Cheshire and Wirral Partnership NHS
NHS Foundation Trust

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Prevention and management of exposure to health care associated infections (HCAI) and inoculation incidents

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Type of document	Policy
Target audience	All CWP staff including students, visiting health care workers, volunteers and contractors whilst on Trust premises.
Document purpose	This policy sets out the arrangements for the prevention and management of exposure to healthcare associated infections and inoculation incidents for any healthcare workers or any service user within the Trust. The key responsibilities are outlined with the reporting arrangements.

Approving meeting	Infection Prevention and Control Sub Committee	Date Nov 2017
Implementation date	January 2018	

CWP documents to be read in conjunction with	
HR6	Mandatory Employee Learning (MEL) policy
IC1	Trustwide Infection Prevention and Control Operational Policy
IC4	Meticillin Resistant Staphylococcus Aureus (MRSA) policy
IC3	Standard (universal) infection control precautions policy
GR1	Incident reporting and management policy
HR15	Managing stress – promoting staff well being guidance for managers and staff
HR14	Guidance on accessing staff support and counselling service
GR27	Guidance for the control of substances hazardous to health.

Document change history	
What is different?	• 3.1 Addition of HIV consultation on transmission of HIV to service user from staff and reference 10. • Page 7, update EPP risk staff categories' and reference 11 & 12.
Appendices / electronic forms	N/A
What is the impact of change?	Low

Training requirements	No - Training requirements for this policy are in accordance with the CWP Training Needs Analysis (TNA) with Learning and Development (L&D)

Document consultation	
East locality	Discussion Forum members
Wirral locality	Discussion Forum members
West locality	Discussion Forum members
Corporate services	Infection, Prevention and Control Sub Committee
External agencies	N/A

Financial resource implications	N/A

External references
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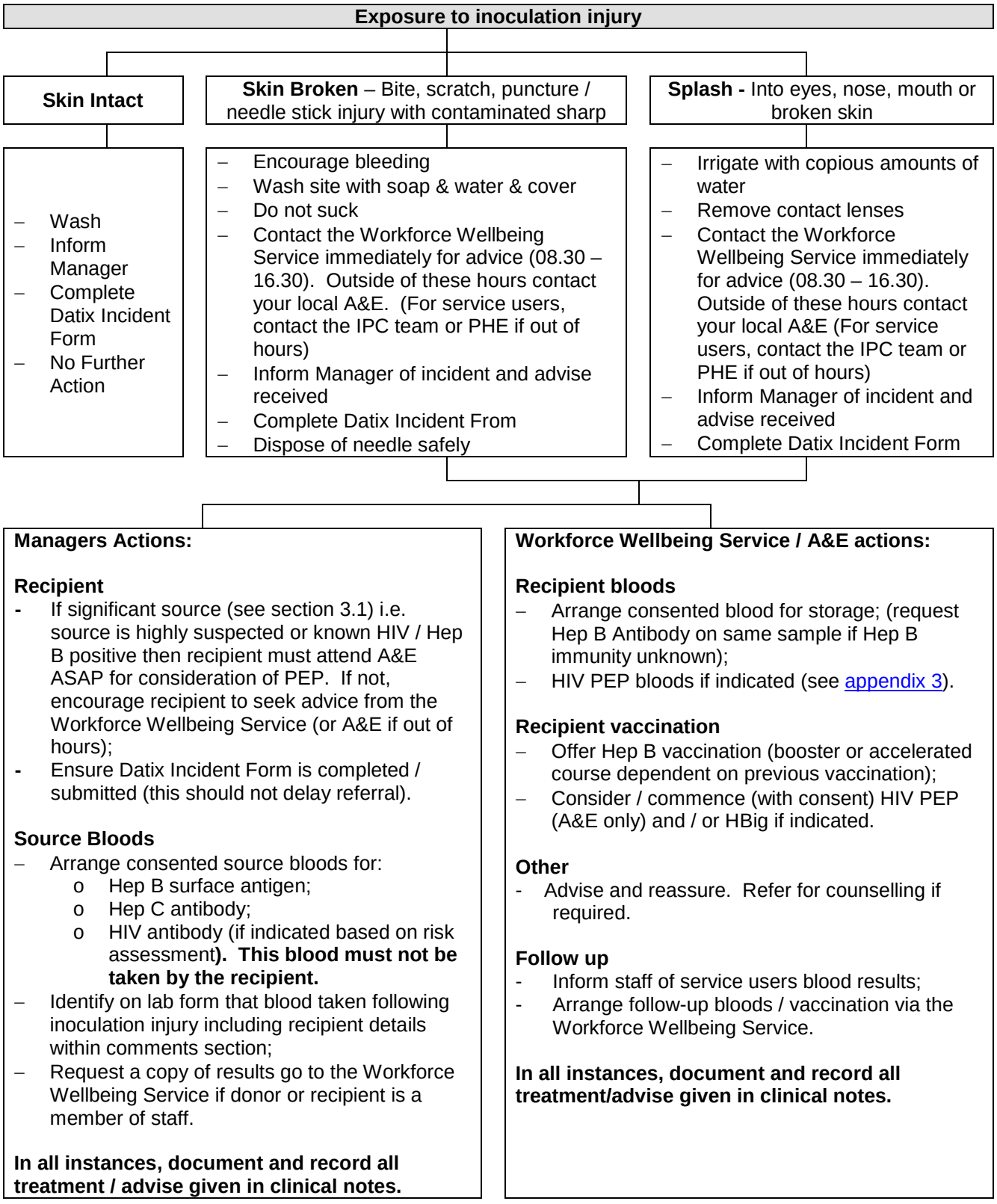
Equality Impact Assessment (EIA) - Initial assessment	**Yes/No**	**Comments**
Does this document affect one group less or more favourably than another on the basis of:		
- Race	No	
- Ethnic origins (including gypsies and travellers)	No	
- Nationality	No	
- Gender	No	
- Culture	No	
- Religion or belief	No	
- Sexual orientation including lesbian, gay and bisexual people	No	
- Age	No	
- Disability - learning disabilities, physical disability, sensory impairment and mental health problems	No	
Is there any evidence that some groups are affected differently?	No	
If you have identified potential discrimination, are there any exceptions valid, legal and/or justifiable?		
Select		
Is the impact of the document likely to be negative? - If so can the impact be avoided?	No N/A	

Equality Impact Assessment (EIA) - Initial assessment	Yes/No	Comments
- What alternatives are there to achieving the document without the impact? - Can we reduce the impact by taking different action?	N/A N/A	
Where an adverse or negative impact on equality group(s) has been identified during the initial screening process a full EIA assessment should be conducted. If you have identified a potential discriminatory impact of this procedural document, please refer it to the human resource department together with any suggestions as to the action required to avoid / reduce this impact. For advice in respect of answering the above questions, please contact the human resource department.		
Was a full impact assessment required?	No	
What is the level of impact?	Low	

Content

Quick reference flowchart - Principles of the management of inoculation injury / exposure to BBV for staff



N.B. If a service user is the recipient of the injury, advice should be sought via the IPC team (01244 397700) or PHE (0151 434 4819) if out of hours. If the donor is a member of staff, he / she should attend the Workforce Wellbeing Service for donor bloods.

Quick reference flowchart - Principles of the management of exposure to a HCAI (non inoculation injury) for staff

Exposure to HCAI

↓

Refer to occupational health department (Contact PHE if out of hours advice is needed)

Managers Responsibility:

- Refer individual to the Workforce Wellbeing Service for advise (out of hours, seek advice from the on-call PHE);
- Ensure Datix incident form is completed;
- Apply advice received from the Workforce Wellbeing Service (including where necessary advice on temporary redeployment and medical exclusion).

Workforce Wellbeing Service responsibilities:

- Assess individual and advise on treatment intervention and impact on work;
- Offer and administer vaccination in accordance with exposure;
- Liaise with manager and exclude from duty if indicated;
- Document and record all treatment / advise given;
- Arrange follow up if needed.

In the event of service user exposure to a HCAI:

- Seek advice from the IPC team (or if out of hours from PHE);
- Arrange for any recommended vaccination to be prescribed / given;
- Arrange for isolation / segregation if indicated on advise of the IPC team / PHE lead;
- Document and record all treatment / advice given in patient records and inform senior clinician responsible for care.

1. Introduction

Cheshire and Wirral Partnership NHS Foundation (CWP) is firmly committed to reducing Health Care Associated Infections (HCAI) and in doing so acknowledges its responsibility under Health and Safety Law to protect staff and service users against acquiring HCAI, as far as is reasonably possible, through the promotion of good clinical practice and the provision of suitable facilities. All CWP staff have a responsibility under Health and Safety Law to adhere to local policy and report unsafe practices / working environments.

Furthermore CWP will ensure that risk of exposure to hazardous substances including pathogens is assessed and effective measures to protect workers and others from risks are implemented where possible.

This policy applies to all CWP staff potentially exposed to health care associated infections/inoculation injuries. The same principles should be applied to service users exposed to a HCAI/inoculation injury following guidance indicated in the quick reference flowcharts.

This policy acknowledges that the potential risk of acquiring a blood borne virus (BBV) is enhanced during Exposure Prone Procedures (EPP) (defined below) and that EPP are not considered core business for CWP.

"EPPs are those invasive procedures where there is a risk that injury to the worker may result in exposure of the patient's open tissues to the blood of the worker. These include procedures where the worker's gloved hands may be in contact with sharp instruments, needle tips or sharp tissues (eg spicules of bone or teeth) inside a patient's open body cavity, wound or confined anatomical space where the hands or fingertips may not be completely visible at all times. Such procedures occur mainly in surgery, obstetrics and gynaecology, dentistry and some aspects of midwifery. Most nursing duties do not involve EPPs; exceptions include accident and emergency and theatre nursing" (PHE 2014).

During normal working hours (08.30 – 1630 Monday - Friday, excluding Bank Holidays) the Workforce Wellbeing Service has overall responsibility for supervising the management of Health Care Workers (HCW) who have sustained an occupational exposure to a HCAI. Outside of these hours staff should report the exposure directly to the local A&E department and then notify the occupational health department as soon as it next opens.

2. Purpose

In compliance with the Department of Health guidance CWP will:

- Make immunisation available to staff appropriate to the demands of their occupation and administered by suitably competent staff in accordance with CWP protocols;
- Set out procedures that must be followed to ensure that staff receive the most appropriate treatment without delay following exposure to health care associated infections / inoculation incidents.

3. Definitions

A&E	Accident and Emergency Department
BBV	Blood Borne Viruses referred to in this policy include Hepatitis B, Hepatitis C and Human Immunodeficiency Virus
EPP	Exposure Prone Procedure
HBIG	Hepatitis B immunoglobulin
HBsAb	Hepatitis B surface antibody
HBsAg	Hepatitis B surface antigen
HBV	Hepatitis B Virus
HCV	Hepatitis C virus
HCW	Health Care Worker
HCAI	Health Care Associated Infection

HIV	Human Immunodeficiency Virus
PHE	Public Health England
COCH	Countess of Chester Hospital
Inoculation incident	Consists of exposure to blood or other body fluids involving: – Broken skin – such as abrasions, fresh cuts, eczema; – Percutaneous exposure - when contaminated material penetrates the skin e.g. needle stick injury, bites; – Mucocutaneous exposure- exposure of blood or other body fluids to the lining of eyes, nose or mouth.
MMR	Measles, Mumps and Rubella
PEP	Post Exposure Prophylaxis against HIV which is given following exposure in cases considered high risk for possible HIV exposure
Recipient	Person who was exposed to the body fluid
Sharps	Are objects with sharp edges such as suture needles, hollow needles, scalpels, blades lancets, surgical instruments, broken ampoules, bone, teeth or equipment used in dentistry e.g. burr which carry the risk of transmission of BBVs.
Source	Person who is the origin of blood or body fluid. Sometimes referred to as 'the donor.'

3.1 Key advice

To protect CWP staff in the event of exposure to HCAI and reduce the risk of possible transmission of disease to staff and service users.

It is imperative that all incidents of exposure to a Blood Borne Virus (BBV) or other HCAI are documented using the Datix incident reporting system as per the incident reporting and management policy.

For the purpose of this policy the term 'health care associated infection (HCAI)' encompasses any infection by an infectious agent acquired by a healthcare worker in the course of their NHS duties such as:

- Blood borne viruses, for example:
  - Hepatitis B (HBV);
  - Hepatitis C (HCV);
  - Human immunodeficiency virus (HIV).
- Other pathogens, for example (list not exhaustive):
  - Varicella (Chickenpox);
  - Measles;
  - Mumps;
  - Rubella;
  - Tuberculosis;
  - Influenza.

For MRSA please refer to the CWP MRSA policy.

Inoculation incidents referred to within the policy include sharps injuries, bites and scratches (if the skin is broken) and splashes to exposed mucous membranes (e.g. eyes, mouth etc).

Blood Borne Viruses (BBVs)

Transmission occurs when the infected bodily fluid of an individual makes contact with the bodily fluid / mucous membrane of another person. Bodily fluids with the potential to transmit BBVs include:

- Blood;
- Synovial fluid;
- Cerebrospinal fluid;
- Semen;
- Vaginal secretions;

- Amniotic fluid;
- Pericardial fluid;
- Pleural fluid;
- Breast Milk.

Urine, faeces, vomit and saliva **DO NOT** represent a significant risk unless blood stained.

Significant occupational transmission of BBVs to healthcare workers can occur following:

- A penetrating injury from a sharp object or instrument (i.e. needle or blade) that is contaminated with the blood or body fluids of an individual known or suspected to have a BBV;
- Exposure of mucous membrane (eyes, mouth etc) to blood or body fluids from an individual known or suspected to have a BBV;
- Exposure of non-intact skin (cuts, abrasions, dermatitis etc) to blood or body fluids from an individual known or suspected to have a BBV;
- A human bite (from an individual known or suspected to have a BBV) that breaks the skin;
- Exposure from an unknown source that is contaminated with blood or bodily fluids and that originated from an area that would be considered high risk (e.g. an area frequented by injecting drug users or sex workers). Risk should be determined based on a knowledge based risk assessment and undertaken by a person with sufficient knowledge of the medical history of the service user and any relevant information in relation to the incident, the area in which the incident occurred and any potential high risk factors. The risk assessment should be completed as soon as possible following the incident (see section 4 and appendix 1 to support the completion of the assessment). Timescales for completion might be subject to a bit of slippage depending on the volume of questions raised.

Non significant exposure to a BBV is defined as:

- Contamination of intact skin;
- Exposure to urine, faeces, vomit or saliva that is not blood stained;
- Injury from a sterile or uncontaminated instrument or sharp object;
- Exposure from an unknown source acquired in an area not associated with high risk activities (based on a knowledge based risk assessment undertaken by a person with sufficient knowledge of the medical history of the service user and any relevant information in relation to the incident, the area in which the incident occurred and any potential high risk factors. The risk assessment should be completed as soon as possible following the incident (see section 4 and appendix 1b to support the completion of the assessment).

Other HCAI's

Occupational transmission of other HCAI can be via airborne or droplet transmission (e.g. following coughing / sneezing) or from personal contact with an infected individual.

Transmission to service users from staff

The Department has asked PHE to produce guidance for the NHS to implement the change in policy, and to establish a centralised database to monitor healthcare workers with HIV (2013). Prior to this, the consultation document should be considered in addition to PHE guidance as in Reference 10 for those staff performing Exposure Prone Procedures.

Transmission to staff from service users

- Infection prevention and control procedures are necessary not only to protect vulnerable service users but also to protect HCW's from infection. HCW's are usually healthy and are therefore generally less susceptible to infection than the service users that they care for. However they may acquire skin infections such as herpes simplex, respiratory or skin infections such as chickenpox and mycobacterium tuberculosis and enteric infections (Wilson, 2006);

- Good infection prevention and control practice to minimise risk and prevent service users and healthcare workers acquiring infections must therefore be used routinely during all service user care – not just when it is known that the service user has an infection;

- It is also important to note that healthcare workers infected with BBVs may transmit infection to the service user. The main route of such transmission is associated with exposure prone procedures in which injury to the healthcare worker could result in blood entering the service user's open tissues.

4. Risk factors

Blood Borne Viruses (BBV)
There is no evidence that HBV, HCV or HIV can be transmitted under conditions of usual social contact unless significant exposure to blood or bodily fluids occurs.

