A Whittington Hospital Clinical Management Guideline

Management of blood and body fluid exposure incidents

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Relevant to: **All Whittington Trust Staff**

Key words : Occupational exposure**,** sharps injury, needle-stick injury, blood-splash, blood exposure

➢ Criteria for use

For use by the Health and Work Centre staff, Microbiology Department, Senior Managers in clinical areas and all staff working in clinical areas or at risk of exposure to blood or body-fluids.

➢ Background/ introduction

Needlestick and sharps injuries account for 17% of accidents to NHS staff and are the second most common cause of injury, after moving and handling at 18% (NHS Employers - The healthy workplaces handbook 2007)

As a provider of healthcare and as an employer, The Whittington Hospital NHS Trust has a responsibility to provide a safe working environment for the delivery of healthcare in which the risks of harm to patients and staff are minimised. This policy describes how The Whittington Hospital NHS Trust will manage and minimise the risk of blood borne virus transmission as a result of blood or body fluid contamination.

➢ Inclusion/ exclusion criteria

This policy applies to **all** Trust staff and staff working on the Whittington Hospital site (e.g. students, locum staff, visiting staff). It also applies to visitors and patients.

Clinical management: Contents

	Page
Sharps procedure	3
Definitions	4
Aims	4
First Aid	4
Reporting	4
Prevention	5
Duties within the organisation	5
Management in the Health and Work Centre	6
i) The staff member	6
ii) The source patient	6
iii) Testing the source patient	7
iv) Unknown or untested source patient	7
v) OH Paperwork	8
HIV, hepatitis C or hepatitis B positive source patient	8
i) Procedure	8
ii) Advice to staff member	9
iii) Health Protection Agency	9
Follow up blood tests	10
i) 6 weeks	10
ii) 3 months	10
iii) 6 months	11
Further Information	
Appendix 1 Hepatitis B prophylaxis for reported exposure incidents	12
Appendix 2 Checklist for pre test discussion	13
Appendix 3 RIDDOR reporting	14
Contacts	15
References	15

Clinical Management

SHARPS PROCEDURE

WHAT TO DO IF YOU HAVE A CONTAMINATION INCIDENT

Follow the action plan below <u>IMMEDIATELY</u>

1. FIRST AID

- Wash under running water and encourage bleeding.
- If eyes or mouth are involved, wash with copious amounts of water.
- Apply a waterproof dressing if appropriate
- Report immediately (see below)

2. REPORTING the injury:-

Contact the Health and Work Centre (between 09.00 and 17.00 Monday to Thursday, 08.00 and 16.00 Friday) on:

020 7288 3351 or ext. 3351

Anyone sustaining a sharps injury or blood splash outside of these hours should attend the **Emergency Department** as soon as possible.

3. Complete an Accident/Incident Form at your place of work (within 24 hours of the incident) and inform your Manager if you have not yet had time to do so.

FOLLOW UP: The Health and Work Centre team will follow up all contamination injuries.

Definitions

Recipient – the person (usually staff member, but occasionally a patient) who has been exposed to another person's blood or body fluid
Source – the person (usually a patient but occasionally a staff member) whose blood or body fluid has contaminated another person
Percutaneous/needlestick/sharps injury - when a needle or other sharp instrument accidentally penetrates the skin
Mucocutaneous exposure - when blood or other body fluid splashes into the eyes, nose or mouth or onto broken skin
BBV – Blood-borne viruses - The major blood-borne pathogens of concern associated with needlestick injury are hepatitis B virus (HBV), hepatitis C virus (HCV) and human immunodeficiency virus (HIV)
PEP – post exposure prophylaxis (antiretroviral drugs given when the staff member has been exposed to HIV positive blood or blood stained body fluid)
Medical devices incorporating sharps protection mechanisms – these include safety-shielded and retractable needles, safety lancets, blunt needles (for example for suturing), needle-free systems, blunt plastic cannulae and shielded cannulae.

Aims

- To protect staff and patients from blood-borne viruses exposure and infection via occupational exposure incidents so far as is reasonably practicable.
- To enable the Trust, through the reporting procedure, to establish the incidence of Sharps Injuries and define measures to reduce this incidence

First aid treatment of a blood or body fluid exposure incident

- If the mouth, eyes or nose are involved wash thoroughly with water
- If skin is punctured encourage bleeding and wash with soap and water
- Do not suck or scrub the puncture site
- If the wound is a bite, attend A&E as antibiotics or other treatment may be required
- Report immediately to the Health and Work Centre on 020 7288 3511 (staff).

Reporting a blood or body fluid exposure incident

- Report all incidents
- Inform head of department (or whoever is in charge)
- Telephone **the Health and Work Centre on 020 7288 3351 (attend A&E if out of hours)** as soon as possible

If the source patient is HIV positive you should seek advice immediately as PEP is most effective if given as soon as possible, preferably within an hour of the incident, although it is still beneficial if started within about 48-72 hours following the incident.

When you attend the emergency department (out of office hours only), they will undertake a risk assessment and offer PEP if required. They will take a sample of blood for serum save and may offer you a hepatitis B booster.
All follow up and further management can wait until the next working day and will be managed by staff in the Health and Work Centre.
You should telephone the Health and Work Centre on the next working day on **020 7288 3351**

- Complete an incident form (http://whittnet.whittington.nhs.uk/Documents/IR%20Form%20Procedure%20ALL%20Staff_9904.doc within 24 hours of the incident) and inform you manager so that they can complete a Sharps Injury Investigation Form (http://whittnet.whittington.nhs.uk/admin/default.asp). Both forms should be returned to the Health and Safety Adviser, Risk Management, Jenner Building.

Prevention of a blood or body fluid exposure incident:

Safe Working Practices

Prior to a procedure involving blood and body fluids

- Perform risk assessment of procedure considering risk to yourself, your colleagues, patients and members of the public (see Health and Safety Policy)
- Follow correct method to ensure safe clinical practice when assembling the sharps bin (Bin must comply with the British Standard (BS7320))
- Ensure that date of assembly and name of assembler is clearly identified on the sharps bin
- Choose a safety device if possible
- Use needleless devices where appropriate
- Ensure there are adequate sharps bins of appropriate sizes in your department
- Ensure sharps bins are situated in suitable locations
- Always take the sharps bins to the point of use and place if on a hard even surface
- Always keep sharps bins out of the way of non-staff, especially children and other vulnerable people
- Use vacuum blood collection bottles where appropriate
- Ensure that appropriate personal protective equipment is available e.g. gloves, aprons, goggles/visors, masks etc.

During procedure:

- Ensure that Standard (universal) precautions are followed at all times
- Wear appropriate personal protective equipment – see infection control manual
- Wear eye protection if there is any risk of splashing or aerosol spray to the face
- Ensure water proof dressings are used to cover cuts, grazes, lesions
- Carefully assemble device to be used
- Do not take the device apart unless unavoidable
- Do not re-sheath needles
- Use tray system to carry sharp devices
- Never carry sharps in your hand
- Activate temporary closure mechanism on sharps bin between use
- Never move an open sharps bin
- Always carry the sharps bin by the handles
- Be especially careful of sharps risk during emergency procedures.
- Sharp instruments (e.g. scalpels, needles) are not passed directly from hand to hand and handling is kept to a minimum.

After procedure:

- Dispose of sharps directly into a sharps bin at the point of use
- Always label the sharps bin with source department
- Safe disposal is the responsibility of the user
- Dispose of all other clinical waste appropriately (see Waste Management policy)

Disposing of Sharps bins (See Waste Management Policy section 5.6)

- Dispose of sharps bins when ¾ full (black line on sharps bin) or when the sharps bin is a month old following the date of assembly. Lock securely.
- When ready for disposal, the sharps bin is ratchet tagged
- Dispose of sharps bin securely as clinical waste
- Do not put sharps bins in clinical waste bags
- Contact portering services to collect locked and tagged sharps bins

Duties within the organisation

Chief Executive

The Board vests in the Chief Executive responsibility for ensuring the development of and compliance with this policy.

The delegated authority for co-ordinating and monitoring implementation of this policy and the associated protocols/procedures will lie with the Health and Work Centre.

Clinical Directorate Management Teams

The Clinical Directorate Management Teams have responsibility for ensuring that risks associated with accidental exposure to blood or body fluids are managed in accordance with this policy and the associated protocols/procedures.

