risk assessment to assess the exposure and the Source using the Specific Health Surveillance (SHS) ASPH Inoculation Injury Risk Assessment Form on Cohort.

- Administer post exposure prophylaxis accordingly

- Take sample of recipient blood for HIV, Hep C Ab and where indicated if no evidence of Hepatitis B vaccination HBsAb, linking source patient details. If the recipient does not give consent for BBV screen the take serum save for long term serum save.

- Ensure the recipient / staff member if booked for follow up testing as necessary

- Give instruction on obtaining source patient blood results

- Notify Virology of Inoculation injury: virology.asph@nhs.net

- Inform the recipient of the expected timeframe for source patient blood results to be processed and update with results

- If source bloods not available book recipient / staff member in for follow up HIV and Hep C testing in 3 and 6 months on OH IT system Immunisation Module

- Give the recipient / staff member OH Body Fluids Exposure Advise sheet (see Appendix G) and any other relevant information.

- An OH IT system note entry and/or SHS should be made by the Nurse and OHP after each interaction with the client (face to face assessment or telephone conversation).

- In case of a known BBV exposure (HCWs only) the Nurse must notify the Trusts Health and Safety Officer.

9.2.2 OH follow up of the Recipient

If the BFE is low or high risk, the OHA / Nurse should arrange for virology follow up. BBV testing is not generally recommended earlier than 6 weeks because it takes time to seroconvert.

- In high risk cases virology follow up starts at 6 weeks and is repeated at 12 and 24 Weeks

- In low risk cases virology follow up starts at 12 weeks and is repeated at 24 weeks.

- If HIV PEP is started, virology follow up should be undertaken 6 weeks after cessation of HIV PEP.

See Appendix E for the details of blood tests at each stage of virology follow up.

- The Recipient should be advised that if they fail to attend their follow-up appointment they will be contacted by phone or e-mail to arrange another appointment. After two unsuccessful attempts to contact them, or if they fail to attend further appointments, OHS will not make further contact.

If the Recipient is an EPP worker, remind them of their professional obligation to protect their patients from communicable diseases, in line with GMC/GDC/ NMC guidance. They should be advised that, if they do not attend for follow-up, their manager will be informed that their fitness to continue to undertake EPP work cannot be confirmed (appendix H).

- The follow-up plan may be modified depending on the Source's test result if available. In principle, any / all BBV that the Source is reported to be negative for, will then be excluded from the Recipient's follow up testing. For example if the Source is reported negative for HBs Ag but there is not a result for HIV and HCV, then the Recipient shall be only followed up for HCV and HIV.

- Other modifications to follow up testing shall be directed by the OHP. For example if the Recipient is immunocompromised, experiences seroconversion illness or the Source is coinfected (HIV seroconversion may be delayed in co-infection with HCV therefore a longer follow up may be required).

10.0 Exposure Risk Assessment

The risk associated with exposure depends on the type of injury (route and degree of exposure) and the type of the body fluid involved.

Significant injury is:

- Percutaneous exposure: cuts or puncture wounds caused by e.g. contaminated sharp/ needle where the skin is broken and the wound bleeds.

- Exposure of broken skin: i.e. splash of body fluid to existing lesions such as abrasion, cuts, Eczema

- Mucous membrane exposure: i.e. splash of body fluid into the eyes or mouth.

An injury that does not meet any of the above definitions is not significant. A Splash of any type of body fluid including those that are classed as high risk to intact skin is not significant and does not need further action.

The risk associated with **exposure** depends on the type of injury (route and degree of exposure) and the type of bodily fluid involved.

10.1 Type of Injury:

Significant Injury is:
Percutaneous exposure:
- Cut or puncture wounds caused by contaminated sharp instruments, where the skin is broken and the wound bleeds.
- A human bite where the skin is broken because of trauma.

Exposure to non-intact skin: i.e. splash of bodily fluid to existing lesion such as abrasion, cuts, eczema
Mucous membrane exposure: i.e. splash of bodily fluid into the eye or mouth.

An Injury that does **not** meet and of the above definitions is **not significant.**

A Splash of any type of bodily fluid (including those that are classed as high risk) to **intact** skin is not significant and does not need further action.

10.2 Types of Body Fluid:

High risk body fluids are:
- Blood
- Any blood stained bodily fluid
- Amniotic fluid
- Cerebrospinal fluid
- Human breast milk
- Pericardial fluid
- Peritoneal fluid
- Pleural fluid

• Unfixed human tissue and organs • Saliva in association with dentistry (even with no visible blood) • Synovial fluid • Exudative or other tissue fluid from burns or skin lesions • Semen • Vaginal secretions
Low Risk body fluid unless they are visibly blood stained • Saliva (unrelated to dentistry • Urine • Faeces and Vomit • Nasal Secretions • Gastric secretions • Sputum • Tears • Sweat

10.3 Other considerations

The risk of transmission is related to the volume of blood transferred; hollow bore needles carry more risk than solid instruments, and a cannula that has been inserted in the source's artery or vein carries more risk than a needle that has been inserted into subcutaneous or muscle tissue. A device that is visibly blood stained also carries more risk, as well as a high viral load source.

The deeper the injury, the higher the risk of transmission is.

There is a small risk of acquiring BBV through human bites **if the skin has been broken and the saliva is contaminated with bloods of the source.**

Although HIV PEP is not generally recommended after a bite, as the risk is likely to be negligible, it could be considered if ALL of the tree following criteria are met:

1. The Sources saliva is visibly contaminated with bloods
2. The Source is HIV positive and know or suspected to have a plasma viral load of >200 copies/ml
3. The bite resulted in severed and/or deep injury

10.4 In Summary

- The exposure is considered significant if the injury is significant and the body fluid involved is high risk.

- A Non – significant exposure (no risk exposure): is where the injury is not significant and the body fluid involved is not high risk. It is classed as a no risk exposure and no further action is required. The Recipient should be reassured.

- In cases where there is a significant injury involving low risk body fluid from a high risk Source, post exposure prophylaxis is not required but virology follow up is advisable.

10.5 Source Risk Assessment

The OHA/nurse/Dr should initially establish whether the Source is **KNOWN** or **UNKNOWN**

10.5.1 KNOWN SOURCE

If there has been a **significant exposure**, the next step is to establish a BBV **status** of the Source. The OHA/nurse/Dr should enquire about the BBV status of the Source from the person responsible for patients care (the treating medics or custody nurse)

- If the Source is known to have a BBV infection, the appropriate PEP should be initiated promptly. This includes situations where the Source status that they are **BBV POSITIVE.**

- The risk of transmission is related to the viral load in the Sources blood /bodily fluid e.g. for newly acquired infection or advanced infections/AIDS the risk is much higher than a Source who is already on antiretroviral treatment and responding well.

- If the status is not known, the person responsible for the care of the Source should conduct a risk assessment to establish if the Source has any risk factors.

Source risk factor for BBV infection (also see table 1)

- Men who have sex with men (MSM)
- People who inject drug (PWID) past or present, overall prevalence of HIV amongst PWID in England and Wales is ~1 -2% (1.7% for under 25 year old), HCV prevalence as high as 50%
- From the table with high prevalence (>1%) of BBVs use the link below
- https://www.unaids.org/en/regionscountries/countries
- Commercial sex workers
- Received blood transfusion or bloods products prior to 1991
- Sexual Partner at risk of BBV

The person responsible for the care of the Source should clarify whether there are any clinical indications suggestive of BBV infection. Determine if the Source has been previously tested for BBVs, and if so, which tests were undertaken, why, when and whether the results are available.

10.5.2 Neonatal source / newborn source up to 18 months

If the source is neonate or child up to 18 months of age, the risk assessment should be conducted on the mother and the mother should be approached for blood testing. The HIV antibody test is not used to diagnose HIV in babies and young infants up to 18 months. This is because, if the mother is HIV positive, antibodies can cross the placenta from mother to the infant and be present in the baby's blood for up to 18 months after birth. To establish the HIV status of babies and infants under 18 months of age, a HIV viral load test is performed, which looks for the presence of the virus in the blood.

10.5.3 Source Children Between 18 months and 5 years of age

For children between 18 months and 5 years of age, the decision whether to test the child and/or the mother will made on a case by case basis. In these circumstances, advice should be sought from the OHP in the first instance. The virologist, HIV specialist, paediatrician may also be contacted for further advice. After 18 months the test used to diagnose HIV will be the HIV antibody test which, if positive, will indicate that the child is infected.

10.6 Testing the Source

The best evidence of the Source's BBV status is a post incident blood test. Therefore, the person responsible for the care of the Source should be asked to approach the Source to obtain their informed consent for testing. The Source should be tested for all 3 BBV:

1. Hepatitis B Surface Antigen (HBsAg)

2. Hepatitis C Antibody (HCV Ab), HCV RNA PCR should be used for high-risk Source (e.g PWID)

3. HIV Antigen / Antibody (HIV Ag/Ab), the results should be available within 8 hours and no later than 24 hours after being taken.

The Recipient (staff member who sustained the injury) MUST NOT APPROACH the Source to undertake the risk assessment or testing.

11.0 Consent

Informed consent is an absolute pre-requisite to testing and must be sought following and must be sought following careful pre-test discussion with the Source. The person responsible for the care of the Source should be advised that informed consent is required prior to obtaining any blood sample for testing.

See appendix B for more information about consent, including the person who can give appropriate consent in accordance with the Human Tissue Act in Human Tissue Authority.

In line with Department of Health guidance, all Source patients should be approached for HBsAg, HIV Ab and HIV Ag/Ab testing irrespective of known risk factors. Evidence of recent negative BBV test results (e.g within three months), whist reassuring, should not preclude approaching the Source patient for retesting.

If the initial assessment of the body fluid exposure was undertaken in ED all relevant information regarding the initial management of the exposure (risk assessment, actions taken and baseline blood tests) should be obtained promptly and recorded in the Recipient's notes.

Based line source test include HIV, Hep C Ab and HBsAg.
Based line recipient test include HIV and Hep C Ab and consider HBsAb

This information of the risk assessment document is usually emailed by ED /A&E service to the OHS on the day of the assessment using OH email Occupationalhealth.asph@nhs.net.