The risk of transmission of a BBV from a significant source is as follows:

- HBV – In an un-immunised HCW, the risk of transmission of HBV from a known infectious source (via a percutaneous route e.g. following sharps injury) is approximately 30% (HPA 2007);
- HCV – In a non-immune HCW, the risk of percutaneous transmission of HCV from a known positive source is approximately 3% (HPA 2007). This risk is significantly reduced in relation to mucous membrane exposure;
- HIV – The risk of percutaneous transmission of HIV to a health care worker from a known positive source is approximately 0.3% (HPA 2007). This risk reduces to 0.1% in relation to mucous membrane exposure.

Other HCAI
Transmission of other HCAI is directly associated with the contact / exposure to others infected with the pathogen. The likelihood of developing the illness depends on the individuals' immunity status to the pathogen, the level of contact / exposure to the pathogen and the virility of the pathogen itself.

4.1 Prevention

The adoption of Standard Universal Precautions (otherwise known as safe working practices) when handling blood / bodily fluids, tissues and sharps instruments is the most effective means of reducing occupational exposure / transmission. Further information can be found in the Trust's standard (universal) precautions policy.

Vaccination, where available, can assist in reducing the risk of infection and is strongly recommended (as applicable to local risk). However it should never be regarded as a substitute for safe working practices but as an additional protection.

4.2 How inoculation incidents are reported, managed and treated

It is imperative that all incidents of exposure to a Blood Borne Virus (BBV) or other HCAI are documented using the Datix incident reporting system as per the incident reporting and management policy. The following outlines the process to be followed for the management of an inoculation incident (quick reference flowchart), including prophylaxis (definition of prophylaxis: is the prevention of disease or control of its possible spread):

- It is imperative that there should be as little delay as possible from the time of exposure to the assessment of transmission of risk and the commencement of appropriate treatment;
- Following exposure to a HCAI, healthcare workers should seek advice from the occupational health department (A&E dept out of hours) on the access / administration of post-exposure prophylaxis (PEP) and vaccination if indicated.

a) Immediate first aid (following **any BBV** exposure, whether or not the source is known to pose a risk of infection) should be undertaken as follows:

i) Penetrating wound / non intact skin:

- Wash site of exposure liberally with soap and running water without scrubbing (**do not** use antiseptic skin washes);
- Gently encourage free bleeding from puncture wounds (**do not** suck);
- Cover with impermeable dressing;
- Dispose of any item involved safely i.e. sharps container.

ii) Exposed mucous membrane:

- Irrigate eyes copiously with water before and after removing contact lenses;
- Wash mouth and nose out liberally using tap water.

b) Risk assessment

i) Source patient

A designated doctor / practitioner (this can be a member of the ward team who is familiar with any medical history or information), should assess if the reported exposure was significant (see section 3.1), based on type, route, nature and extent of exposure. The designated doctor/practitioner should refer to appendix 1b to support this assessment.

In all case of **significant exposure**, the source patient's BBV infectivity status should be established (by blood test) as soon as possible after the injury occurs as follows:

- Hepatitis B (Surface Antigen)*;
- Hepatitis C (PCR & Antibody);
- HIV (Antigen / Antibody combined test).

*Source patient testing for Hep B Surface Antigen is not required if the recipient is known to be **immune** to Hepatitis B.

Informed consent must be obtained by the designated doctor / practitioner from the source prior to venepuncture **(this must not be conducted by the HCW who sustained the injury);**

- If consent is withheld / delayed, the Workforce Wellbeing Service or A&E department (depending on who is responsible for dealing with the injured HCW) should be notified;
- The lab request form must clearly indicate that blood has been taken following an inoculation incident and include the name / date of birth of the recipient (within the 'comments' section) along with the date of the incident;
- The lab request form must indicate that the results are to be copied to the Workforce Wellbeing Service;
- The outcome of the risk assessment (i.e. indication of significant risk present) should be forwarded to the Workforce Wellbeing Service / A&E (depending on who is responsible for dealing with the injured HCW) as soon as it is completed by the designated doctor / practitioner.

ii) Recipient

- The recipient's hepatitis B immunity status should be established in all cases of significant exposure;
- A sample of the recipient's blood should be taken for storage (and Anti HB's if immunity status is unknown) following significant exposure (see appendix 2);
- The name and date of birth of the source patient should be recorded on the lab form of the recipient along with a statement indicating blood has been taken following an inoculation / exposure incident;
- If the source patient consent for blood testing is withheld / delayed the decision as to whether or not to recommend PEP should be made based on the risk assessment taking account of the type, nature and extent of exposure and the assumed risk of the donor;
- If consent is delayed (e.g. due to the source patient being unconscious), PEP treatment can be commenced, until consent has been obtained and the test result known;

- Follow up bloods of the recipient will be co-ordinated via the occupational health department as indicated in appendix 2.

4.3 Post Exposure Prophylaxis (PEP)

4.3.1 HIV

NB. HIV PEP is most likely to be effective when initiated as soon as possible (within hours and certainly within 48-72hrs of exposure) (DH 2008).

- In view of the need for very prompt treatment and the serious consequences of HIV seroconversion, significant occupational exposure to known or possible sources of HIV constitutes a medical emergency and the recipient should attend their local A&E department immediately following such an injury where HIV PEP may be required (see appendix 3 – HIV prophylaxis – a summary of required treatment following inoculation incident);
- Blood for storage should be taken from all recipients following exposure to any significant BBV source and any follow up blood testing appointments necessary, will be issued by the occupational health department once advised by the individual;
- There is currently no immunisation / immunoglobulin against HIV, however there is evidence that the administration of antiretroviral medication can significantly reduce the risk of developing HIV following an exposure incident.

4.3.2 Hepatitis B

- The Recipient's Hepatitis B status should be established;
- Hepatitis B immunoglobulin offers short term protection against the virus and should be considered / offered in non-immune recipients exposed to a known / suspected high risk source (appendix 4);
- Vaccination should be offered as indicated based upon whether the exposure was considered significant or not and the likelihood of future potential exposure (appendix 4);
- All follow up care including bloods (appendix 2) and vaccination (appendix 4) should be co-ordinated via the Workforce Wellbeing Service.