Line Managers (including Consultants)

- Ensuring that blood or body fluid contamination injury risk assessment is undertaken with regard to work and clinical activities within their area of responsibility.
- Identifying and implementing any action/control required following the risk assessment. Further advice may be sought from the health and work, risk and safety and infection control teams
- Ensuring that staff are given the necessary information, instruction and training to enable them to avoid accidental exposure to blood or body fluids, and to report promptly any accidental exposure to the health and work team.
- Reporting all incidents using the trust incident reporting procedure.
- Assisting the health and work team in the risk assessment of the incident if requested by the health and work team e.g. checking source patient notes for evidence of risk factors.
- Sharps bins, or any sharps that have been in use, should not be located in patient areas unless they are actually in use and under the direct supervision of a member of trust staff trained in sharps management.

Individual staff

- Having been provided with information, instruction and training, staff will comply with this policy and follow the associated protocols/procedures/safe systems of work for their areas of work and responsibility in order to prevent accidental exposure to blood or body fluids.
- Staff will report promptly any accidental exposure to blood or body fluids to their line manager, the Health and Work Centre and to the risk and safety department via the trust incident reporting procedure.

Management in the Health and Work Centre

(i) The Staff Member

The Occupational Health Nurse Adviser (OHNA):

- Sees the staff member to discuss their concerns and take details of the incident. He/She will complete an 'Body Fluid Exposure form' (BFE Form) whilst the staff member is with them. This ensures that all relevant details are covered and the policy is implemented.
- Sends blood for serum save to microbiology
- Checks Hepatitis B immune status. See Appendix 1, "Hepatitis B prophylaxis following contamination incident" for details of action to be taken.
- Gives the staff member time to talk about their concerns following the incident.
- Discusses possible risks from the incident.
- Arranges for any follow up blood tests necessary
- Ensures an incident form is been completed in accordance with the trust's incident reporting procedure
- Gives advice on avoiding future incidents.
- Assesses whether a workplace visit or further investigation of working practice/equipment is required.

(ii) The Source Patient

The HaWC team will check for previous hepatitis B virus (HBV), hepatitis C virus (HCV) and HIV results by telephoning Microbiology (ext 5088) or liaising with the clinical team. If the patient is under 6 months, they will discuss with the OH doctor.

* **N.B. if the body fluid involved is non-blood stained urine, faeces, saliva or sputum HIV and HCV tests are not required, only HBsAg. If the incident involves a bite, it is important to establish whether the source patient's saliva was blood stained e.g. through mouth trauma.**

If the patient has been tested previously, record the results on the BFE form. Remember that validity of results varies depending on how long ago they were done and what risks the source patient has been exposed to since the tests were performed. If source patient is receiving renal dialysis and the tests were done more than seven days ago, repeat.

If the patient is positive for any of the above, the OHNA will discuss with an OH doctor immediately.

(iii) Testing the Source Patient

If there are no test results available (within the last seven days if renal dialysis patients) contact the clinical team caring for the patient and ask a member of the team (this may be a senior nurse) to approach the patient and arrange appropriate discussion, consent and testing for HIV antibodies, HbsAg and HCV antibodies . Details of the staff member should be kept confidential - although sometimes the team already know about the incident. A member of the clinical team should be asked to:

- Explain to the patient what has happened and that there is national guidance stating that patients should be approached for testing following a staff blood exposure incident.
- Have a pre-test discussion with the patient – see appendix 2
- Gain informed consent for the tests (does not necessarily need to be written consent)
- Arrange a time to give the test results to the patient
- If the patient refuses consent, the clinical team feel that it would be detrimental for the patient to be approached or there is any other reason why the testing cannot be done, record this in the staff member's occupational health records.
- If the patient is unable to give consent for any reason, it is an offence to take blood without consent if it is not in the patient's best interest (Human Tissue Act 2004).
- If the patient tests positive to HIV or HCV – the OHNA will discuss with an OH doctor immediately.
- If the patient is HBsAg/HBeAg positive and the staff member is unprotected against hepatitis B, the OHNA will discuss with an OH doctor (See appendix 1 for management)
- If the staff member is not immune to hepatitis B (anti HBs <10 iu/l) the patient's HBsAg status must be requested urgently

Telephone the Microbiology Department or on call Microbiologist and inform them that you are sending an urgent sample to be tested for Hepatitis B surface Ag, HIV antibodies and HCV antibodies.

