NHS
Lothian

GUIDANCE FOR IMMUNISATION OF DRUG USERS AND CLOSE CONTACTS AGAINST HEPATITIS A & B

Updated April 2012

LOTHIAN NHS BOARD
PUBLIC HEALTH & HEALTH POLICY
HEALTH PROTECTION TEAM
Waverley Gate
2-4 Waterloo Place
EDINBURGH EH1 3EG
0131 465 5414

Introduction

This guidance has been developed to support a programme of vaccination against Hepatitis A (HAV) and Hepatitis B viruses (HBV) in drug users and close contacts throughout Lothian. It replaces guidance developed in September 2006.

Hepatitis B (HBV)

Drug users are at risk of HBV due to sharing of injecting equipment and through sexual spread. During the 1990s outbreaks of hepatitis B infection among drug users were relatively frequent, but in the early 2000s concerted efforts to vaccinate injecting drug users against hepatitis B resulted in a decline in the numbers of new transmissions among injecting drug users.

Hepatitis A (HAV)

Several large outbreaks of HAV amongst drug users have been reported in the UK. This is often associated with poor living conditions and spread probably occurs through faecal contamination of drugs or injecting paraphernalia. Blood to blood spread through needle sharing during viraemia is also possible. IDUs are also at high risk of HCV – HAV infection on top of another serious liver disease such as chronic HCV is more likely to lead to more serious symptoms including liver failure. This has resulted in the recommendation that HAV vaccination should be offered to IDUs.[1]

Policy context

This guidance follows the approach outlined in 'The Green Book'[2], updated guidance from the Joint Committee on Vaccination and Immunisation, the British National Formulary and the 'Guidance for hepatitis A and B vaccination of drug users from the Royal College of General Practitioners' [3].

Further detailed information on HBV vaccination is available as part of the Know the Score Campaign and campaign packs which include posters and leaflets for professionals and patients can be ordered by telephoning Exchange Supplies 01305 262244 or email info@exchangesupplies.org

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[1] Guidelines for the control of hepatitis A virus infection. NS Crowcroft et al on behalf of PHLS Advisory Committee on Vaccination and Immunisation. Commun Dis Public Health 2001; 4: 213-27

[2] Immunisation against infectious disease, updated Chapter 18, Department of Health website (http://www.dh.gov.uk/PolicyAndGuidance/HealthAndSocialCareTopics/GreenBook/fs/en)

[3] Guidance for hepatitis A and B vaccination of drug users in primary care and criteria for audit, Royal College of General Practitioners. 1st Edition, 2005

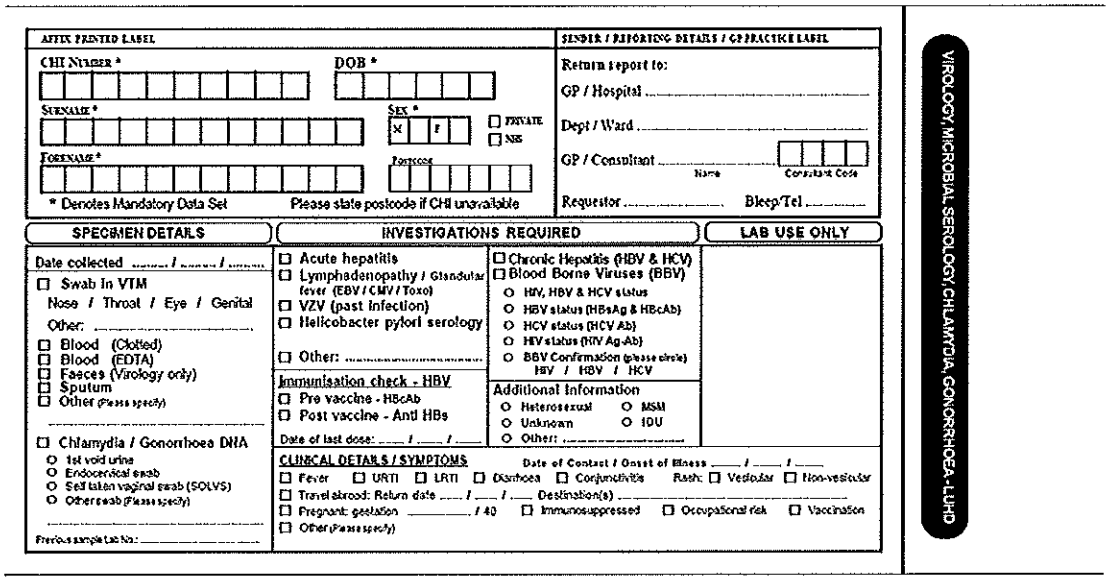
Revision Team 2012

Dr Christine Evans, Consultant Public Health Medicine
Euan Macleay, Primary Care Facilitation Team
Dr Ewen Stewart, Hepatitis MCN Clinical Lead and PCFT
Kate Templeton, