Managing blood-borne virus exposures in custody

Dec 2018 Review date Dec 2021 – check www.fflm.ac.uk for latest update

The medico-legal guidelines and recommendations published by the Faculty are for general information only. Appropriate specific advice should be sought from your medical defence organisation or professional association. The Faculty has one or more senior representatives of the MDOs on its Board, but for the avoidance of doubt, endorsement of the medico-legal guidelines or recommendations published by the Faculty has not been sought from any of the medical defence organisations.

Healthcare Professionals (HCPs) will be asked to see police personnel following potential exposures to blood-borne viruses (BBVs), namely hepatitis B (HBV), hepatitis C (HCV) and Human Immunodeficiency Virus (HIV). It is important to recognise and manage these effectively; ensure that all the relevant information is collated; and, where possible, take a blood sample from the source and send it to the relevant department.

**N.B. All police personnel, whether police officers or not, who might be at risk of exposure to BBV should be offered vaccination against hepatitis B (HBV), as part of their occupational health care. Moreover, this reflects the new public health approach whereby HBV vaccine is now included in the childhood vaccination schedule.**

Prompt and effective management of the recipient is vital in ensuring that any necessary treatment is given expeditiously. Also where the risk is deemed to be low or non-existent then reassurance can be given.

The immediate management following a potential exposure depends not on the virus but on the route of infection/exposure.

The routes can be divided into three broad categories:

- **parenteral exposure** e.g. needlestick, bites or other sharps injury
- **mucous membrane exposure** e.g. mouth and eyes
- **contamination of non-intact skin** (less than 24 hours old).

Where there has been a penetration of the skin or contamination of an open wound, encourage gentle bleeding from the site. Then wash the wound with soap and warm running water, but do not scrub or apply antiseptics; do not suck the wound. Mucous membranes should be irrigated copiously with sterile water. If the recipient is wearing contact lenses then they should be removed and the eyes irrigated again.

Collect as much information about the incident as possible. This is summarised in the following table.

<table>
<thead>
<tr>
<th>Date and time of incident</th>
<th>Nature of incident</th>
<th>Material</th>
<th>Site of injury</th>
<th>Injury type</th>
<th>if needle stick injury</th>
<th>Injury through</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bite</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Spit</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Splash</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Needlestick injury (NSI)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Blood</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Blood-stained fluid</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Saliva</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Skin</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mucosa</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Eye</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mouth</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Puncture</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Laceration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fresh</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Discarded</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Visible blood</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hollow</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Solid</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gloves</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Clothes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>No protection</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other information should also be sought as to the health of the recipient, specifically asking if they are pregnant, immunocompromised or immunosuppressed or if they are on any medication or have previously received medication for any of the BBVs. This would include anti-retroviral treatment for HBV and HIV, and anti-virals or ribavirin and interferon therapy for HCV. Check whether they have been vaccinated for HBV and if so how many doses they received and when, and whether they had their antibody levels checked at any time. All these factors will play a part in the decision-making process for further management. It may be necessary to consider whether HBV immunoglobulin (HBIG) may be required (given as soon as possible, ideally, within 24 hours, and no later than 7 days), as well as commencing an ultra-rapid vaccination course.

See *Green Book, chapter 18, Hepatitis B*

Gather as much information about the contact as possible if they are known. This must be done with the contact’s valid consent. Such consent may allow contact with their care-provider, to establish current therapy, viral load etc.

Please see page 2 for the relevant history to be obtained from the contact and page 4 for the details of the blood sample requirements and the consent form to be completed by the HCP and the contact.
The following questions should be asked where possible:

- Injecting drug use whether current or historic.
- A detailed sexual history in the context of determining the risk of blood-borne virus exposure.
- Country of origin and/or residence.
- History of blood transfusions and/or surgical procedures including when and where they were carried out.
- General health including any medication they may be taking.
- History of vaccination against HBV (no. of doses, timing and whether antibody levels have been checked).
- It may be helpful to ask about any time spent in prison or contact with Drug Treatment Agencies.
- Check with the arresting or investigating officer for any useful background information.

An argument can be made to ask any contact (if known) for a blood sample regardless of risk factors, as it is not always possible to identify those who may be at risk of infection. This also enables reassurance to be given to the recipient if the results of the blood tests are negative.

Human Immunodeficiency Virus

By the end of 2017, 93,385 people were receiving care for HIV in the UK. Rates of new diagnoses were decreasing, (by 28% since 2015), in part due to more testing and the use of HIV (anti-retroviral treatment ART) medicines to treat or prevent transmission of HIV (pre- and post-exposure prophylaxis, PrEP and PEP). The greatest fall in new diagnoses is in men who have sex with men (MSM), but they still represent the largest group with a new diagnosis. For those on ART, the suppression of virus in 97%, was to such a level that they did not pose a risk of transmitting HIV. See Trends in new HIV diagnoses and people receiving HIV-related care in the United Kingdom: data to the end of December 2017

Nevertheless, many (40%) were diagnosed late in terms of the time since they had acquired the infection.

Like HBV, HIV is transmitted through percutaneous or mucosal exposure to body fluids.

**High risk body fluids include**

- Blood
- Semen
- Vaginal secretions
- CSF
- Peritoneal fluid
- Synovial fluid
- Pericardial fluid

**Low risk fluids (unless blood stained)**

- Saliva
- Urine
- Vomit
- Faeces
- Amniotic fluid

The 2015 UK Guideline for the use of HIV post exposure prophylaxis following sexual exposure (PEPSE) has useful tables and information about prevalence of HIV and the risks associated with different types of exposure, so obtaining as much information as possible is helpful.