If baseline blood tests of HIV Ab/Ag, Hep C Ab and HBsAb where indicated, were not completed during the initial assessment the Recipient should be contacted and tests should be completed in the OHS

If the Source of the BFE is not an in-patient of the Trust e.g. those involved in exposures of community staff or external clients, the management of the exposure should follow the same principles as above.

If the Source is a patient in a different hospital, the results of BBV testing should be sought from that hospital's laboratory/virology department (using NHS.net email accounts). Relevant contact details should be obtained and recorded in the Recipient's OH IT system where possible.

Management of the BFE should not be delayed until the consent is obtained and Source's results are available. The Recipient should be managed based on the risk assessment using the available information at the time.

Management of the BFE may be modified later, in accordance with the Source's individual test results.

If the Source cannot be tested and no other information is available to enable any risk assessment, then the Source should be treated as UNKNOWN.

12.0 Window Period
The window period is the time frame within which HIV antigen and / or antibody becomes detectable after infection with HIV. Durning this time the test might be falsely negative but the Source can still transmit the infection to another person. With the current combined HIV Ag/Ab test the window period can be between 2 to 6 weeks from exposure.

Under normal circumstances there is no need to re-test the Source a later date. However, retesting may be justified in a Source with a recent significant exposure to HIV. If the exposure was significant but more that 6 weeks ago a negative HIV Ag/Ab test is conclusive. These cases should be discussed with an OHP and advice may be sought from Virology.

13.0 Unknown Source
If there has been a significant exposure and the Source cannot be identified (e.g. needle stick injury caused by a discarded needle), the risk assessment should be made on an individual basis. This will be informed by the circumstances of the incident:

- Location: areas in which the sharp/ needle might have been used, or on a high-risk Source e.g. GUM clinic or areas known to be used by PWID.

- Timing: the estimated time elapsed between the sharp/ needle being discarded and the BFE incident (HIV does not survive outside the body longer than an hour, HBV and HCV may remain viable for longer).

Based on the above information the unknown source should be categorised as low or high risk. In the majority of cases the use of HIV PEP is unlikely to be clinically justified.

Conclusion

The **exposure** is considered **significant** if the injury is significant and the body fluid involved is high risk.

A **Non – significant exposure (no risk exposure**): is where the injury is **not significant** and the **body fluid** involved is **not high risk**. It is classed as a **no risk exposure** and **no further action** is required. The Recipient should be reassured.

The Source is considered high risk if they are known or found to be positive for one or more BBVs or if they have risk factors for BBV infection.

In cases where there is a significant injury involving low risk body fluid form a high-risk source, virology follow up is advisable.

- The management of BFE depends on the outcome of exposure risk assessment and Source risk assessment (Appendix A)

- Non – Significant Exposure, (No Risk): where the injury is not significant and the body fluid involved is not high risk then further action is not required. The status of the Source is not relevant and the Recipient should be reassured

- Low Risk: In cases where there is a significant injury involving low risk body fluid from a high risk Source, post exposure prophylaxis is not required but virology follow up is advisable

- High Risk: Post exposure prophylaxis (PEP) should be recommended to a Recipient where a significant exposure to a high risk Source has occurred.

- Unless it is a 'no risk' BFE, the practitioner must take a blood sample for serum save. The practitioner should inform the Recipient that their blood sample for serum save will not be tested unless indicated and will be stored for two years.

Recipients who require virology follow up after a high risk BFE should be:

- Advised to practice safe sex using barrier contraception until the confirmation of negative status on completion of follow up

- Advised not to donate blood until the confirmation of negative status on completion of follow up

- Booked for follow up appointments and reminded of the importance of (including professional responsibility for HCWs) attending all follow up appointments.

14.0 Consideration of Post Exposure Prophylaxis
The management of BFE depends on the outcome of the exposure risk assessment and the Source risk assessment

Unless it is a non-significant exposure, 'no risk' BFE, the OHA/Nurse must take a blood sample for HCV Ab and HIV Ag/Av. If the recipient is unvaccinated or HBsAb<10 IU a the time of exposure, OHA / Nurse must also take a blood sample for HBsAg and Hep B Core antibody.

If the recipient has a known diagnosis of a BBV (HBV, HCV or HIV), then a further risk assessment needs to be undertaken, to establish if the Source patient has been exposed to BBV. These cases should be discussed with SOHN/OHP.

Recipients who require virologic follow-up after BFE should be:

- Advised to practice safe sex using barrier contraception until the confirmation of negative status on completion of follow up
- Advised to avoid blood/organ/sperm donation, IVF and pregnancy until the confirmation of negative status on completion of follow up
- Booked for follow up appointment and reminders of the importance of (including professional responsibility for HCW) attending all follow up appointments

14.1 HIV – When to prescribe PEP following Occupational Exposure

HIV PEP should be considered when there is a **significant exposure AND a high-risk Source**

Source is **Known to be HIV-Positive**

- **PEP is recommended** following a high risk injury (sharps or mucosal splash) if the index case is known to be HIV positive, is not on ART for >6 months and does not have evidence of a suspected viral load (<200 copies/ml) within the last 6 months

- PEP is **generally not indicated** following a sharps/splash injury if the index case has been on ART for at least 6 months, has an undetectable plasma HIV viral load <200 copies/ml (at the time of last measurement and within the preceding 6 months) and with

good reported adherence. However due to lack of direct evidence, a case by case decision should be made depending on the nature of the injury

- PEP is not recommended where there is no or negligible risk of HIV transmission e.g. through intact skin that comes into contact with HIV infected blood or other bodily fluids.

Although it is highly likely that viral suppression eliminates the risk of HIV transmission through sharps injuries, the lack of evidence to support this should be discussed, and a case by case decision should be made in the context of high-risk sharps injuries. Where there are concerns about the viral load of the index case being detectable, or concerns around ART adherence or if the injury is particularly high risk (e.g deep wound with hollow bore needle) then PEP could be considered.

14.2 SOURCE of **unknown HIV Status**

- PEP is not recommended following a sharps or mucosal splash injury if the index case is untested but from a low risk group.

- PEP is generally not recommended following a sharps or mucosal splash injury if the Source is untested and from a high risk group (e.g. MSM or PWID), unless there were other factors that increase the likelihood of transmission (e.g. a deep injury or blood bolus injected or sharps injury from a PWID in the context of a local outbreak).

The case should be discussed with a OH Nurse or OHP if the assessment indicates the potential need for PEP. Where HIV PEP is indicated, it should be started as soon as possible and preferably within **one hour** of the exposure incident.

The Recipient should be advised of the risk of transmission of HIV alongside the benefits of PEP medication (HIV PEP can reduce the risk of transmission by up to 80%) and side effects.

14.2.1 HIV PEP is indicated when there is significant exposure AND high risk Source.

	Source	
	No or low risk	High risk/ known HIV positive
Insignificant injury, any body fluid	HIV PEP not required Virology follow up not required	HIV PEP not required Virology follow up not required
Significant injury, low risk body fluid	HIV PEP not required Virology follow up not required	HIV PEP not required Virology follow up advisable
Significant injury, high risk body fluid	HIV PEP not required Virology follow up not required but can be offered	HIV PEP recommended OHP/Virology follow up advisable

- In practice there are occasions when the need for HIV PEP is often not clear-cut at the time of the initial assessment but may be established by obtaining further information about the exposure or consenting and testing the Source individual. In such incidents the initial dose(s) of HIV PEP may be given pending test results.

- The case should be discussed with the Virologist/OHP if the assessment indicates the potential need for PEP. Where HIV PEP is indicated, it should be started as soon as possible and preferably within one hour of the exposure incident.

- The Recipient should be advised of the risk of transmission of HIV alongside the benefits of PEP (HIV PEP reduces the risk of transmission significantly (80%) and side effects. (See appendix D for detailed information about HIV PEP)

14.3 Hepatitis B

The Nurse should check the Recipients immunisation history and previous HBsAb results in OH IT system.

HBV PEP with Hepatitis B immunoglobulin (HBIG) is indicated if:

The Recipient is not immune or has not responded to hepatitis B vaccine i.e. HBsAb <10

And

The Source is known or highly likely to be HbsAg positive

- A hepatitis B booster vaccine should be considered if the exposure is significant and the Recipient has not had a Hepatitis B booster vaccine with in the last 12 months.

- If the Recipient has not been immunised against hepatitis B previously and there is an ongoing occupational risk of exposure to HBV, they should be advised to complete the course of immunisation. The dose administered immediately post incident counts as the first dose of the HBV vaccination course.

- If the Recipient has not been immunised or has only had one dose of hepatitis B vaccination, an accelerated schedule (0,1, and 2 months) should be recommended if there has been a significant exposure to a HBsAg positive or from an unknown Source.

HBV prophylaxis – Greeen Book The Green Book on Immunisation - Chapter 18 Hepatitis B (publishing.service.gov.uk)

	Significant Expoure			Non-Significant Exposure	
HBV status of person prior to exposure	HBsAg Postive Source	Unknown Source	HBsAg Negative Source	Continued Risk	No Futher Risk
Unvaccinated	Accerlated course of Hep B vaccine plus HBIG with first dose	Accelerated course of Hep B Vaccine	Consider a course of Hep B Vaccine	Initiate course of Hep B vaccine	No HBV Reassure
Partially vaccinated	One dose of Hep B vaccine and finish Ccourse	One dose of Hep B vaccine and finsh course	Complete course of Hep B Vaccine	Complete course of Hep B vaccine	Coplete course of Hep B vaccine
Fully vaccinated with primary course	Booster dose of Hep B Vaccine if last	Consider booster dose of Hep	No HBV prophylaxi s	No HBV prophlaxis Reassure	No HBV prophylaxi s

	dose >1 year ago	B vaccine if last dose > 1 year ago	Reassure		Reassure
Known non-responder to Hep B vaccine anti HBs <10mIU 1-2 months post immunisation	HBIG Booster dose of Hep B Vaccine A second dose of HBIG should be given at one month	HBIG Consider booser dose of Hep B vaccine A second dose of HBIG should be given at mone month	No HBIG Consider booster dose of Hep B Vaccine	No HBIG Consider booster dose of Hep B Vaccine	No HBV prophyalxis Reassure

An accelerated course of vaccine consists of dose spaced at 0,1, and 2 months. A booster dose may be given at 12 months.