4.3.3 Hepatitis C

There is currently no prophylactic treatment (i.e. immunisation / immunoglobulin) against Hep C. Exposed HCWs should be counselled and advised to report any suggestive symptoms to the Workforce Wellbeing Service immediately and to attend for follow up blood testing as advised.

4.4 Management and treatment of other health care associated infections (HCAI)

General principles

- Potential exposure of HCW's to HCAI should be reported to the Workforce Wellbeing Service as soon as possible after exposure occurs;
- If exposure occurs outside of occupational health opening hours, advice should be sought from nearest A&E department, out of hours, walk in centre, dependant on severity, advice can also be sought from HPA (public health on call) via the COCH switchboard;
- Redeployment / medical exclusion may be required depending on the circumstances;
- HCWs should be encouraged to attend the Workforce Wellbeing Service for their immunisation status to be assessed and updated where indicated to prevent the likelihood of becoming ill following future exposure to HCAI;
- Post exposure prophylaxis (PEP) or treatment is not available for all HCAIs. Where PEP / treatment is available it is listed below:

Varicella (chickenpox)

Varicella is an acute highly infectious disease transmitted by droplet spread or personal contact. Varicella is preventable in 75% of cases by immunisation.

Management of HCWs following Varicella exposure

- Vaccinated HCWs or those with a definite history of chickenpox are considered immune and there is no need for them to be restricted from work;
- They should however seek further advice from the Workforce Wellbeing Service / infection control team before having patient contact if they feel unwell or develop a fever or rash within 3 weeks following exposure;
- Management of unvaccinated HCWs or those without a definite history of chickenpox and having significant exposure to Varicella includes:
  - Referring HCW to the Workforce Wellbeing Service for assessment / immunisation;
  - Excluding the individual from contact with high risk patients (e.g. pregnant women, immunosuppressed patients / colleagues etc.) from 8–21 days after exposure (Immunisation against Infectious Diseases 2006);
  - Reporting to the Workforce Wellbeing Service should they feel unwell or develop a fever / rash.

Post Exposure Prophylaxis (PEP)

- As well as providing preventative protection against the virus, Varicella vaccination can also be used to reduce the likelihood of infection developing post exposure if the vaccine is administered within 3 days of exposure;
- Regardless of the time since exposure, non immune HCWs should be offered vaccination to reduce their risk from future contamination and prevent exposing service users to Varicella in the future;
- A second dose of vaccine is required 4 – 8 weeks later;
- HCWs with localised herpes zoster (Shingles), on a part of the body that can be covered with a suitable dressing / clothing can be allowed to continue working unless they are in contact with high risk patients in which case a full risk assessment should be undertaken in conjunction with the Infection Prevention and Control Team (IPCT);
- Non immune staff, who are exposed to Varicella, should attend the Workforce Wellbeing Service either that day or the next day. In the event of the Workforce Wellbeing Service being closed for 2 or 3 days (such as weekends or bank holiday weekends), the individual should seek advice from their General Practitioner (GP).

Measles

Measles is an acute viral illness that is spread by airborne or droplet transmission. It is preventable by vaccination in over 90% of cases.

The Department of Health recommends that all people living in the UK are immune against measles.

Management of HCWs following Measles exposure;

- HCWs who are able to demonstrate satisfactory evidence of measles immunity (via either having received 2 doses of MMR vaccination or a positive antibody test) can continue working without restriction;
- Management of unvaccinated HCWs or those without a positive antibody test includes:
  - Referring HCW to the Workforce Wellbeing Service for assessment / immunisation;
  - Reporting to the Workforce Wellbeing Service should they feel unwell or develop a fever / rash.

Post Exposure Prophylaxis (PEP)

- As well as providing preventative protection against the virus, MMR vaccination can also be used to reduce the likelihood of infection developing post exposure if the vaccine is administered **within 3 days** of exposure;
- Regardless of the time since exposure, non immune HCWs should be offered the vaccination to reduce their risk from future contamination and prevent exposing patients to MMR in the future;
- A second dose of vaccine is required 4 weeks later;

- Measles immunoglobulin is available for post exposure prophylaxis in individuals for whom vaccination is contraindicated. Further advice should be sought from consultant microbiologist if required;
- Non immune staff who are exposed to measles should attend the Workforce Wellbeing Service either that day or the next day. In the event of the Workforce Wellbeing Service being closed for 2 or 3 days (such as weekends or bank holiday weekends), the individual should seek advice from their General Practitioner (GP).

Influenza

Immunisation for Influenza to healthcare workers and or service users will be coordinated by the Workforce Wellbeing Service in line with national guidance and trust risk assessment.

Immunisation is not compulsory, however is highly recommended by the Department of Health and the World Health Organisation to all frontline healthcare workers to minimise the spread of infection and protect service users and staff.

5. Reporting, monitoring and support

Reporting

- All exposures to HCAI and inoculation incidents **must** be reported by the recipient via the CWP incident reporting and management policy;
- The A&E departments will provide a summary report for the Workforce Wellbeing Service indicating any action taken for HCW's following exposure to HCAI / inoculation injury;
- All inoculation injuries will be reported under RIDDOR;
- Instances of HCAI / inoculation injuries will be reported into the Health, Safety and Welfare Sub Committee on a quarterly basis by the health and safety department;
- Instances of HCAI / inoculation injuries will be included within the 'Learning form Experiences' report produced by the risk manager.

