



Community Infection Prevention and Control Guidance for General Practice

(also suitable for adoption by other healthcare providers,
e.g. Dental Practice, Podiatry)

Blood-borne viruses

BLOOD-BORNE VIRUSES

**Version 1.00
December 2017**

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BLOOD-BORNE VIRUSES

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1. Introduction

Blood-borne virus (BBV) infections are spread by direct contact with the blood of an infected person. The main blood-borne viruses of concern are:

- Human immunodeficiency virus (HIV), which causes acquired immune deficiency syndrome (AIDS)
- Hepatitis B virus (HBV) and hepatitis C virus (HCV) which cause hepatitis

These viruses are considered together because infection control requirements are common and because of the similarities in their transmission routes.

2. HIV

HIV infection damages the immune system increasing the risk of severe infections and certain cancers. There is no cure or vaccine, but treatment includes drugs that have proved very effective at improving the quality of life and extending lifespan. Individuals with HIV may not have any symptoms and may be unaware of their infection.

The United Kingdom (UK) has a relatively small HIV epidemic, with an estimated 101,200 people living with HIV in 2015. This equates to an HIV prevalence of 1.6 per 1,000 people aged 15 and over. In the same year, 6,095 people were newly diagnosed with HIV and 594 people died of AIDS-related illnesses.

3. Hepatitis

Viral hepatitis is notifiable and cases should be reported to the Consultant in Communicable Diseases Control (CCDC) at your local Public Health England office. Early discussion of new cases with your local CCDC is recommended, who will coordinate contact tracing and the provision of hepatitis B immunoglobulin (HBIG) and vaccine.

Effective vaccination for hepatitis B is available for high risk individuals and individuals who have been exposed.

Hepatitis B

Hepatitis B is an infection of the liver. Acute infection may be asymptomatic or may cause a non-specific illness with nausea, vomiting, loss of appetite and jaundice. Infection without apparent illness is common in children.

The risk of developing chronic hepatitis B infection depends on the age at which infection is acquired and the risk is increased in those whose immunity is impaired. Most infected adults recover fully and develop lifelong immunity. However, approximately 5% of previously healthy adults may remain infected (chronic carriers) and potentially infectious. Children infected between the ages of 1-5 years have a much higher chance of becoming a chronic carrier (20-50%) and this is particularly the case for babies infected at birth (90%).

Around 20 to 25% of individuals with chronic HBV infection worldwide have progressive liver disease, leading to cirrhosis in some patients.

UK estimates for hepatitis B prevalence is low, around 0.3%, but is more common in other parts of the world and among UK residents exposed in those countries.

Hepatitis C

Hepatitis C is another virus which can damage the liver. Most patients with hepatitis C have no symptoms and are unaware of their infection. Some may develop a flu-like illness and jaundice. About 1 in 5 people infected with hepatitis C recover completely. The majority become chronically infected, about 20% of these will develop severe liver scarring (cirrhosis) in 20-30 years and a proportion will go on to develop liver cancer.

UK estimates for hepatitis C prevalence are low (around 0.5%), but the infection is more common in other parts of the world and among UK residents exposed in those countries. Prevalence among drug users may be as high as 50-80%.

4. Infectivity

HIV

HIV infection is spread by direct contact with an infected person's blood or certain body fluids.

Main routes of transmission:

- Sexual intercourse with an infected person, particularly without using a condom
- Sharing contaminated needles or other injecting equipment
- From an infected mother to baby during pregnancy, delivery or breast feeding
- Tattooing, body piercing or acupuncture with unsterilised equipment
- Blood transfusion in a country where blood donations are not screened for HIV
- Sharing razors and toothbrushes which may be contaminated with blood from an infected person

- Occupational exposure through sharps injuries or other mucosal or non-intact skin exposure

HIV is not spread by normal daily activities, e.g. kissing, sharing food, crockery or bathroom facilities.

Hepatitis B

Hepatitis B infection is spread by direct contact with an infected person's blood or certain body fluids. The degree of infectivity is related to specific serum markers, i.e. hepatitis e antigen and anti-hepatitis e antibody.

Main routes of transmission:

- Sexual intercourse with an infected person without using a condom
- Sharing contaminated needles or other injecting equipment
- From an infected mother to baby, during pregnancy or delivery
- Tattooing, body piercing or acupuncture with unsterilised equipment
- Blood transfusion in a country where blood donations are not screened for hepatitis B
- Sharing razors and toothbrushes (which may be contaminated with blood from an infected person)
- Occupational exposure through sharps injuries or other mucosal or non-intact skin exposure

Hepatitis B is not spread by normal daily activities, e.g. kissing, sharing food, crockery or bathroom facilities.

Hepatitis C

Hepatitis C is spread by direct contact with an infected person's blood. In the past, infection may have been transmitted by blood and blood products.

Currently the main route of spread in the UK is through sharing contaminated equipment among drug injectors. This accounts for the majority of cases.

Other less common routes of transmission include:

- Sexual intercourse with an infected person without using a condom (this route of transmission is relatively uncommon)
- From an infected mother to baby, during pregnancy or delivery
- Tattooing, body piercing or acupuncture with unsterilised equipment
- Blood transfusion in a country where blood donations are not screened for hepatitis C
- Sharing razors and toothbrushes (which may be contaminated with blood from an infected person)

- Occupational exposure through sharps injuries or other mucosal or non-intact skin exposure.