OHA will need to contact Pharmacy to ensure HBIG is in stock and or liaise with Pharmacy in terms of contacting UKHSA South East Public Health Team for availability of HBIG.

If HBIG is required, the OH Nurse should contact the OHP regarding the risk assessment. If HBIG is considered. The OHA should contact the Consultant Virologist for prescription of HBIG.

It is important to give the first dose of HBIG as soon as possible after the exposure ideally within 24 hours, although it should still be considered up **to one week post exposure.**

HBIG (500IU) must be administered intramuscularly (IM).

14.4 Hepatitis C

There is no vaccine or PEP available against hepatitis C, however treatment against acute Hepatitis C infection can be effective in up to 90% of cases.

It is therefore imperative that the Recipient attends all follow up appointment to detect HCV seroconversion as early as possible and to treat accordingly.

If a high risk Hepatitis C source is considered and no source patient bloods are available, then follow up test for HCV RNA can be considered in the following schedule:

Six weeks post high risk BFE incident Hep C RNA
Twelve weeks post high risk BFE incident Hep RNA and Hepatitis C Ab
Twenty four weeks post high risk incident Hepatitis C AB

If the recipient of the BFE should test positive for Hep C RNA, Occupational Healht will arrange for referral to Hepatology specialist in conjunction with OHP.

14.5 Antibiotic Prophylaxis for Human Bites

Antibiotic prophylaxis should be considered for **human bite wounds under 72 hours** old. If the injury is over 72 hours old and there are not signs of infection, then antibacterial prophylaxis if of no value.

Do not offer antibiotic prophylaxis if the bite has not broken the skin.

Offer antibiotic prophylaxis if the bite has broken the skin and drawn blood.

Use the NICE guidelines for Managing a Human Bite, Scenario: Managing a human bite | Management | Bites - human and animal | CKS | NICE

Consider antibiotic prophylaxis if the bite has broken the skin but not drawn blood if it meets the below criteria:
Involves a high risk area such as hands, feet, face, genitals, skin overlying cartilaginous structures or an area of poor circulation **OR**
Recipient is at risk of serious wound infection because of a comorbidity (such as diabetes, immunosuppression, asplenia or decompensated liver disease).

The recommended antibacterial therapy is **a three day course of Co-Amoxiclav 625mg TDS.**

In the case of penicillin allergy the alternative is **Metronidazole 400 mg TDS PO for 3 days + Doxycycline 200mg immediately and then 100mg OD PO for the next 4 days.**

14.6 Tetanus Prophylaxis

Tetanus prophylaxis should be recommended following puncture type injuries where there has been contact with soil or manure.

Tetanus Prophylaxis Green Book The Green Book on immunisation - chapter 30 tetanus (publishing.service.gov.uk)

Immunisation	Immediate Treatment			Later Treatment
	Clean Wound	Tetanus Prone	High Risk Tetanus Prone	
Those aged 11 years and over, who have received an adequate primary course of Tetanus vaccine with the last dose within 10 years	None required	None required	None required	Further dose as required to complete the recommended schedule (to ensure future immunity)
Received adequate primary course of tetanus vaccine, but last dose more than 10 years ago Includes UK born after 1961 with history of accepting vaccinations	None required	Immediate reinforcing dose of vaccine	Immediate reinforcing dose of vaccine. One dose of human tetanus immunoglobulin in a different site.	Further dose as required to complete the recommender schedule (to ensure future immunity)
Not received adequate primary course of tetanus vaccine Includes uncertain immunisation status and /or born before 1961	Immediate reinforcing dose of vaccine	Immediate reinforcing dose of vaccine One dose of human tetanus immunoglobulin in a different site	Immediate reinforcing dose of vaccine One dose of human tetanus immunoglobulin in a different site	

15.0 **Virological follow-up of the Recipient**
The Nurse should arrange for virological follow-up:

	Baseline	6 weeks	12 weeks	24 weeks
All Exposure				
HIV	HIV 1&2 Ag/Ab		HIV 1&2 Ag/Ab	
Hepatitis C	HCV Ab	HCV RNA if a high risk exposure	HCV Ab (if a high risk exposure) HCV RNA	HCV Ab if a high risk exposure
Hepatitis B	HBsAg, HBc Ab (if not previously tested) *For immunocompetent adults who have completed a Hep B vaccination and responded with HBsAb>10 IU at any time or documented evidence of natural immunity i.e. HB core Ab detected No base line or follow up Hep B*		If unvaccinated or HBsAb <10 IU at time time of exposure: HBsAb, HBsAg	Only advised if HBsAb remain <10 IU at 12 weeks HBsAg
IF HIV PEP Prescribed				
Renal Function Test	Yes	Only if abnormalities at baseline		
Liver Function Test	Yes	Only if abnormalities at baseline or symptomatic		
Pregnancy Test	Yes	If appropriate	If appropriate	
Urine Dip		Check for proteinuria if renal test are abnormal at baseline		
If proteinuria is detected on urinalysis a mid-stream urine sample for protein/creatinine ratio should be performed. If patient is symptomatic or has abnormal LFTs then also check GGT				
• Further modifications to follow up testing shall be directed by the OH Physician if the Recipient s is immunocomprised, experiences seroconversion illness or the Source is co-infected (HIV seroconversion may be delayed in co-injection with HCV therefore a longer follow up may be required).				

- The follow-up plan may be modified depending on the Source's test results if available. In principle, any/all of BBV the Source is reported to be negative for, shall be excluded from Recipients follow up testing.
- If the Recipient started their primary Hep B immunisation immediately after the injury their immune response should be checked after the completion of the Hep B course in accordance with the Hepatitis B protocol.
- Use a yellow top bottle for HBsAb, HBsAg, HBcAB, HCV Ab, HIV Ag/Ab, all PEP bloods
- Use a purple top bottle for HCV RNA

Further modifications to follow up testing shall be directed by the OH Physician **if the Receipient is immunocompromised experiences sero converstion illness or the source is co-infected** (HIV seroconversion may be delayed in co-infection with HCV therefore a longer follow up may be required).

The follow up plan may be modified depending on the Source test results if available. In principle, any/all BBV that the Source is reported to be negative for, shall be excluded from Receipients follow up testing.

If the Recipient started their primary Hep B vaccination immediately after the injury, their immune response should be checked after the completion of the course in accordance with Hepatitis B protocol.

Use a yellow top bottle for HBsAb, HBsAg, HBcAb, HCV Ab, HIV Ag/Ab, all PEP bloods.

Use a purple top bottle for HCV RNA

Virological follow up will usually start at 12 weeks post the initial BFE exposure and is repeated at 24 weeks after the initial BFE exposure.
If HIV PEP is started and there are abnormalities a baseline testing or the recipient becomes symptomatic, baseline tests should be repeated. These cases should be discussed with an OHP on a case by case basis, to establish appropriate management of the Recipient.

The Recipient should be advise that if they fail to attend their follow-up appointment they will be contact by phone or email to arrange another appointment. After two unsuccessful attempts to contact them, or if they fail to attend further appointments, OH will not make any further contact.

If the Recipient is an EPP worker, they should be reminded of their professional obligations to protect their patients from communicable diseases in line with GMC/GDC/NMC guidance. They should be advised that if they do not attend for follow-up, their manager will be informed that their fitness to continue to undertake EPP work cannot be confirmed (appendix).

Th follow-up plan may be modified depending on the Source's test results, if available. In principle, **any/all BBV that the Source is reported to be negative for will be excluded from the Recipients follow up testing.** For example, if the Source is reported negative for HBsAg but their HCV and HIV status is unknown, then the Recipient shall only be follow up for HCV and HIV.

Other modifications to follow up testing shall be directed by the OHP. In the absence of an OHP the OHN may discuss cases with the Consultant Virologist. For example, such modifications to follow up testing may be necessary if the Recipient is immunocompromised, experiences seroconversion illness or the Source is co-infected (HIV seroconversion may be delayed in co-infection with HCV therefore a longer period of follow up may be required).

16.0 Miscellaneous

OH will document a note entry and an OH record will be made the OH nurse after each interaction with the Recipient (face to face assessment or telephone conversation). If an OHP is involved in the management of a BFE incident (for example, discussion regarding HIV PEP), they should also make a OH note on the OH IT system.

The Recipient should be provided with relevant leaflets (appendix for HIV PEP).

If there is an exposure of any kind to radioactive material, the OH nurse must discuss this the OHP immediately.

17.0 Training

All staff within the Trust will be provided with training in the management of inoculation injuries.

The training will be delivered at Trust inductions and as part of clinical mandatory training.

The training should focus on avoiding BFEs;

Adherence to universal precautions;

Undertaking appropriate risk assessments when assessing BFE exposure;

Using PPE and Safe handling of sharps where appropriate

Applying first aid measures in the event of a BFE

Prompt reporting of BFEs to the OHS during working hours or the Emergency department (ED) outside of working hours

Attending follow up appointments in Occupational Health

18.0 Useful Trust contacts

Dr Stephen Winchester, Consultant Medical Virologist
Ext: 3029 Email s.winchester@nhs.net
Virology main lab ext 3729 Email virology.asph@nhs.net

Nicki Lewis, Lead Antimicrobial Pharmacist / Clinical Lead Pharmacist
Bleep 8203 Email: nicki.lewis@nhs.net

Genitourinary Medicine Service formerly Blanch Herriot Unit transferred to Buryfields in Guildford run by CNWL
HIV information Line: 0203 317 5100

Dr Jillian Pritchard, GUM Consultant (ASPH ahoc clinics)
Ext: 2664 jillian.pritchard1@nhs.net

19.0 RIDDOR reporting

- RIDDOR reporting is required if the Recipient of off work for 7 consecutive days or more as a result of the incident, if the Source patient is a BBV positive or if a seroconversion occurs.

- Trust staff: The OHA should email the information (date, time, location and incident details) to the Trust Health and Safety Manager who will report to the HSE.
- Commercial clients: The OHA will email the incident information (date, time, location and incident details) to the Employer/Manager who will report to the HSE.