Monitoring

- Copies of incident forms relating to exposure to HCAI / inoculation incidents will be forwarded to the Workforce Wellbeing Service and the IPC team by the Datix administrator;
- Compliance with the policy's training needs will be monitored via the People and Organisational Development Sub Committee (PODSC) on a quarterly basis.

Support

- The Workforce Wellbeing Service is responsible for the follow up care / support of HCW's following exposure to HCAI / inoculation incidents;
- Additional support will be offered via the Trust's staff support (counselling) team.

6. How the organisation trains staff in line with the training needs analysis

Staff are trained through CWP Mandatory Employee Learning relating to Inoculation Incidents. The Trust mandatory employee learning policy, details the training requirements for staff in line with the management and treatment of inoculation incidents.

Appendix 1a - Local risk assessment and checklist following exposure of staff to inoculation injury including as appropriate service user follow up following Inoculation Injury

Recipient details			
Recipient name		DOB	
Location of incident (e.g. ward, community clinic, home etc)			
Patient number			
Date of incident		Time of incident	

Incident details / description		
Location of Injury (e.g. tip of right index finger)		
Was injury sustained through a pair of gloves?	☐ Yes	☐ No

Source details			
Is the source known?	☐ No	☐ Yes - If so	
Name		DOB	
Hospital No			
Diagnosis			
Relevant Social History			
If source patient is unknown			
Area where incident occurred			

Significance of BBV exposure

Transmission of a BBV occurs when the infected bodily fluid of an individual makes contact with the bodily fluid / mucous membrane of another person. Bodily fluids with the potential to transmit BBVs include:

- Blood
- Synovial fluid
- Cerebrospinal fluid
- Semen
- Vaginal secretions
- Amniotic fluid
- Pericardial fluid
- Pleural fluid
- Breast Milk

Urine, faeces, vomit and saliva **DO NOT** represent a significant risk unless blood stained.

Risk assessment	**Yes**	**No**
Is the injury a deep penetrating wound from a hollow bore needle? (with or without bleeding)	☐	☐
Is the injury a deep penetrating injury from another sharp or spicule of bone? (with or without bleeding)	☐	☐
Is the injury a bite that has broken the surface of the skin and that has come from a source known to have or being investigated for a BBV?	☐	☐
Is the injury a scratch that has broken the surface of the skin and that has come from a source known to have or being investigated for a BBV?	☐	☐
Is the injury from a splash onto broken skin or mucous membrane that has come from a source known to have or being investigated for a BBV?	☐	☐
Has there been exposure of broken skin or mucous membrane from fresh blood?	☐	☐
Is the source known/being investigated for being HIV positive?	☐	☐
Is the source known/ being investigated for being Hepatitis B positive?	☐	☐
Is the source known/ being investigated for being Hepatitis C positive?	☐	☐
Has the individual received blood transfusions pre 1992?	☐	☐
Is the injury from an unknown source sustained in a high risk area?	☐	☐

Risk assessment	Yes	No
Is the injury from an unknown source that is likely to be contaminated with a BBV	☐	☐
A positive response to any of the questions above indicates a significant exposure and the recipient should be referred directly to the A&E department and followed up by the Workforce Wellbeing Service.		

Outcome / action		
BBV exposure considered significant?	☐ Yes	☐ No

Checklist **significant** exposure	Checklist for **non significant** exposure
Refer recipient to the A&E department for discussion / consideration of PEP	Refer to the Workforce Wellbeing Service (If a service user seeks advise form the IPC team or, out of hours via PHE).
Individual to contact Workforce Wellbeing Service following attendance at A&E and arrange follow up appointments for bloods / vaccination (If a service user seek advice form the IPC team or, out of hours via PHE in relation to bloods / vaccination requirements)	Complete Datix form completed
Complete Datix form	Offer counselling via staff support
Arrange for consented source bloods to be taken (Hepatitis B surface antigen, Hepatitis C PCR & Antibody and HIV Antigen / Antibody combined test) (N.B. note the recipient name on laboratory form and request results be copied to the Workforce Wellbeing Service)	Document all intervention within clinical notes.
Document all intervention within clinical notes	

Service user inoculation injury follow up

In the event of a significant exposure to a service user:

- Refer to an appropriate clinician/A&E to discuss the need for PEP;
- Arrange for source blood testing for storage via the Workforce Wellbeing Service (if a member of staff);
- Inform recipient of the outcome of the source blood test;
- Offer Hepatitis B vaccination if indicated and this should be prescribed by local medical staff or GP if community based service user;
- Arrange recipient follow up bloods (either as in-patent or via recipient GP for community based service users) as follows:

    - Hep B (Only indicated if source was Hep B positive or if source was unknown but considered high risk):
        - 6 weeks – Hep B surface antigen;
        - 12 weeks – Hep B surface antigen;
        - 6 months – Hep B surface antigen & Hep B surface antibody.

    - Hep C (Only indicated if source was Hep C positive or if source was unknown but considered high risk):
        - 6 weeks – Hep C PCR;
        - 12 weeks – Hep C PCR & Antibody;
        - 6 months – Hep C Antibody.

Service user inoculation injury follow up

- HIV (Only indicated if source was HIV positive or if source was unknown but considered high risk):
  - 6 weeks – HIV Antigen / Antibody combined test;
  - 12 weeks – HIV Antigen / Antibody combined test;
  - 6 months – HIV Antigen / Antibody combined test.

- Arrange for completion of Hepatitis B vaccination course (either as in-patent or via recipient GP for community based service users) as follows:

Additional bloods would be required if the recipient was given HIV post exposure prophylaxis via GP if community based.