POSITIVE SOURCE PATIENT RESULTS SHOULD ALWAYS BE DISCUSSED WITH THE OH DOCTOR

(iv) Unknown or untested source patient

- These cases are considered on an individual basis.
- If the source patient is known but testing is not possible, as much detail as possible about the exposure should be gained. The clinical team should be asked to look in the source patient's notes and ask him/her the following:

<u>Source patient details</u>

Is the source patient:

- a gay man (possible risk of HBV and HIV)?
- Has the source patient:
- lived as an adult in Africa (possible risk of HIV)?

- a history of IV drug use (possible risk of HCV/HIV/HBV)?
- received blood products before Oct 1985 (HIV) 1991 (HCV)?
- had unprotected sex with a partner known to have a BBV or any of the above risk factors?
- had any other significant risk factors?

If the source patient answers **yes** to **any** of the above risk factors, the OHNA will discuss the risks with an OH doctor who will assess the need for **Post Exposure Prophylaxis (PEP).**

Exposure incident details

Type of exposure:

- percutaneous, mucous membrane splash, broken skin exposure?
- deep/superficial?
- blood/body fluid involved?
- type of device involved
- was the staff member wearing protective clothing/equipment?

If the source patient has none of the above risk factors and the circumstances of the exposure are low risk, the staff member will be offered follow up testing for HBV (if non immune at time of incident), HCV and HIV antibodies at three and six months (Hepatitis C PCR testing is not indicated). It is important to reassure the staff member that this is a low risk incident and follow up is offered, not required.

(v) Recording/Reporting

- Record all details on the BFE form. Also record that the staff member has been seen in the HaWC following a blood exposure incident – 'please refer to Body Fluid Exposure Incident form for further details' on a history sheet. Ensure that you record any follow up arrangements that you have made with the staff member on the BFE form.
- Ensure that the staff member has completed an incident form.
- Manager should complete the Sharps injury Investigation Form (http://whittnet.whittington.nhs.uk/admin/default.asp) and return it to the Health and Safety Adviser, Risk Management, Jenner building.
- Complete HPA CFI initial report form and consent form if appropriate.
- Risk management will report any RIDDOR reportable incidents to the HSE in line with the Health and Safety Policy.

HIV, Hepatitis C or Hepatitis B positive source patients

(i) Procedure

Record all information on the BFE form. This will prompt you to take action at the appropriate time.

HIV

- If the source patient is HIV positive **PEP** should be given as soon as possible, preferably within **one hour** of the incident. It is most likely to be effective when initiated within hours, and certainly within 48-72 hours of exposure, and continued for 28 days. PEP is generally not recommended beyond 72 hours post-exposure. A starter pack will be given either in A&E (out of working hours) or by the HaWC team. This may mean sending the staff member to the Royal Free Hospital HaWC for assessment and starter pack. Assessment will always be discussed with one the OH doctors.
- The staff member is seen by the OH Doctor weekly during the four-week post exposure drug regime for biochemistry and haematology blood tests, to check for side effects, to give repeat prescriptions and to offer psychological support.
- A follow up blood test is arranged for 12 weeks after the finish of the course of PEP (or 12 weeks post incident if PEP was not taken).

HCV

- Blood should be taken for serum save (and anti-HBs if appropriate). Arrange a date for follow up blood test 6 weeks after the incident

HBV

- See appendix 1. Follow up blood testing is only necessary if the staff member is non-immune at the time of the incident.
- If appropriate, arrange a date for follow up blood test 6 weeks after the incident

(ii) Advice to staff member

This may include:

- Statistics regarding seroconversion
- Risks involved in particular incident
- OH follow up procedure and rationale behind it
- 'Window period' – if the exposure was significant and there are relevant source patient risk factors, re-resting of the source patient may need to be considered three months after the incident, or liaising with the virologist about other appropriate tests
- If anxious, establish support networks; friends, family etc
- Allow time to express anxieties and concerns and to answer any questions
- Confidentiality
- Any restrictions or precautions i.e. safe sex, not donating blood.
- Ways in which future incidents may be avoided
- Ask for consent to send details of the incident to the HPA surveillance scheme

(iii) Health Protection Agency, Communicable Diseases Surveillance Centre

When consent has been obtained, complete the 'Surveillance of Occupational Exposure to Bloodborne viruses – Initial Report'. Send to the HPA using the pre addressed labels. Questionnaires will be sent to the OH nurse/doctor completing the initial form asking for details of the 6 week and 6 month follow up.