20.0 Monitoring Compliance with this Protocol

Compliance will be monitored using the methods outlined in the following table:

Measurable Procedure Objective	**Monitoring / Audit method**	**Frequency of monitoring**	**Responsibility for undertaking the monitoring**	**Monitoring reported t o which groups/ committees, Inc. responsible for reviewing action plans**
Trust staff will comply with immediate requirements following BFE exposure	Case reviews	As required	OHS	Local Management
OH will manage all reported BFE's according to the protocol	Case reviews and audit	Quarterly and or as required	OHS	Health and Safety Committee
Patterns of BFE's and response will be reviewed to ensure learning and mitigate risk of recurrence	Summary report of all BFE incidents, their management and compliance with procedures	Quarterly	OHS	Health and Safety Committee and information with Infection Control committee

Additional audit and monitoring will be implemented as considered necessary.

21.0 Stakeholder Engagement and Communication

The policy is owned by the Occupational Health Department.

All Trust staff has a personal and professional responsibility to ensure they have read and understood all Trust Policies that are relevant to their role. This policy is relevant to all staff.

The Occupational Health Department will advertise, through its intranet, when the training sessions for staff are held and will actively encourage staff to participate for reasons of personal development and responsibility as well as to ensure compliance with the law.

22.0 Approval and Ratification

Policy review requires approval by the Control of Infection Committee

23.0 Dissemination and Implementation

The policy is available on the Trusts intranet site.

24.0 Review and Revision Arrangements

This policy will be reviewed in July 2023 unless there are any further changes to the statutory requirements and guidance in the interim, in which case a review will be carried out as required by such changes.

25.0 Document Control and Archiving

The current and approved version of this document can be found on the Trust's intranet sites. Should this not be the case, please contact the Quality team. Previously approved versions of this document will be removed from the intranet by the Marketing and Communications team and archived on the corporate governance shared drive.

26.0 References

Ashford and St Peters Hospitals Infection Control Policy

UK Guideline for the use of HIV Post –Exposure Prophylaxis 2021, British HIV Association https://www.bhiva.org/PEP-guidelines (Accessed 29/11/2023)

The Green Book - Chapter 18: Hepatitis B https://www.gov.uk/government/publications/hepatitis-b-the green book-chapter-18 (Accessed 29/11/2023)

Human Tissue Act (2004) www.hta.gov.uk (Accessed 29/11/2023)

The Health & Social Care Act (2008): Code of Practice for health and adult social care on the prevention and control of infections and related guidance (December 2009)

Health and Safety Executive (1998) Reporting injuries, diseases and dangerous occurrences in health and social care: Guidance for employers. HSE Information Sheet. https://www.hse.gov.uk/pubns/hsis1.pdf (Accessed 29/11/2023)

National Institute for Health and Care Excellence (NICE), Recommendations for Managing a Human Bite (revised May 2023).
https://cks.nice.org.uk/topics/bites-human-animal/management/managing-a-human-bite/ (Accessed 29/11/2023)

Appendix A

This document (or a copy) must be filed with the A&E card. If the injured person is a Trust employee, they must take the original with them to Occupational Health at the earliest possible opportunity or email to occupational.health@asph.nhs.net
RISK ASSESSMENT/ACTION FORM FOLLOWING POTENTIAL BLOOD BORNE VIRUS (BBV) EXPOSURE INCIDENT IN HEALTH CARE WORKER OR OTHER INJURED PERSON
SECTION A – details of risk assessment (to be completed by A&E doctor)

Assessors Name	
Signature	
Job Title	
Contact details	
Date and time of assessment	
Date and time of exposure	

SECTION B – details of risk exposure

Name of injured person	
Date of birth	
Injured persons Job category	
Division where injury occurred	
Ward/Dept where injury occurred	

How did the accident happen [please provide a short description of what happened]

SECTION C – Details of Exposure Incident (TICK)					
	YES		YES		YES
Not Known		Pleural Fluid		Unfixed tissues and organs	
Blood		Synovial Fluid		Body fluid with visible blood	
Human Breast Milk		Semen		Peritoneal fluid	
Amniotic Fluid		Cerebo-spinal Fluid		Saliva in association with dentistry	
Vaginal Secretion		Bloody Saliva from human bite		Saliva from human bite without blood	

If any boxes in this section ticked, the body fluid is high risk. CONTINUE WITH ASSESSMENT.
If no boxes in Section C ticked, advise injured person that exposure to BBV has not occurred. No further documentation required. STOP HERE.

SECTION D – Type of injury				
Percutaneous injury				
	YES	Details	NO	Details
Was skin injured with:				
a solid needle				
a hollow needle				
a sharp instrument (please state)				
Was the sharp needle/instrument visibly contaminated with source patient's blood?				
Was there bleeding from the site of the injury?				
Exposure of broken skin				
	YES	Details	NO	Details
Were high risk body fluids in contact with HCW/ injured person's broken skin? (e.g. fresh cuts <24 hrs old; eczema etc)				
Mucous membrane exposure				
	YES	Details	NO	Details
Were high risk body fluids in contact with eyes?				
Were high risk body fluids in contact with inside of the mouth				
Other mucous membrane e.g. inside nose (specify)				
If answered YES in any boxes in both Sections C and D, proceed to Section E.				
If answered NO to all boxes in Section D, advice injured person that exposure to BBV has not occurred. No further documentation required. STOP HERE.				
SECTION E – Blood testing on injured person				
Send a serum sample (gold topped bottle) from injured person to the Pathology department for appropriate serology and to be saved long term as a base-line sample. Please state on the blood form that the sample is from the exposed person "the recipient" and include the details of the source patient if known. This information will allow both samples to be linked.				
				YES
Injured person advised to attend Occupational Health as soon as it is next open.				

SECTION F – Risk assessment of source patient and consent to testing for BBVs
If you have ticked a YES box in Sections C & D, a risk assessment should be obtained for the source patient. If an inpatient, it should be obtained from the notes or by the team looking after the patient, but NOT the injured person. (If not an inpatient, the risk assessment should be obtained by an appropriate person). The person obtaining the risk assessment should also ask the source patient for consent to take a blood sample for BBVs (see Section J).

SECTION G – Source details		
	YES	
Source unknown		Proceed to section M
Source patient known		
Source name		
Date of birth		
Hospital Number		
Ward		
Source patient out patient		
Contact details		
GP		

SECTION H – Hepatitis risk assessment of source patient				
	YES	Details	NO	Details
Source patient HBsAg positive				
Source patient HCV Ab positive				

SECTION I – HIV risk assessment of source patient				
	YES	Details	NO	Details
Is the patient suspected/known HIV positive				
Lived for >6 months in Sub-Saharan Africa or S.E. Asia				
Any known risk factors e.g. men who have sex with men, IV drug user, prostitute				

If any yes box ticked in this section, then treat the incident as high risk for HIV exposure. Post– exposure prophylaxis should be offered to the injured person, and preferably given within 1–2 hours. THIS IS A MEDICAL EMERGENCY. See section K.

(NB It is still worth giving PEP up to 2 weeks after the incident).

SECTION J – Blood testing on source patient

The individual obtaining the risk assessment of the source patient should explain that a member of staff has been exposed to their blood/body fluids and that within this Trust it is the routine practice is to test their blood for blood borne viruses to enable appropriate treatment of the injured person. The source patient's blood will be tested for HBV, HCV and HIV, but this will only be done if they give consent for it.

	YES		NO	
Consent for Hepatitis B Surface Antigen (HBsAg) testing given				
Consent for Hepatitis C Antibody (Hep C Ab) testing given				
Consent for HIV testing given				

If consent is given, please document this in the patient's notes.

SECTION K: To be completed by Doctor Prescribing HIV PEP

HIV PEP drugs are kept at SPH in:
The Emergency Drug Cupboard, Contact Site Coordinator)
A&E Drug Cupboard
Occupational Health

Ashford Hospital in:
Emergency Drug Cupboard (Contact Site Coordinator)

	YES		NO	
Step 1 – go through card (kept with the PEP), with the injured person.				
Step 2 – For female injured person there: is there a risk of pregnancy?				
If yes, is pregnancy test positive?				
Is injured person's current medication a contraindication for HIV PEP?				
If yes, specify current medication				

	YES		NO	
Step 3 – Injured person counselled re HIV PEP				
Injured person decided to have PEP				

Name of person to have PEP	
Signature of person deciding to have PEP	
Date	
Signature of doctor prescribing PEP	

Date					
Print name					
Designation					
Name of consultant authorising prescription of PEP (Occupational Health, GUM, A&E)					
Print name					
Designation					
Step 4					
	YES		NO	Details	
HIV PEP administered					
Date commenced (DD/MM/YYYY)		time (24 hour clock)			
SECTION L – HCV prophylaxis					
There is no post exposure prophylaxis available. If the source patient is high risk or the source is unknown, Occupational Health can arrange follow up testing for the injured person as appropriate. If treated within 3 months of Hepatitis C seroconversion 90% of people clear the virus					
SECTION M – Hepatitis B prophylaxis					
If you have ticked a YES box in section C, D and the hepatitis B part of section H, treat the exposure as high risk for hepatitis B.					

An accelerated course of vaccine consists of doses spaced at 0, 1 and 2 months. A hepatitis B booster vaccine should be considered when the injury occurs if the individual has not received one within the past 12 months and may also be given at 12 months post injury to those at continuing risk of exposure to HBV. ** HBIG to be obtained from Consultant Virologist on duty
SECTION N – Follow up
If the injured person is an Ashford & St. Peters Hospital NHS Foundation Trust employee or they have been working on Trust premises, instruct them to contact the Trust Occupational Health Department on 01932 722404 the next working day. They should have already completed a DATIX report form and forwarded it to the manager of the area where the injury occurred. For any other injured person / Health Care worker they should be advised to make an appointment with their own G.P./Occupational Health Provider.

