

The Newcastle Upon Tyne Hospitals NHS Foundation Trust

Infection Prevention and Control Policy for the Management of Patients with Bloodborne Viral Infections

Effective: March 2011

Review: March 2014

NOTE: As it will never be possible to identify all individuals with these infections prospectively the blood and body fluids of ALL patients must be considered as potentially infective. (See [Standard Precautions Policy](#))

1. Policy Scope

This document gives guidance on the management of patients with blood borne viral infections from the infection prevention and control perspective. There is considerable overlap with other trust guidelines and policies. These should be referred to in conjunction with these guidelines where indicated. Trust guidelines can be found at <http://intranet/Policies/policies.asp> .

Includes:

- Hepatitis B Virus (HBV)**
- Hepatitis C Virus (HCV)**
- Hepatitis D Virus (HDV)**
- Human Immunodeficiency Virus (HIV)**
- Miscellaneous blood-borne Viruses**

Does not include: **Creutzfeldt-Jakob Disease (CJD) and variant CJD (vCJD)**
See: '[Guidelines for the Control of Transmissible Spongiform Encephalopathies \(TSEs\) in hospital patients](#)'

Viral Haemorrhagic Fever
See: '[Viral Haemorrhagic Fever: guidance for admitting physicians](#)'

Guidance on haemodialysis
See: '[Guidelines for the prevention of blood borne virus transmission in the haemodialysis service](#)' .

2. Introduction and Background^{1, 2}

- **HBV**

HBV infection is the most readily transmitted of the viruses covered in this guidance. It can be transmitted by inoculation of minute amounts of blood, for example during medical, surgical or dental procedures, sexual intercourse, intravenous and percutaneous drug abuse, tattooing, body piercing, acupuncture or even via contaminated razors or toothbrushes. It is, however well documented that the virus can be transmitted by other body fluids and it is present in saliva, menstrual and vaginal discharges, seminal fluid, colostrum, breast milk and serous exudates, all of which have been implicated in transmission. Transmission of HBV between patients has been documented not only during surgical procedures, but also in the ward setting, most notably in

renal dialysis units (often unrelated to dialysis apparatus itself). Transmission of infection is preventable by adherence to [standard precautions](#).

Acute infection can be asymptomatic or may result in the symptoms and signs of acute or fulminant hepatitis. In endemic HBV areas (e.g. Africa and South East Asia) where the commonest route of infection is mother to child, 90% of children infected at birth go on to develop chronic hepatitis. This level reduces to 1-5% in immunocompetent individuals infected as adults, but is higher in postnatally infected children and the immunosuppressed. Chronic HBV infection is defined as the presence of HBV surface antigen in the blood for more than 6 months. Chronic HBV infection can be asymptomatic but may progress to hepatitis, cirrhosis, hepatic failure, the need for liver transplant or hepatocellular carcinoma. Current treatment options do not normally result in cure, but may prevent or delay the onset of liver damage. HBV is infectious at all stages of infection. Although traditionally only patients with acute HBV infection and HBeAg positive carriers were considered to be of 'high infectivity' it is now well recognised that a significant proportion of HBeAg negative/anti-HBe positive carriers are also highly infectious.

HBV infection can be prevented by vaccination. This is not currently part of the national vaccination schedule in the UK and therefore the majority of patients will be susceptible to infection. Although all healthcare workers should be offered vaccine, a significant number of vaccinated health care workers do not respond to vaccine and remain susceptible. After a known exposure the risk of infection can be reduced by the use of hepatitis B immunoglobulin and/or vaccine.

- **HCV**

HCV transmission is primarily via the inoculation of contaminated blood, for example during medical, surgical or dental procedures, intravenous drug abuse, tattooing or body piercing. In contrast to HBV, HCV is only rarely transmitted in other ways (e.g. sexual intercourse or during child birth). Again transmission of infection is preventable by adherence to standard precautions.

Acute infection is usually asymptomatic, with up to 80% of individuals developing chronic HCV infection (as shown by the detection of viral RNA in the blood by PCR). Chronic HCV infection remains asymptomatic for many years, but as with HBV many progress to hepatitis, cirrhosis, hepatic failure, the need for liver transplant or to hepatocellular carcinoma. Current treatment options are only effective in a proportion of individuals. There is no vaccine

- **HDV**

HDV infection occurs only in the presence of HBV infection. Transmission is via the same routes as for HBV, from an HBV/HDV coinfecting individual. It is acquired either at the same time as acute HBV infection, or as a superinfection in an individual with chronic HBV. The presence of HDV can exacerbate the symptoms/signs of acute or chronic HBV. Prevalence varies widely but high levels are found in southern Europe, the Middle East, Japan, Taiwan and parts of Africa and South America. There is no specific vaccine, although infection can be prevented by prevention of HBV infection.

- **HIV**
HIV infection can occur via the inoculation of contaminated blood. Worldwide it is a sexually transmitted infection with up to 10% occurring mother to child at birth. Infection is also transmitted via intravenous drug use. In the past infection has been transmitted by infected blood or blood products, however screening of donations has now made this a highly unlikely route in the UK. Virus is known to be present in several body fluids, including vaginal secretions, semen and breast milk.

Initial infection is usually asymptomatic but may produce a self-limiting glandular fever-like illness. At a later stage, features such as night sweats, diarrhoea and persistently enlarged lymph nodes may develop. AIDS is characterised by opportunistic infections. The use of combinations of anti-HIV drugs can control the infection and prevent progression to AIDs, but cannot clear the virus.

- **Miscellaneous blood-borne viruses**
In recent years a number of blood-borne viruses have been identified i.e. GBV-A, GBV-B, GBV-C (the latter is also known as Hepatitis G virus) and TT virus. As yet infection with these viruses has not been linked to disease and it is unlikely that a patient's status for these viruses will be known. It is almost certain that other blood-borne viruses exist which have yet to be identified. This emphasises again the need for standard precautions for all patients regardless of known infection status.

3. Care of Patients in Hospital

- 3.1 Patients who are bleeding, have undergone surgery, have a bleeding diathesis or are at high risk of sudden bleeding (e.g. significant oesophageal varices) should be cared for in single rooms. This is also required where patients have significant diarrhoea, incontinence or altered behaviour due to psychiatric or neurological disease. Further precautions/isolation may be required as the result of other concomitant transmissible infections (see [Isolation Policy](#)).
- 3.2 Patients who are adequately self-caring and do not fit into the above categories do not require isolation. They may be admitted to the open ward and allowed the same activity as other patients without restrictions regarding the use of bathroom facilities, crockery or cutlery. Precautions should be taken to segregate potentially contaminated personal toilet equipment such as razors and tooth brushes.
- 3.3 Non-invasive investigations such as Chest X-Ray and ECG can be carried out without additional precautions.
- 3.4 During venesection and other ward based invasive procedures normal protocols should be followed. See the '[Infection Control: Standard Precautions](#)' and '[Needlestick Injuries: Code of Practice](#)' policies.

- 3.5 In the event of a needle-stick or splash injury to a member of staff or another patient urgent action is required. A senior member of staff MUST be informed. Any potential exposure incident from a source patient known, or suspected, to be infected with a bloodborne virus should be discussed urgently with the doctor on-call for Infectious Diseases. In the case of staff exposure the trust '[Needlestick injuries: code of practice](#)' should also be followed. The incident should be reported to the Clinical Governance and Risk Department (CGARD) via the Trust Datix Web System.

Surgery

See: [Guidelines for infection control practice in the operating theatre.](#)

The blood and body fluids of ALL patients must be considered as potentially infective. Screening should not be carried out pre-operatively except where clinically indicated. Some specific precautions are recommended for patients known to be infected with blood-borne viruses and these are contained in the above guidelines.