See UK Guideline for the use of HIV Post-Exposure Prophylaxis Following Sexual Exposure (PEPSE)

Information regarding prevalence in other countries can be obtained from WHO:

World Health Organization, HIV country profiles
Hepatitis C

It is estimated that around 215,000 people in the UK have chronic HCV. In the UK the major route of HCV transmission is through sharing equipment for injecting drug use, most commonly through blood-contaminated needles and syringes.

The current estimates below are of people who have HCV and inject (or have ever injected) drugs (PWID):

- In England and Wales about 50%
- in Scotland about 58%
- in Northern Ireland about 23%.

Whilst needle exchange programmes reduce transmission, it can still occur by sharing other ‘equipment’, especially if contaminated with blood.

See Public Health England, Hepatitis C in the UK

Other routes of infection are as follows:

- Receiving a blood transfusion or blood products prior to September 1991 when screening was introduced in the UK. This has been shown to account for the majority of cases of post-transfusion non-A, non-B hepatitis.
- Transmission from mother to baby is estimated at around 5% and may be much higher if there concomitant HIV.
- Sexual transmission is not common with estimates of less than 0.1% over 10 years, in heterosexual partners. There is an increased risk for those with multiple sexual partners.
- The risk through occupational exposure following a single needlestick injury with an HCV RNA positive source is estimated at 1.8%
- Tattooing, acupuncture, ear or body piercing with unsterilized equipment.
- There is no data of the risk of hepatitis C through a bite. With saliva alone the risk is considered to be very low. However, if there is blood in the mouth then the risk would increase and could be taken to be about the same as that following a single needlestick injury.

See BASHH National Guidelines for the Management of the Viral Hepatitides

Follow-up Management

Specialist management of any potential exposure is required to ensure that the optimum treatment is given where relevant. Whilst this would be handled at the same time for all the viruses, it is easier to discuss them as separate entities.

Nevertheless, it is important that all police personnel are aware of the importance of reporting at-risk incidents immediately. They should attend their nearest Emergency Department (ED) unless there is immediate access to assessment via occupational health. ED staff should have access to on-call expert advice to assist in carrying out a suitable risk assessment of any BBV risk. Such experts could be consultants in virology, microbiology, infectious diseases, HIV medicine or GU medicine. They could also include public health physicians, namely Consultants in Communicable Disease Control or Consultants in Public Health in Scotland.

The Occupational Health Departments for the different Constabularies should have good arrangements in place with their local EDs to collate information about police personnel following any exposure.

The reason for having a robust system in place is to ensure that Post-Exposure Prophylaxis is instigated as soon as possible, in the case of HIV. Ideally this should be within one hour, although it may be considered up to 72 hours after exposure.

The details of the specific management for each virus are beyond the remit of this document and would be the responsibility of the specialist. Further information may be found:

EAGA guidance on HIV post-exposure prophylaxis
How to deal with an exposure incident
The Green Book, Immunisation against infectious disease
Public Health England
The Public Health Agency
NHS Health Scotland
BASHH Guidelines
A sample of clotted blood (ideally 10 ml but not less than 0.5 ml) should be taken from the contact and placed in a plain tube. The sample can only be taken with specific consent to test for HIV, HBV and HCV. An example of a consent form is shown below. Additional authority may be required if the sample is designated as an ‘intimate’ sample.

Notes
1. Informed consent is an absolute pre-requisite to testing the source for the purpose of managing blood-borne virus. In this case consent is governed by the Human Tissue Act 2004 which outlines a universal approach for source testing and identifies those who can give appropriate consent. The exposed individual, (the recipient) should not themselves approach the source to request testing.

2. Where the source has been arrested for assault on a police officer or another person [including a sexual assault], under PACE the sample of blood may then become an intimate sample – part of the evidence against the detainee and require the authorisation of an inspector before it can be taken. This authorisation would be entered on the custody record.

Consent form – THIS FORM SHOULD ACCOMPANY THE BLOOD SAMPLE

The form should be signed by the HCP, the contact and witnessed by an independent police officer (usually the custody sergeant). The blood sample and the form should be taken to the designated hospital by an independent officer i.e. not the injured police officer (recipient).

Part 1

“[Name], having discussed with ____________________________ who is a Forensic Physician/Healthcare Professional to the ______________________ (insert Constabulary), hereby consent to give a sample of my blood for testing for hepatitis B virus, (HBV), hepatitis C virus, (HCV) and human immunodeficiency virus, (HIV). I also authorise the testing laboratory to inform the Occupational Health Service of ________________ (insert Constabulary), of the results of the tests and agree that the results may also be released by them to ______________________________ (insert name and shoulder number of police officer [recipient]).”

“I do/do not* wish to be informed of the results.”

“If I wish to be informed of the results they can be communicated to me by telephone/mobile phone/text/email/post (two of the above must be selected and completed below).”

Print name ____________________________
Address ____________________________
Telephone no. ____________________________
Mobile no. ____________________________
Email ____________________________
Signed ____________________________

Signature witnessed by ____________________________

Print Name of witness ____________________________

Countersigned by FP/HCP ____________________________

Part 2

I would also like the result of the test to be communicated to the GP and/or GP practice named below.

__________________________________________

Notes
1. Informed consent is an absolute pre-requisite to testing the source for the purpose of managing blood-borne virus. In this case consent is governed by the Human Tissue Act 2004 which outlines a universal approach for source testing and identifies those who can give appropriate consent. The exposed individual, (the recipient) should not themselves approach the source to request testing.

2. Where the source has been arrested for assault on a police officer or another person [including a sexual assault], under PACE the sample of blood may then become an intimate sample – part of the evidence against the detainee and require the authorisation of an inspector before it can be taken. This authorisation would be entered on the custody record.