Action for Doctor to take when dealing with an BFE

Priority Action required.
Treat as Medical Emergency and complete Trust Risk Assessment

↓

Take a blood sample form the recipient for HIV, Hep C Ab and consider if HBsAb required based on risk assessment of Hep B Vaccination Status

↓

Review sections H & I of the Risk Assessment of Source Patient

↙ ↘

If Yes / Don Know Answer

↓

The incident is deemed High Risk

Involves possible exposure to BBV (Hep B, Hep C, HIV)

Follow the guidelines on risk assessment form

If necessary, contact the on call Virologist

↓

If PEP is required

↓

HIV PEP can only be accessed from the Emergency Drug Cupboard by Site Co-Ordinator (Ashford) Or ED (SPH)

Complete Section K of Trust Risk Assessment form

Hepatitis B immunoglobulin can be accessed from the on-call virologist

↓

Member of staff told to attend OH the next workday

All NO answers

↓

The incident is deemed low risk and no BBV involvement.

↘

Discuss the source patient consent for obtaining blood for HBsAg, Hep C Ab and HIV

Go through check list discussion with source patient

Document conversation in medical records

If consent given for source BBV screening complete section J of risk assessment form

Blood to be taken in gold top and sent to pathology as urgent

With high risk exposures at the weekend contact pathology reception and virology by email notifying them of the specimen for process as urgent

Make a note on the pathology request form to copy results to OH

Appendix B - <u>Information for consenting physician nurse practitioner – testing the Blood Borne Viruses following a body fluids exposure / incident.</u>

- Consent is an absolute pre-requisite to testing the Source for the purpose of managing occupational blood borne virus (BBV) exposure
- A universal approach is advocated in approaching Source after body fluid exposure incidents. As a rule all such adults who are able to give consent should be asked for consent for HIV, HBV and HCV testing
- **The Recipient, should not themselves approach the Source to request BBV testing**.

Under The Human Tissue Act 2004, which came into force on 1 September 2006, consent is required for testing tissue from the living or the deceased if used for obtaining scientific or medical information which may be relevant to any other person. Adult patients who are unconscious or otherwise not able to give consent (e.g. sedated, recently anaesthetised, incompetent) should not be tested for the purpose of benefiting another individual.

If the Source patient lacks capacity to consent for BBV testing, any clinical discussion regarding Source patient status/risk factors for BBVs must be undertaken by a Consultant OHP and the Treating Consultant.

The Human Tissue Act identifies the person who can give appropriate consent as:

- Living competent adult or child over 16 = his/her consent
- Living child under 16 = consent of a person with parental responsibility unless the child is deemed competent to give consent.
- Deceased adult:
- His/her consent before death o If no prior consent, consent of a nominated representative o If no representative, the consent of a qualified relative
- Qualifying Relatives: Spouse or partner, parent or child, brother or sister, grandparent & grandchild, child of a brother or sister, step-father or step-mother, half brother or half sister, friend of long-standing
- Adults who are unconscious or otherwise unable to give consent (e.g. sedated, recently anaesthetised or lacking mental capacity) may not be tested solely for the purpose of benefiting another individual.

Checklist for discussion with Source

- Is the Source able to give informed consent (age>16, fully conscious, mentally competent)
- Inform Source about the incident and the reason why testing is indicated. Explain how the information would help the Recipient
- State that blood would be tested for Hepatitis B, C & HIV (explaining this is the virus that causes AIDS) and ask if any previous tests
- Indicate that the results are confidential; his/her G.P will only be informed if Source requests
- Insurance implications. Following guidance by their Association, most insurers do not ask applicants whether they have been tested for HIV, but only whether they are HIV positive. Existing insurance policies are unaffected by a positive result, provided the person did not withhold information when the policy was taken out. Life insurance policies are restricted & more expensive for those with HIV, in the same way as for anyone with a potentially life threatening disease.

- Explain that a positive test for HIV does not necessarily mean a person currently has AIDS. Further tests will be needed. Although HIV is still not curable, treatments now exist which mean that early diagnosis is beneficial
- Early detection of hepatitis viruses and treatment initiation is also beneficial
- Diagnosis of blood borne viruses would also potentially protect family members from the risk of transmission
- Discuss transmission of blood-borne viruses
- If Source gives consent, record in the notes that Source consent for testing has been obtained following a body fluid exposure incident. Consent may be given orally for all bloodborne virus testing, with the exception of individuals in police custody from whom a signed and witnessed consent must be obtained
- Check with virology and tell Source when an initial result will be ready (usually a matter of hours on weekdays if flagged).

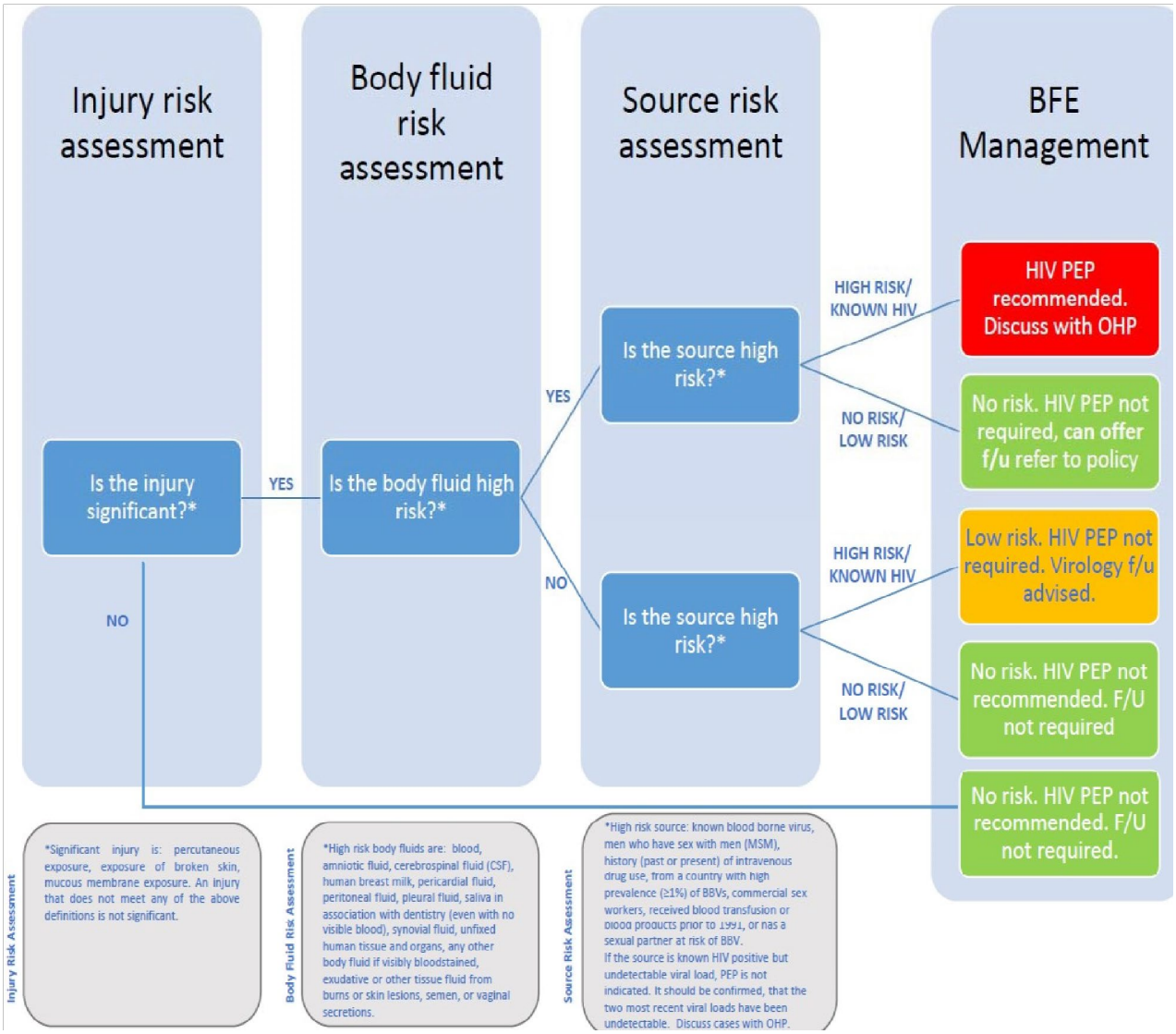
Informing Source of the test results

- Where possible, arrange for results to be given face-to-face, in an out-patient setting this may not be feasible so refer to local operational plan
- If appropriate, advise that s/he could still acquire Hep. B, C or HIV if any high-risk behaviour
- If risk behaviour in the previous 3 months, should consider retest to confirm status
- Appropriate follow-up should be arranged as needed.

Appendix C - **Indications for Prescribing HIV PEP**

HIV PEP should be recommended when for incidents involving a significant exposure AND a high-risk Source.
In practice there are occasions when the need for HIV PEP is often not clear-cut at times of the initial assessment but may be established by obtaining further information about the exposure or consenting and testing the Source individual. In such incidents the initial doses of HIV PEP may be given pending test results.

Decision Tree HIV PEP



When deciding whether PEP is indicated where the HIV status of the Source is unknown and not obtainable or a HIV test result is pending, the probability of the index case being HIV-positive must be estimated.
If the Source is of non-UK origin, using this link: https://aidsinfo.unaids.org

The equation below can be used to calculate the risk of HIV transmission from the incident.

Risk of HIV transmission = risk that source is HIV positive with a detectable HIV viral load X risk per exposure 1/333 for needle sick injury 1/1000 for splash injury

For example, a female of British origin has a prevalence of detectable HIV viraemia of 0.1 in 1000 or 1/10000, which when multiplied by the risk of transmission form a needle stick injury (1/333), gives a transmission risk form the incident of: 1/10,0000 x 1/333 = 0.0000003 or 1/3,333,333. So in the above example of a needlestick from a British female of unknown HIV status PEP would not be recommended as the risk is negligible.

Conversely, in the example of a needlestick form an MSN in London the probability of the index case being HIV positive with a detectable viral load is 32/1000, which multiplied by the transmission risk of x 1/333, gives a risk of HIV transmission of: 32/1000 x 1/333 = 32/33300 = 1/10,405 (0.01%). This risk is also extremely small, so PEP would generally not be recommended unless there were other factors that increased likelihood of transmission, such as an inoculum of blood having been injected.

In the case of a n uncomplicated needlestick injury from an untested MSM, the extremely small risk of HIV transmission along with the potential toxicity and inconvenience of PEP should be directly discussed with the individual. In most cases following a risk assessment, and discussion about risks and benefits, PEP would generally, not be given, However, the decision must be made on a case by case basis using clinical discretion and considering the preference of the client.