4. Basic Procedures overview

See related policies: [Infection Control: Standard Precautions](#)
[Hospital Isolation Policy](#)
[Needlestick Injuries: Code of Practise](#)
[Disinfection Policy](#)
[Waste Management Policy](#)
[Hospital Laundry Policy](#)

As all patients must be assumed to be potentially infected the above general policies equally apply to patients with confirmed blood borne viral infections. Major points are:

- 4.1 During procedures that carry out a risk of contact with infected blood or body fluids or other contaminated materials, disposable gloves should be worn and clothing protected with a plastic apron. During procedures that carry out a risk of splashes of infected material, masks and eye protection must be worn in addition to the above. Staff with minor cuts or abrasions must protect them with waterproof occlusive plasters or dressings. Staff with certain skin conditions may require additional precautions.
- 4.2 If environmental spills occur, they must be mopped up using disposable wipes and inactivated with hypochlorite solution (10,000 ppm), according to the manufacturer's instructions. Surfaces should not be left wet. Disposable gloves should be worn and clothing protected with a plastic apron. If there is a risk of splashes of infected material, masks and eye protection must be worn in addition to the above.
- 4.3 Contaminated material for disposal should be discarded in an orange clinical waste bag. Contaminated linen should be bagged as infected linen in a soluble seam inner bag in an outer red bag and fastened securely.

5. Procedure after Death

See: [Policy on the use of Cadaver Bags](#).

References

1. Hawker J, Begg N, Blair I, Reities R, Weinberg J. Communicable Disease Control Handbook: WileyBlackwell, 2005.
2. Zuckerman A, Banatvala J, Pattison J, Griffiths P, Schoub B. Principles and Practice of Clinical Virology: John Wiley and Sons, Ltd, 2004.
3. Newcastle Upon Tyne Hospitals NHS Foundation trust. Internally endorsed policies and guidelines. <http://intranet/Policies/policies.asp>

Reviewed by: Consultant Virologist (March 2011)

THE NEWCASTLE UPON TYNE HOSPITALS NHS FOUNDATION TRUST
IMPACT ASSESSMENT – SCREENING FORM A

This form must be completed and attached to any procedural document when submitted to the appropriate committee for consideration and approval.

Policy Title:	Infection Prevention and Control Policy for the Management of Patients with Bloodborne Viral Infections	Policy Author:	Sheila Waugh (Consultant Virologist)
		Yes/No?	You must provide evidence to support your response:
1.	Does the policy/guidance affect one group less or more favourably than another on the basis of:	No	This policy does not discriminate against any individual or group based upon their race, ethnicity, nationally, gender, culture, religion or belief, sexual orientation, age or disability.
	• 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 difficulties, physical disability, sensory impairment and mental health problems.	No	
2.	Is there any evidence that some groups are affected differently?	No	
3.	If you have identified potential discrimination, are any exceptions valid, legal and/or justifiable?	N/A	
4(a).	Is the impact of the policy/guidance likely to be negative? <i>(If "yes", please answer sections 4(b) to 4(d)).</i>	No	
4(b).	If so can the impact be avoided?	N/A	
4(c).	What alternatives are there to achieving the policy/guidance without the impact?	N/A	
4(d)	Can we reduce the impact by taking different action?	N/A	

Comments: None	Action Plan due (or Not Applicable): N/A
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Name and Designation of Person responsible for completion of this form: Sheila Waugh (Consultant Virologist) Date: March 2011

Names & Designations of those involved in the impact assessment screening process: Sheila Waugh (Consultant Virologist)

(If any reader of this procedural document identifies a potential discriminatory impact that has not been identified on this form, please refer to the Policy Author identified above, together with any suggestions for the actions required to avoid/reduce this impact.)

For advice on answering the above questions please contact Helen Lamont, Director of Nursing, or, Christine Holland, Senior HR Manager. On completion this form must be forwarded electronically to Steven Stoker, Clinical Effectiveness Manager, (Ext. 24963) steven.stoker@nuth.nhs.uk together with the procedural document. If you have identified a potential discriminatory impact of this procedural document, please ensure that you arrange for a full consultation, with relevant stakeholders, to complete a Full Impact Assessment (Form B) and to develop an Action Plan to avoid/reduce this impact; both Form B and the Action Plan should also be sent electronically to Steven Stoker within six weeks of the completion of this form.