Follow up blood tests

Please refer to appendix 2 for pre test discussion details.

(i) At 6 Weeks

HCV

- Pre test discussion
- Take blood for Hep C PCR (red topped serology blood tube - PCR blood needs to go in a separate blood tube if taking blood for other tests as well and delivered to microbiology within 4 hours) see fig 1.
- If the result is negative then an appointment is given for three months post PEP/incident. If positive, refer to OH doctor for further tests and referral to specialist team.

HBV

- Pre test discussion
- Take blood for HBsAg (red topped serology blood tube)
- If the result is negative then an appointment is given for three months post PEP/incident. If positive, refer to OH doctor for further tests and referral to specialist team.

(ii) At 3 months

HIV

- Pre-test discussion
- Take blood for HIV Antibodies (red topped serology blood tube).
- If the result is negative, reassurance can be given about freedom from infection. If positive, refer to OH doctor for further tests and referral to specialist team.

HCV

- Discussion as per 6 weeks
- Test for Hepatitis C antibodies **and** Hepatitis C PCR – see fig 1.
- If both test results are negative, give appointment for six months post PEP/incident. If either test is positive, refer to OH doctor for further tests and referral to specialist team.

HBV

- Discussion and test as per 6 weeks
- If the result is negative, arrange appointment for 6 months post PEP/incident. If positive, refer to OH doctor for further tests and referral to specialist team.

(iii)At 6 months

HCV

- Discussion as per 6 weeks and 3 months.
- Test for Hepatitis C Antibodies only – see fig 1.
- If the result is negative, reassure staff member that they do not require any further testing in relation to this incident. If positive, refer to OH doctor for further tests and referral to specialist team.

HBV

- Discussion and test as per 6 weeks and 3 months
- If the result is negative, reassure staff member that they do not require any further testing in relation to this incident. If positive, refer to OH doctor for further tests and referral to specialist team.

Ensure all information is sent to the HPA CDSC at Colindale.

Fig I HCV Follow up tests.

	HCV Antibodies	HCV RNA (PCR)
6 weeks	No	Yes
3 months	Yes	Yes
6 months	Yes	No

- Further information

Appendix 1

Hepatitis B Virus Prophylaxis for reported exposure incidents

HBV status of person exposed	Significant Exposure			Non-significant exposure	
	HBsAg positive Source	Unknown Source	HBsAg negative source	Continued risk	No further risk
<= 1 dose HB vaccine pre-exposure	Accelerated course of HB vaccine* HBIG x 1	Accelerated course of HB vaccine*	Initiate course of HB vaccine	Initiate course of HB vaccine	No HBV prophylaxis Reassure
>=2 doses HB vaccine pre-exposure anti HBs not known	One dose of HB vaccine followed by second dose one month later	One dose of HB vaccine	Finish course of HB vaccine	Finish course of HB vaccine	No HBV prophylaxis Reassure
Known responder to HB vaccine (anti HBs > 10 miu/ml)	Consider booster dose of HB Vaccine	Consider booster dose of HB Vaccine	Consider booster dose of HB Vaccine	Consider booster dose of HB Vaccine	No HBV prophylaxis Reassure
Known non-responder to HB vaccine (anti-HBs <10 miu/ml 2-4 months post–immunisation.	HBIG x 1 Consider booster dose of HB vaccine	HBIG x 1 Consider booster dose of HB vaccine	No HBIG Consider booster dose of HB vaccine	No HBIG Consider booster dose of HB vaccine	No HBV prophylaxis Reassure

*An accelerated course of vaccine consists of doses spaced at 0,1 and 2 months.
A booster dose my be given at 12 months to those at continuing risk of exposure to HBV
Source: PHLS Hepatitis Subcommittee. CDR Review 1992:2;R97-R101

Ref: Department of Health (1996) Immunisation against infectious disease HMSO London 106