Summary Table of PEP prescribing recommendations

	Index HIV Positive		Index of unknown HIV Status	
	HIV VL unknown or detectable	HIV VL undetectable	From High Prevalence country / risk group (e.g MSM)	From low prevalence country / group
Sharps Injury	Recommended	Not recommended	Generally not recommended	Not recommended
Mucosal splash injury (high risk bodily fluid)	Recommended	Not recommended	Generally not recommended	Not recommended
Human Bite	Generally not recommended	Not recommended	Not recommended	Not recommended
Needlestick from a discarded needle in the community			Not recommended	Not recommended

Recommended: the benefits of PEP are likely to outweigh the risks, PEP should be given unless there is a clear reason not to do so.

Generally not recommended: the risk of HIV transmission is very low, the potential toxicity and inconvenience of PEP is likely to outweigh the benefit unless there is a clear specific extenuating factor which increases the risk (see footnotes c,d,e,f below). PEP should be very rarely be given when the risk has been assessed and discussed.

Not recommended: the risk of HIV transmission is negligible, and PEP should not be given.

a High prevalence countries or risk-groups are those where there is a significant likelihood of the index case individual being HIV – positive. Within the UK at present, this likely to be MSM, people who inject drugs from high risk countries (see footnote d) and individuals who have immigrated to the UK form areas of high HIV prevalence, particularly, sub-Saharan Africa (high prevalence is >1%), HIV prevalence country specific HIV prevalence can be found at https://aidsinfo.unaids.org
b The Index case has been on ART for at least 6 months with an undetectable plasma HIV viral load at the time of last measurement and within the last 6 months with good reported adherence. Where there is any uncertainty about HIV VL results or adherence to ART then PEP should be given. The viral load threshold considered 'undetectable' in the PARTNER 1 and 2 and HPTN052 studies was <200 copies/ml.
c Factors the influence decision-making in all exposures: More detailed knowledge of local HIV prevalence with index case sub-population (see footnote a). The recommendation related to high-risk groups living in the UK (based on the known prevalence of detectable HIV viremia in the uk guides as tabled above). Where the index case is form a high-risk group and normally resides outside the UK, the risk may be greater and where there is doubt PEP should be given.
d HIV prevalence amongst PWIDs varies considerably depending on whether there is a local outbreak and country of origin and is particularly high in PWIDs from Eastern Europe and central Asia. Region – specific estimates can be found in the UNADIS Gap Report. http://www.unaids.org/sites/default/files/media_asset/05_Peoplewhoinjectdrugs.pdf
e Factors that may influence decision – making include in occupational exposure: Deep trauma or bolus of blood injected
f PEP should only be considered after a bite if **all three** criteria are met: a) The Source's saliva was visibly contaminated with blood; b) The Source is know or suspected to have a plasma HIV viral load >200 copies.ml; and c) The bite has resulted in severe and/or deep tissue injury.

Appendix D: HIV- Post Exposure Prophylaxis (PEP)

If the Source is known to have HIV infection, the Nurse and OHP must establish:

- Antiretroviral treatment if any including resistance
- The two most recent viral load ideally 3 months apart.

If this information is readily available, HIV PEP should not be delayed**. If the Source is known HIV positive but undetectable viral load at the two most recent test, HIV PEP is not indicated.**
The case may need to be discussed with virologist or HIV consultant.
If there is evidence of drug resistance, advice should be sought from the HIV consultant.
If information is not known, empirical PEP may be necessary.

HIV EPE comprises of oral antietroviral medication which should be taken for 28 days.

The current regime that is currently recommended is:

> HIV PEP comprises oral antiretroviral medication, the first-line **empirical** PEP regimen recommended is as follows:
> **(Truvada) Tenofovir disoproxil 245mg/emtricitabine 200mg** one tablet PO ONCE a day
> **PLUS**
> **Raltegravir 1200mg** 9600mg x 2 tablets) PO once daily for **28 days** (30 day packs are supplied)

If the Source is known to have HIV infection, the Nurse and OHP must establish:

- **Antiretroviral treatment if any, including drug resistance.**
- **The two most recent viral load results, ideally within the last 6 months.**

If this information is not readily available, HIV PEP should not be delayed. The case may need to be discussed with a virologist or HIV consultant.

If there is evidence of drug resistance, advice should be sought from the HIV consultant.

HIV

Timing of HIV PEP

It is imperative that HIV PEP is started as soon as possible after exposure, preferably within 1 hours, but it can be considered up to 72 hours post-exposure.

Current guidelines do not recommend initiating PEP beyond 72 hours after exposure. However, in certain circumstances e.g. a very high-risk incident i.e. significant exposure involving a known HIV infected Source with a high viral load, starting HIV PEP even up to a week after the exposure may be considered.

Commencement of HIV PEP should not be delayed whilst awaiting Source blood results. HIV PEP can be discontinued when the Source blood results become available and are negative for HIV1 & 2 antigen and antibody.

Before prescribing HIV PEP

The Nurse and OHP must assess the Recipient:

- All personal details of the Recipient must be recorded in OH IT system including full contact details
- Full medical history such as diabetes, renal impairment, liver disease, psychiatric history and current pregnancy must be obtained.
- A full drug history must be obtained to decide on drug interaction (see below). Refer to experts if eGFR is <50mls/min.
- Empirical PEP is available in the ED and OH in 30 day packs.
- At the PEP follow-up assessment, the OHP will make further assessment and plan follow up / continuation of PEP etc (see below)

Anti-emetics and anti-diarrhoeal drugs are not prescribed routinely anymore. The Recipient should be advised that they can take medication if they develop side effects:

- Loperamide for diarrhoea
- Simple analgesia such paracetamol for headache or muscle aches
- In case of severe nausea and vomiting that requires pharmacological treatment, the
- Recipient should be advised to contact OHS or GP/ pharmacist to decide on safest medication.

Drug Interactions

When prescribing PEP it is essential to ensure that the potential for drug-drug interactions is considered, therefore an accurate patient medication history, including the use of over the counter, supermarket and recreational drugs, assessment must be undertaken.

Clinicians are advised to liaise with a HIV specialist pharmacist and or use Liverpool Drug interaction website for this purpose to be undertaken. http://hivdruginteractions.org

The following medications commonly interact with HIV PEP (list is not exhaustive):

- Other antivirals
- Statins
- Non-Steroid Anti Inflammatory Drugs (NSAID): may need to reduce the dose of NSAID
- Antihypertensive
- Domperidone
- OCP: the HIV PEP may reduce the efficacy of OCP, therefore, additional contraception such as barrier methods should be used whilst taking HIV PEP.

Drug-Drug Interactions with Tenofovir/Emtrictabine (Truvada)

Tenofovir disoproxil/emtricitabine has no significant drug-drug interactions although caution should be applied when tenofovir disoproxil/emtricitabine is co-administered with other potentially nephrotoxic agents. Enhanced renal monitoring may be warranted in this situation.

Drug-Drug Interactions with Raltegravir

Raltegravir has fewer drug interactions than other HIV medication as it is metabolised via UGT1A1 and is not a substrate of cytochrome P450 (CYP) enzymes.

Co-administration of Raltegravir 1200mg daily with aluminium and/or magnesium and calcium carbonate containing antacids are likely to result in clinically meaningful reductions in the plasma trough levels of Raltegravir. Based on these finding, co-administration of aluminium/magnesium and calcium carbonate containing antacids with raltegravir 1200mg once daily is not recommended.

Recipients must be advised to stop multivitamin supplements during the 28 day course of PEP.

Potent enzyme inducers such as rifampicin reduce plasma levels of Raltegravir. Consider 800mg BD raltegravior if rifampicin cannot be avoided.

Raltegravir does not interact with hormonal contraceptives.

All recipients should be advised to use barrier methods of contraception and avoid blood donation until appropriate BBV follow up has been completed and or a negative HIV test at three months post exposure.

If Recipient is taking any medication, check for interactions,
Use the HIV Interaction website https://www.hiv-druginteractions.org/checker (or associated app called HIV iChart)

If there is an interaction:

- Liaise with the Recipient's treating doctor to consider altering the dose of or stopping the regular medication that interacts with HIV PEP
- Liaise with pharmacist or HIV/ GUM clinic regarding alternative HIV PEP.

Pregnancy

HIV PEP is **not** an absolute contraindication in pregnancy or whilst breast feeding, however, as with other drugs, HIV PEP should only be started if the benefit outweighs the potential risks from side effects.

There is limited data regarding the safety of HIV PEP in pregnancy but to date no significant adverse pregnancy outcomes have been reported.

Women should be counselled that HIV drugs used for PEP are not licensed in pregnancy. Ultimately the decision whether to take HIV PEP rest with the pregnant women based on knowledge and the information regarding risk of HIV transmission and the know and unknown risk to the pregnancy outcomes.

OHN/ OHP should consider liaising with pharmacist, HIV/ GUM specialist and obstetrician if needed.

The anxiety about potential transmission of BBV to the unborn baby should be addressed with the pregnant Recipient:

- They should be reminded that they have not caught the infection and that the HIV PEP will reduce the likelihood of contracting HIV infection
- They should be advised that even if they were to contract HIV, there is treatment available that is likely to significantly reduce the risk of transmission to the baby.

If the Recipient is unsure whether or not they are pregnant, a pregnancy test should be performed prior to starting HIV PEP. Urine pregnancy tests are reliable two weeks after conception. Earlier than two weeks, pregnancy will have to be determined by blood βHCG level. HIV PEP should not be postponed while awaiting the result of a blood test for pregnancy, unless this is the woman's expressed wish.

Women who are breast feeding should be counselled about the potential transfer of antirevirals to the infant breast milk. Advise should be sough from HIV specialist / pharmacist.

For women who are pregnant Raltegravir 400mg twice daily is preferred. If accessing Raltegravir 400mg might cause delay, Raltegravir 600mg twice daily should be used and switch at the earliest opportunity.

HIV PEP Side Effects

Drugs used for HIV PEP can cause various side effects which should be discussed with Recipients to enable them making informed decision.

Common side effects: include nausea, vomiting, diarrhoea, headache, insomnia, tiredness and feeling generally unwell.