Document all intervention within clinical notes

Contact details

Infection Prevention and Control Team: 01244 397700
PHE Out of Hours on 0151 434 4819

Appendix 1b - Local risk assessment / checklist following exposure of service user to a HCAI

Recipient details			
Recipient name		DOB	
Location of incident (e.g. ward, community clinic, home etc)			
Patient number			
Date of incident		Time of incident	

Incident details / description	
Nature of HCAI (e.g. measles)	
Details of exposure	

HCAI Exposure	
Nature of HCAI (e.g. measles)	
Length of time since first exposure	

Source details			
Name		DOB	
Hospital No			
Confirmed HCAI diagnosis of source?	☐ Yes	☐ No	

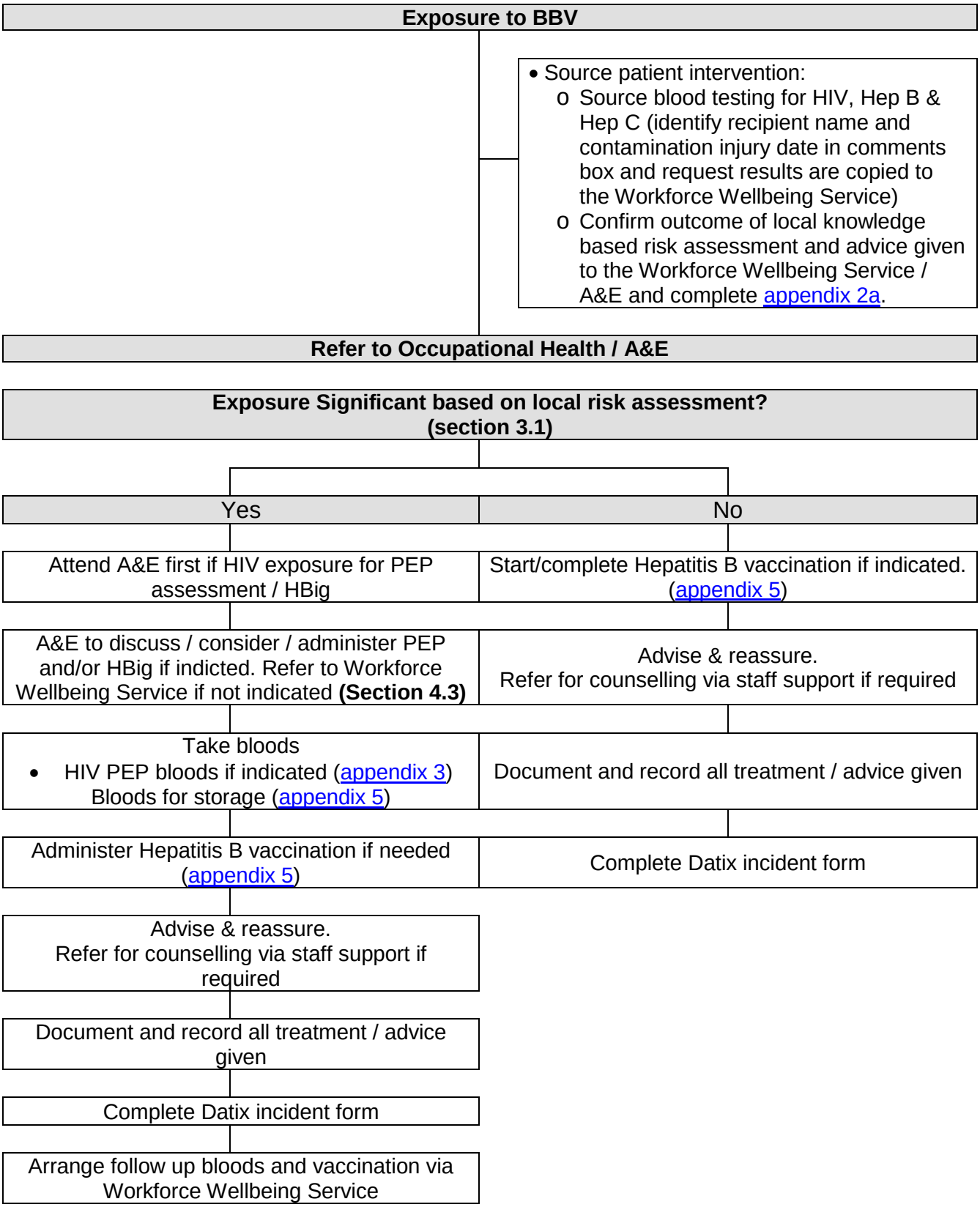
Recipient immunity		
Has the recipient		
Ever had the virus / disease to which they have been exposed?	☐ Yes	☐ No
Ever been vaccinated against the virus/disease to which they have been exposed?	☐ Yes	☐ No
If so, have they ever been told they are immune as a result of a blood test?	☐ Yes	☐ No
Any signs / symptoms of the virus/disease to which they have been exposed?	☐ Yes	☐ No

Outcome / action		
Datix Form completed?	☐ Yes	☐ No

Checklist	**Yes**	**No**
Advice sought from IPC(or HPA out of hours)	☐	☐
Arrange for prophylactic vaccination where available (either as in-patent or via recipient GP)	☐	☐
Advise service of potential signs or symptoms of the virus/disease and action to take if symptoms occur over the coming weeks.	☐	☐
Document all intervention within clinical notes.	☐	☐

Contact details
Infection Prevention and Control Team: 01244 397700 PHE Out of Hours on 0151 434 4819

Appendix 1c - Intervention following Blood Borne Virus (BBV) exposure for staff



A Datix incident form **must** be completed for all inoculation incidents however referral to the Occupational Health / A&E department **must not** be delayed for this purpose.