Appendix 2

Check List for pre-test discussion with source patient

1. The pre-test discussion should be carried out in a sensitive manner, and not by the exposed member of staff.
2. Explain what has happened, maintaining the staff member's anonymity.
3. Emphasise that it is national policy following incidents such as this to approach the patient involved and ask for permission to test for HIV, hepatitis B and hepatitis C. It should be explained that the tests are the same as those done for blood donors. The approach is not made on the basis of perceived risk.
4. Explain that it is their right to decline permission.
5. Explain that an HIV antibody test requires informed consent, which involves discussion prior to the test. Stress confidentiality.
6. The most recent Department of Health guidelines state that the pre-test discussion for HIV antibody testing should be considered part of mainstream clinical care i.e. should not require specialist counselling training or qualification.
7. Establish that the patient understands the meaning of the HIV test i.e. that it is not a test for AIDS, it is a test for HIV infection.
8. Discuss methods of transmission of HIV, HBV and HCV: unprotected sex, IV drug use, blood transfusions (prior to 1985 for HIV and 1991 for HCV in the U.K.), vertical transmission, needle-stick injuries. Ensure they are quite clear what they are being tested for.
9. Discuss the practical implications of the test and the result (positive or negative) e.g. life insurance (Association of British Insurers recommend that companies should only ask about positive test results), sexual relationships, work situations and medical follow-up. It is important to remain sensitive to the potential stigma associated with HIV in many communities.
10. If high-risk behaviour occurred within the preceding three months (they don't have to tell you what) explain the window period; it can be up to 3 months from infection to the detection of measurable antibodies. Consider organising a follow-up test after the window period.
11. Describe the procedure for having blood taken. Ask if the source patient wishes to know the results, if not, this must be discussed with an OH consultant before the blood is taken. If appropriate arrange a time to give them the results.
12. Obtain consent verbally or in writing and document in the patient's records e.g. *"Source patient in staff blood contamination incident. Consent requested to test for HIV/HBV/HCV"*.
13. Request HBsAg, HCV antibody and HIV antibody test on the pathology form. Write "source patient in needle-stick i for clinical details.
14. Should a source patient object to having blood taken or tested (for whatever reason), it may be appropriate for them counselled to identify the problems (but the patient's wishes should be respected and coercion should not be used)
15. Occasionally a patient is unable to give consent. Consent cannot be given by a third party e.g. next of kin. Please Human Tissue Act 2004 which came into force in England, Wales and Northern Ireland on 1 September 2006. (see below: New Guidance on non-consensual blood testing after a needlestick injury).
16. If the patient refuses consent, or if it would be detrimental for the patient to be approached, or there are any other reasons why the testing is not done, record this and inform occupational health.

New guidance on non–consensual blood testing after a needlestick injury

The GMC's advice on testing the blood or bodily fluids from a patient who lacks capacity after a doctor has sustained a needlestick injury, has been superseded by recent legislative changes – namely the Human Tissue Act 2004, which came into force in England, Wales and Northern Ireland on 1 September 2006.

- **Contacts (inside and outside the Trust including out-of-hours contacts)**

Health and Work Centre The Old Police House Whittington Hospital	020 7288 3351 Mon – Thurs 9 am – 5 pm Fridays 8 am – 4 pm
Health and Work Centre Royal Free Hospital Pond Street London NW3 3QG	020 7830 2509/10/11 Mon – Friday 8.30 am – 5pm
Microbiology Specialist Registrar	020 7288 5085 Monday – Friday 9 am – 5 pm
Microbiology On Call Specialist Registrar	 Aircall/ Mobile via Switchboard
Consultant Microbiologists Dr Michael Kelsey Dr Julie Andrews	 020 7288 5082 020 7288 3894

- **References (evidence upon which the guideline is based)**

References

1 Department of Health September 2008. HIV post-exposure prophylaxis. Guidance from the UK Chief Medical Officers' Expert Advisory Group on AIDS

2 UK Health Departments 1998. AIDS/HIV infected health care workers: guidance on the management of infected health care workers and patient notification.

3 General Medical Council. Good Medical Practice. 3rd edition May 2001

4 General Medical Council. Serious Communicable Diseases. Oct 1997

5 Human Rights Act 1998. The Stationary Office, London

6 National Patient Safety Agency, 4-8 Maple Street, London, W1T 5HD020 Tel: 7927 9500

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8 Jaeckel E, Cornberg M, Wedemeyer H, Santantonio T, Mayer J, Zankel M, Pastore G, Dietrich M, Trautwein C, Manns MP; German Acute Hepatitis C Therapy Group. Treatment of acute hepatitis C with interferon alfa-2b. N Engl J Med 2001 15; 345:1452-7.

9 UK health departments 1998. Guidance for clinical health care workers: Protection against infection with blood borne viruses; recommendations of the Expert Advisory Group on AIDS and the Advisory Group on Hepatitis