- Symptoms usually start within 2 or 3 days of commencing HIV PEP and may increase during the first week
- Symptoms usually subside after 10 days on treatment
- Ordinarily HIV PEP should not be discontinued because of common side effects
- If the Recipient cannot tolerate HIV PEP and it is discontinued, the side effects usually resolve within 3 or 4 days of discontinuing the medications

Advise the Recipient that they can take anti-emetics and anti-diarrhoeal medications and analgesia if they experience side effects.

Serious but uncommon side effects: include hepatotoxicity, renal toxicity, bone marrow arrest, skin rash.

- These side effects are usually asymptomatic therefore it is imperative that relevant blood and urine tests are undertaken before commencement and throughout the course of HIV PEP
- Inform the Recipient to report significant side effects and that the HIV PEP drugs can be changed if necessary
- Inform the Recipient that serious side effects are usually reversible.

Additional Information for the Recipient

The Recipient should be informed that the medicines used are licensed to treat HIV infection but they are not licensed for prophylaxis. The Recipient should understand the rationale, efficacy and the benefits on balance with the side effects of HIV PEP, to enable them to participate in the decision-making process.

The purpose of the discussion is to ensure the Recipient fully understands the importance of adherence to the treatment.

If the Recipient forgets or misses a dose:

- They should take the missed dose as soon as they can and take the next dose at the regular time
- They should not double the next dose
- If more than 48 hours have elapsed since the last dose then they should discontinue PEP
- To derive the maximum benefit in patients with chronic HIV infection >95% of the doses should be taken. The level of adherence for prophylactic treatment to achieve the maximum efficacy is not clear and the Recipient should be advised to adhere closely to the regimen.

The Recipient should be reminded of the importance of follow up visits and that blood tests are needed as serious complications can initially be asymptomatic.

It is important to ensure that the Recipient on HIV PEP is aware of whom to contact if experiencing side effects at any time.

Whilst on HIV PEP:

Restriction to work activity is NOT necessary regardless of the type of duties

- The Recipient does not need to refrain from performing EPP's during the follow up period
- If side effects are significant then the Recipient may need modifications to their duties/ hours or time off work
- The Recipient can carry on with normal daily activities
- The Recipient should be assured that they do not place anyone at risk by social contact
- They should be advised to keep well hydrated
- The Recipient can follow their normal diet
- Alcohol is not contraindicated but the Recipient should be advised to reduce alcohol intake. Large amounts of alcohol can affect the liver enzymes which make it difficult to establish whether the raised liver enzymes are due to HIV PEP or alcohol intake
- If the Recipient is a Trust employee, they should be reminded to complete the Trust on-line incident reporting form.

It is important to establish that the Recipient understands:

- Rationale for using PEP
- PEP should be taken for 28 days
- Potential adverse effects of PEP. Fatigue, nausea, diarrhoea, abdominal discomfort, liver dysfunction or renal toxicity/renal tubule toxicity (with tenofovir -usually reversible on stopping treatment)
- Relative lack of conclusive data for the efficacy of PEP. Not 100% effective Unlicensed nature of PEP
- Importance of adherence and explain number of tablets, dosing times and interval
- The need to attend follow up visits, stress the importance
- The need to practise safe sex until follow up testing has been completed
- Provide advice on future prevention strategies
- Seroconversion – advise on symptoms and stress importance to inform OH should they develop any symptoms
- HIV PEP can be taken with or without food. Taking it with food may help prevent nausea

- There are alternative HIV PEP regimes available in case the Recipient develops side effects or cannot tolerate the prescribed regime
- It is important to ensure that Recipient is aware to discard the last 2 doses (as HIV PEP is supplied in a 30 day pack).

Baseline blood tests for HIV PEP

If HIV PEP is prescribed the following baseline PEP blood and urine tests should be carried out:

- HIV Ag/Ab
- Full Blood Count (FBC) (To detect anaemia)
- Urea & Electrolytes (U&Es) (to detect renal toxicity)
- Liver Function Tests (LFTs) and Gamma Glutamyl Transpeptidase (γGT or GGT) (to detect hepatotoxicity)
- Urinanalysis / dipstick (to detect proteinuria)
- If protein is detected in urine, a mid stream urine sample for protein /creatinine ratio should be performed
- Hep BsAg and Hep BcAb only if the recipients is unvaccinated or HbsAb<10 IU:
- HCV Ab
- If the Recipient is diabetic, also check Glucose. Advise the Recipient to monitor their blood sugar more frequently whilst on HIV PEP.
  (*2 yellow and 1 purple top bottles*)

Discuss the outcome of the baseline PEP blood and urine tests with the OHA and if there is any abnormality the results should be discussed with an OHP.

If PEP is not prescribed and the recipient declines baseline test (HIV, HCV, or HBsAg/HepBcAb, take a baseline serum save.

Abnormal baseline liver or renal results should be discussed with the OHP and managed accordingly. Routine renal and liver function test monitoring after initiation of PEP is not necessary unless clinically indicated or if baseline blood tests are abnormal.

It is imperative to remind the recipient to contact the OHS if there is a new onset or deterioration in the side effects. Further HIV PEP follow up will be decided on an individual basis, based on the blood/urine results and side effects.

Early cessation of PEP

If the Source results are reported as negative the Nurse should advise the Recipient to discontinue PEP with immediate effect. If there is any uncertainty regarding the Window Period, the Nurse should discuss with an OHP prior to discontinuing PEP.

If HIV PEP is ceased before PEP follow-up blood tests, a decision should be made on a case by case basis to determine if further specific PEP follow-up blood testing is required. This will depend upon:

- how many days the Recipient has taken HIV PEP
- if the individual has experienced side effects
- the results of previous PEP blood test results.

It is important to remind the Recipient that if he/she develops any side effects within two weeks of ceasing PEP, they should contact Occupational Health.

Appendix E - PEP information leaflet. From BASHH, BHIVA and HIVPA

https://hivpa.org/wp-content/uploads/2021/04/HIVPA-PEP-PIL-April-2021-generic-TDF-FTC-RAL-OD-Final.pdf

Information about the HIV post exposure prophylaxis (PEP) contained in this pack.
This pack contains:

- Emtricitabine/tenofovir disoproxil tablets containing 200mg of emtricitabine and 245mg of tenofovir disoproxil
- Raltegravir (Isentress®) yellow 600mg tablets

These contain three anti-HIV medicines in total, which are needed after a recent risk of catching the virus (two medicines in the first tablet; one in the second).

Please read this information carefully, if you have any questions, ask your doctor or pharmacist.

Contact details:

Occupational Health Department, Chertsey House, First Floor
Guildford Road, Chertsey, Surrey. KT16 0PZ
Phone: 01932 72 2404

If you have any other side effects that you are concerned about, please contact your follow-up clinic, GP or NHS 111. If you think you may need urgent medical help, go to your nearest ED department. Please do not stop taking the medicines unless advised to by your doctor.

For non-sexual and non-occupational exposure: The clinical team in ED will advise you of your follow-up details.

What is post exposure prophylaxis (PEP)?
PEP is a 28 day course of medicines taken to reduce the risk of becoming infected with HIV after a possible contact with the virus. The anti-HIV medicines are known as antiretrovirals.

What is HIV?
HIV stands for Human Immunodeficiency Virus. It is a virus, which attacks the body's immune system.

Is PEP effective?
In most circumstances the risk of HIV being passed on from a single needle stick injury or sexual act is small. Taking the 28-day course of anti-HIV medicine makes that risk even smaller. Start PEP as soon as possible, preferably within 24 hours (ideally sooner) but always within 72 hours of possible contact with HIV. Starting PEP as early as possible, taking every dose as prescribed and completing the 28-day course provides the best protection. PEP does not reduce the risk of HIV infection to zero, and this is one of the reasons why you will be given appointments for check-ups during or after the PEP course.

How will I know if PEP has worked?
You will have follow-up appointments during your treatment and the clinic will arrange HIV tests after PEP. The clinics will give you information about your appointment. It is essential to attend these appointments, please let the clinic know if you need to cancel or change any. Your treatment and follow-up will be confidential.

How do I take the medicines?

The first dose of emtricitabine/tenofovir disoproxil tablets (one tablet) and raltegravir (two tablets) should be taken immediately.

After the first dose, continue to take the medications as stated below:
- Emtricitabine/tenofovir disoproxil tablets One tablet to be taken once each day (every 24 hours)
- Raltegravir tablets Two tablets to be taken together once each day (every 24 hours)

You should not miss any doses of the tablets; this may increase the chance that the treatment doesn't work.

What are the possible side effects of the medicines?

Like all medicines, emtricitabine/tenofovir disoproxil and raltegravir may cause side effects, although not everybody gets them. Any side effects are usually mild and short term. There are more details on the side effects of emtricitabine/tenofovir disoproxil and raltegravir in the patient information leaflets enclosed.

Commonly reported side effects of PEP that may affect up to 10% of people (up to 1 in 10 people) include:
• nausea (feeling sick) • diarrhoea • headache • lack of energy or weakness • loss of appetite • stomach ache • dizziness • trouble sleeping • rash

Many of these side effects can be managed at home. An anti-diarrhoeal medicine, loperamide, may be helpful if diarrhoea develops.

Your doctor or pharmacist will also be able to provide medication to reduce nausea and vomiting; please contact them if you need some. If you develop a rash or flu-like illness on PEP, or during the 12 weeks after finishing PEP, contact your clinic immediately to discuss your symptoms to ensure they are not an allergic reaction or signs of HIV infection.

If you experience any of these side effects or any other problems which are distressing and cannot be tolerated, or you feel you cannot continue to take your tablets, please return to the clinic to seek expert advice or to discuss a suitable alternative.

Do not stop treatment without seeking medical advice. Continuation of treatment for the full course will increase the effectiveness of PEP.

Can I take other medicines?
PEP medicines may interact with other medicines, including those you have bought yourself and herbal remedies. Tell the clinic about all medicines and herbal remedies that you currently take.

Common drug interactions include:
- Calcium, iron, magnesium, aluminium and zinc which can be found in indigestion remedies, vitamins and mineral tablets can stop you from absorbing raltegravir properly so should not be taken.
- Rifampicin After starting PEP, tell anyone recommending a new treatment for you that you are taking these medicines.