Appendix 2 - Post exposure / follow up recipient bloods required post inoculation incident (to be co-ordinated via the Workforce Wellbeing Service)

https://www.gov.uk/government/collections/immunisation-against-infectious-disease-the-green-book

(The information below can be found via the green book in the link above and should be accessed electronically)

In all cases blood should be taken for storage post exposure. Anti HBs should also be checked if Hep B immunity status unclear.

<table>
<tr><th></th><th colspan="3">HIV</th><th colspan="3">HBV</th><th colspan="3">HCV</th></tr>
<tr><th>Timescales</th><th>HIV positive /suspected source</th><th>HIV negative source</th><th>Unknown source</th><th>HBV positive source</th><th>HBV negative</th><th>Unknown source</th><th>HCV positive source</th><th>HCV negative</th><th>Unknown source</th></tr>
<tr><td>2 weeks post incident (only if taken PEP)</td><td>– FBC
– Liver Profile & enzymes
– U&E
– Serum Amylase</td><td rowspan="2"></td><td rowspan="5">Follow pathway determined by initial risk assessment and treat as either high risk (i.e. follow HIV positive /suspected source pathway) or low risk (follow HIV negative source pathway).</td><td rowspan="2"></td><td rowspan="2"></td><td rowspan="5">Follow pathway determined by initial risk assessment and treat as either high risk (i.e. follow HBV positive source pathway) or low risk (follow HBV negative source pathway).</td><td rowspan="2"></td><td rowspan="2"></td><td rowspan="5">Follow pathway determined by initial risk assessment and treat as either high risk (i.e. follow HCV positive source pathway) or low risk (follow HCV negative source pathway).</td></tr>
<tr><td>4 weeks post incident (only if taken PEP)</td><td>– FBC
– Liver Profile & enzymes
– U&E
– Serum Amylase</td></tr>
<tr><td>6 weeks post incident</td><td>Antigen / Antibody combined test</td><td rowspan="3">No further bloods however obtain follow up serum if symptoms or signs of liver disease /HIV develop</td><td>Surface Antigen*</td><td rowspan="3">No further bloods however obtain follow up serum if symptoms or signs of liver disease / HIV develop</td><td>Hep C PCR</td><td rowspan="3">No further bloods however obtain follow up serum if symptoms or signs of liver disease / HIV develop</td></tr>
<tr><td>12 weeks post incident</td><td>Antigen / Antibody combined test</td><td>Surface Antigen*</td><td>Hep C PCR & Antibody</td></tr>
<tr><td>6 months post incident</td><td>Antigen / Antibody combined test</td><td>Surface Antigen* & Surface Antibody*</td><td>Hep C Antibody</td></tr>
</table>

* Follow up bloods not necessary where HCW is known to be immune.

** Follow up bloods not necessary following non-significant exposure (e.g. splash to intact skin).

Appendix 3 - HIV prophylaxis – summary of treatment following inoculation incident

Commencement of HIV post exposure prophylaxis should only be considered following appropriate assessment by a suitably qualified and experienced clinician in accordance with national HIV PEP guidance arrangements.

Timescales	Known HIV infected source	Unknown source
Immediate post incident	• Obtain baseline serum for storage; • Take base line bloods for: – FBC; – Liver profile and enzymes; – U&E; – Serum Amylase. • Gain consent for treatment from recipient: – Seek advice from consultant in GU Medicine or Consultant Microbiologist if necessary; – Discuss implications with recipient; – Commence 5 day starter pack PEP as soon as possible after injury (certainly within 48-72 hours of exposure). • Forward summary of advice / treatment to Workforce Wellbeing Service; • Refer to Workforce Wellbeing Service for follow-up.	• Obtain baseline serum for storage; • Seek advise from Consultant in GU Medicine or Consultant Microbiologist if necessary: – PEP not usually indicated unless the circumstances strongly indicate an HIV positive source (depending on risk assessment); – Advise recipient of recommended action plan / follow up arrangements; – Forward summary of advice / treatment given to Workforce Wellbeing Service. Refer to Workforce Wellbeing Service for follow-up.

Appendix 4 - Hepatitis B Immunisation / Immunoglobulin - summary of treatment following inoculation incident as per the Green Book via the link below:

https://www.gov.uk/government/collections/immunisation-against-infectious-disease-the-green-book

(The information below can be found via the green book in the link above and should be accessed electronically)

HCW status	**Significant exposure**			**Non significant exposure**	
All HCWs regardless of status	Obtain baseline serum for storage				
HBV status exposed person	**HBsAg positive Source patient**	**Unknown source**	**HBsAG negative source**	**Continued risk**	**No further risk**
< 1 dose HB vaccine pre-exposure	Accelerated course HB vaccine + HBIGx1	Accelerated course HB vaccine	Start course HB vaccine	Start course HB vaccine	No HBV prophylaxis Reassure
>2 doses of HB vaccine pre-exposure (antiHbs unknown)	1dose HB vaccine followed by 2nd dose 1month later	1dose HB vaccine	Finnish course of HB vaccine	Finnish course of HB vaccine	No HBV prophylaxis Reassure
Known responder to HB vaccine (antiHBs > 10milU/ml)	Booster dose HB vaccine	Consider booster dose HB vaccine	Consider dose HB vaccine	Consider dose HB vaccine	No HBV prophylaxis Reassure
Known non-responder to HB vaccine (anti HBs<10mlU/ml 2-4 months post vaccine)	HBIG x 1 Consider booster dose of HB vaccine A second dose of HBIG should be given at one month	HBIG x 1 Consider booster dose of HB vaccine A second dose of HBIG should be given at one month	No HBIG Consider dose of HB vaccine	No HBIG Consider dose of HB vaccine	No HBV prophylaxis Reassure