Hepatitis C is not spread by normal daily activities, e.g. kissing, sharing food, crockery or bathroom facilities.

5. Preventing infection

Prevention strategies focus on minimising lifestyle risks, early recognition of cases to facilitate early treatment and advice for cases, screening in pregnancy for the reduction of vertical transmission of HIV and hepatitis B.

6. Infection prevention and control measures

Precautions to prevent inoculation of blood and certain body fluids will prevent transmission of these viruses.

Strategies in occupational settings include:

- Standard precautions
- Use of safety sharps where assessment indicates they will provide safe systems of working for staff
- Protection of clinical and other relevant staff with hepatitis B vaccination
- Appropriate management of percutaneous exposures (sharps/splash injuries) - refer to your local 'Sharps management and inoculation injuries guidance'

As a result of the lack of early symptoms in some infected persons and the propensity of the viruses to persist as chronic infections, many people who carry these blood-borne viruses may not be aware they are infected.

Assigning risk on the basis of declared or observed high risk activity is potentially discriminatory and highly unreliable. In adopting standard precautions, the risk of transmission of these viruses will be minimised. As always, care should be taken with sharps (please refer to the 'Sharps management and inoculation injuries guidance'), in line with the Health and Safety Executive Guidance.

The quality of infection control procedures, i.e. standard precautions, should be such that in principle no extra precautions are required for patients known to carry these viruses.

Standard infection prevention and control precautions for reducing the risk of transmission of BBVs

Always:

- Keep cuts or broken skin covered with waterproof dressings
- Protect eyes, mouth and nose from blood splashes where there is a risk of splashing
- Avoid direct skin contact with blood and blood stained body fluids (if blood/blood stained body fluids are splashed on to the skin, wash off with liquid soap and warm running water)
- Wear disposable latex/nitrile gloves when contact with blood or body fluids is likely
- Always clean hands after removing gloves
- Always clean hands before and after giving first aid
- Contain and promptly disinfect surfaces contaminated by spillages of blood and body fluids

Spillages of blood or body fluids

Urine, faeces, sputum, tears, sweat and vomit are not considered to pose a risk unless they are contaminated with blood. Please refer to the 'Environmental cleanliness guidance' and 'Standard precautions guidance' for advice on cleaning spillages of blood/blood stained body fluids.

Disposal of waste

Please refer to the 'Waste management guidance'.

Pathology specimens

Standard precautions for venepuncture and sharps disposal should be employed.

Specimens and request forms from patients known to be or suspected of being infected with blood-borne viruses should be labelled with a 'Danger of Infection' or 'hazard' sticker.

7. Deceased patients (death certification)

Standard precautions should be maintained when in contact with deceased patients.

The body of patients diagnosed with HIV, hepatitis B and hepatitis C may be viewed and hygienic preparation can be performed.

Mortuary staff and funeral directors should be informed of the infection hazards prior to the transfer of a body. Embalming should not be performed.

8. Infection Prevention and Control resources, education and training

The Community Infection Prevention and Control (IPC) Team have produced a wide range of innovative educational and IPC resources designed to assist your Practice in achieving compliance with the *Health and Social Care Act 2008* and CQC registration requirements.

These resources are either free to download from the website or available at a minimal cost covering administration and printing:

- Over 20 IPC Guidance documents (Policies) for General Practice
- 'Preventing Infection Workbook for General Practice'
- 'IPC CQC Inspection Preparation Pack for General Practice'
- IPC audit tools, posters, leaflets and factsheets
- 'IPC Advice Bulletin for GP Practice Staff'

In addition, we hold educational study events in North Yorkshire and can arrange bespoke training packages and 'Mock IPC CQC Inspections'. Prices vary depending on your requirements and location.

Further information on these high quality evidence-based resources is available at www.infectionpreventioncontrol.co.uk.

9. References

Department of Health (2013, updated 2016) *Immunisation against Infectious Disease*

www.gov.uk/government/uploads/system/uploads/attachment_data/file/503768/2905115_Green_Book_Chapter_18_v3_0W.PDF

European Agency for Safety and Health at Work (2010) *Directive 2010/32/EU – prevention from sharp injuries in the hospital and healthcare sector*

Hawker et al (2012) *Communicable Disease Control and Health Protection Handbook 3rd Edition*, Blackwell Wiley

Health and Safety Executive (2013) *Health and Safety (Sharp Instruments in Healthcare) Regulations 2013 Guidance for employers and employees*

Health and Safety Executive (2005) *Controlling the Risks of Infection at Work from Human Remains – A Guide for those in the Funeral Profession, including Embalmers and those involved in Exhumation*

Public Health England (2014) *Eye of the Needle - United Kingdom Surveillance of Significant Occupational Exposures to Bloodborne Viruses in Healthcare Workers*

[www.gov.uk/government/uploads/system/uploads/attachment_data/file/385300/EoN_2014 - FINAL CT 3 sig occ.pdf](http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/385300/EoN_2014_-_FINAL_CT_3_sig_occ.pdf)

Public Health England (2016) *HIV in the UK: 2016 report*

Royal College of Nursing (2013) *RCN Guidance to support the implementation of the Health and Safety (Sharp Instruments in Healthcare Regulations)*