Always check with a doctor or pharmacist before starting any new medicines during the 28-days of treatment.

What should I do if I forget to take any tablets?
Anti-HIV medicines work best if there is a constant amount of the drugs in your body. It is important that you take them regularly and as prescribed.
If you forget to take the emtricitabine/tenofovir disoproxil or raltegravir, take them as soon as you remember.

However, if it is time for your next dose, skip the missed dose and go back to your regular schedule. Take the next dose of anti-HIV medicines at your normal time, but don't take a double dose. Missing doses may increase the chance that the treatment doesn't work, so try not to forget to take your medicines, you may wish to put an alarm on your phone to help remind you to take your medication.

Are these medicines safe if I am pregnant?
Yes, raltegravir and emtricitabine/ tenofovir can be taken in pregnancy. You will be asked to use raltegravir twice daily (one 400mg tablet) instead of once daily. It is important to tell the doctor if you are pregnant or breastfeeding. The doctor will discuss PEP benefits and risks with you.

Other information
While you are being treated and until you have received the results of an HIV test, you should use condoms at all times with any sexual partners. You should not donate blood during this time.

This information was prepared by the HIV Pharmacy Association (HIVPA) and should only be distributed to people already taking or who are thinking of taking the listed medicine(s). This leaflet does not constitute any endorsement of the use of the listed medicine(s) by HIVPA, and is intended for information purposes only. Drug interaction information has been taken from the summary of product characteristics for Isentress 600mg film-coated tablets and the Liverpool HIV Interactions – HIV Drug Interactions website. Prepared April 2021

Appendix F

Patient information leaflet for blood borne virus testing following staff contact with patient blood and bodily fluids

This leaflet explains what will happen if a member of staff comes into contact with your bodily fluids in such a way that there is a risk of transmitting infection. Bodily fluids include saliva, urine and faeces but this leaflet is mainly concerned with blood.

Accidents will happen. On very rare occasions, a member of staff might injure themselves in such a way it is possible that your blood or bodily fluids could enter their body. This usually happens because of a needlestick injury, where the member of staff accidentally pricks themselves with a needle. This is obviously distressing for the member of staff, and so the hospital has a specific policy to help them deal with it.
It is hospital policy that after this type of accident, we will ask you to agree to have a small blood sample taken from you. This will then be tested for various diseases that can be passed from one person to another through blood or bodily fluids. These conditions and diseases are called 'blood borne viruses'.

The policy also states that the member of staff taking the blood sample will ask you some personal details including: where you were each born and grew up, if either of you have ever had a blood transfusion, your sexual and drug-taking histories and whether either of you have recently had any tattoos or body piercing. These are similar questions to those you would be asked if you were a blood donor.

How will the blood be taken and how much?
If you have given a blood sample in the past month or so, which has been stored, we may be able to test this for blood borne viruses instead of taking a new sample. A doctor or nurse will take the blood sample using a cannula, central venous catheter line, implantable port or PICC if you already have one. About a test tube full of blood will be taken. This is about two teaspoonfuls. This amount of blood is needed as various tests will be carried out in the laboratories.

What tests will be carried out?
The laboratory staff will test the blood sample for various diseases, including Hepatitis and Human Immunodeficiency Virus (HIV), which can be passed on by blood and other bodily fluids. By asking you to agree to this testing, we are not implying that you have any of these diseases. It is only done to protect and reassure our staff. If you have any questions about this, please talk to the doctor or nurse taking the blood sample.

What are the implications of these tests?
It is rare for these tests to find any trace of these diseases. If the test results are negative, that will be the end of the matter as the information will remain confidential and will not be passed on to your GP or anyone else. In the rare circumstance that the tests show some trace of one of these diseases, the medical team caring for you will tell you the results.
We will also need to tell our Infectious Diseases Team, so they can visit you to offer advice, information and support about options for more tests and treatment. In many cases, there are effective methods of treating these diseases. They will also give you information about any support organisations available.

Appendix G:

Occupational Health
Chertsey House, St Peter's Hospital
Guildford Road, Chertsey, Surrey.
KT16 0PZ

Tel 01932 72 2404
E-mail Occupationalhealth.asph@nhs.net
Web www.ashfordstpeters.nhs.uk/occupational-health

PRIVATE & CONFIDENTIAL
Name of manager
Contact details

Dear

Re: Name of staff member

The above named staff member sustained an accidental exposure to blood /body fluids whilst at work on (clinical area/time/date). They were advised that follow-up in Occupational Health is required.

Despite two reminders they have not attended for a follow-up appointment.

As their role involves exposure prone procedure (EPP) work, their fitness to continue undertaking this type of work cannot be confirmed at present.

We suggest that you ask them (named person) to contact Occupational Health promptly to arrange follow-up assessment.

Please let us know if they are no longer working in your department, you can contact us via Occupationalhealth.asph@nhs.net

Yours sincerely
Name of practitioner
Designation

Appendix H : EQUALITY IMPACT ASSESSMENT

Name and title: Nadine Williams – Occupational Health Manager
Policy: Management body fluid exposure BFE

Background Who was involved in the Equality Impact Assessment
Occupational Health completed the Equality Impact Assessment, this is also being sent To Infection Control Committee members for comment before submission for approval and ratification
Methodology • A brief account of how the likely effects of the policy was assessed (to include race and ethnic origin, disability, gender, culture, religion or belief, sexual orientation, age) • The data sources and any other information used • The consultation that was carried out (who, why and how?)
All Trust Staff and those working on Trust premises regardless of their race and ethnic origin, disability, gender, culture, religion or belief, sexual orientation, age are subject to the guidance set out in this policy. This Policy aims to reduce ensure any inoculation injuries sustained by staff working in Ashford & St Peter's Hospitals NHS Foundation Trust premises are managed efficiently and effectively reducing the risk of transmission of Hepatitis B, Hepatitis C and or HIV virus to affected individual. This policy affects all Healthcare workers whose work for the Trust and or within the Trust premises. This policy is informed by: Management of Healthcare Waste Policy Control of Substance Hazardous to Health (COSHH) Policy Spillage of Blood and Body Fluids Policy Standard Precautions Policy Health & Safety Policy Management of Infected Health Care Worker Policy
Key Findings • Describe the results of the assessment • Identify if there is adverse or a potentially adverse impacts for any equalities groups

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There is a potential adverse impact for those workers undertaking Exposure Prone Procedure duties who develop an infection with Hepatitis B, Hepatitis C and or HIV virus following an inoculation injury.

There is well documented evidence where there is an increased risk of HIV being present in the following groups, IV drug users, prostitutes, men who have sex with men, haemophiliac's. Those from high risk area's including sub Saharan Africa and south east Asia. All source patients treated equally when being approached for blood test. A leaflet (See Appendix G) of this Policy is given to source patient being approached for blood testing. If required the Trust has access to translators to ensure good communication. If this is not possible a risk assessment can be carried out on the basis of the medical notes but no bloods are taken without informed consent.

Whilst all effort and adherence to control measures are in place to reduce this risk. If this was to occur appropriate employment support will be offered to Health care workers who are diagnosed as with an occupationally acquired blood borne virus.

Patient safety is paramount and it is important to reduce the risk of transmission from staff to patients. This policy supports compliance with government guidance.

All Health care workers who sustain an inoculation injury and require subsequent follow up screening to ensure no sero-conversion has occurred will be informed of the potential consequences of possible sero-conversion to infection with the Hepatitis B, Hepatitis C or HIV virus.

Conclusion
Provide a summary of the overall conclusions – as above

Recommendations

- State recommended changes to the proposed policy as a result of the impact assessment
- Where it has not been possible to amend the policy, provide the detail of any actions that have been identified
- Describe the plans for reviewing the assessment

No further changes are required to the policy as a result of the impact assessment. The policy will be reviewed again in 3 years

APPENDIX I : CHECKLIST FOR THE REVIEW AND APPROVAL OF DOCUMENTS

To be completed (electronically) and attached to any document which guides practice when submitted to the appropriate committee for approval or ratification.
Title of the document: Management of body fluid exposure and inoculation injuries policy
Policy (document) Author: Nadine Williams
Executive Director: Dr Stephen Winchester

		Yes/No/ Unsure/ NA	Comments
1.	Title		
	Is the title clear and unambiguous?	Yes	
	Is it clear whether the document is a guideline, policy, protocol or standard?	Yes	
2.	Scope/Purpose		
	Is the target population clear and unambiguous?	Yes	
	Is the purpose of the document clear?	Yes	
	Are the intended outcomes described?	Yes	
	Are the statements clear and unambiguous?	Yes	
3.	Development Process		
	Is there evidence of engagement with stakeholders and users?	Yes	Infection control, GUM consultant, OHP
	Who was engaged in a review of the document (list committees/ individuals)?	Yes	
	Has the policy template been followed (i.e. is the format correct)?	Yes	
4.	Evidence Base		
	Is the type of evidence to support the document identified explicitly?	Yes	
	Are local/organisational supporting documents referenced?	Yes	
5.	Approval		
	Does the document identify which committee/group will approve/ratify it?	Yes	
	If appropriate, have the joint human resources/staff side committee (or equivalent) approved the document?	Yes	
6.	Dissemination and Implementation		

	Is there an outline/plan to identify how this will be done?	Yes	
	Does the plan include the necessary training/support to ensure compliance?	Yes	
		Yes/No/ Unsure/ NA	Comments
7.	Process for Monitoring Compliance		
	Are there measurable standards or KPIs to support monitoring compliance of the document?	Yes	
8.	Review Date		
	Is the review date identified and is this acceptable?	Yes	
9.	Overall Responsibility for the Document		
	Is it clear who will be responsible for coordinating the dissemination, implementation and review of the documentation?	Yes	
10.	Equality Impact Assessment (EIA)		
	Has a suitable EIA been completed?	Yes	

Committee Approval (insert name of Committee)			
If the committee is happy to approve this document, please complete the section below, date it and return it to the Policy (document) Owner			
Name of Chair	David Fluck	Date	22.12.2023
Ratification by Management Executive (if appropriate)			
If the Management Executive is happy to ratify this document, please complete the date of ratification below and advise the Policy (document) Owner			
Date: n/a			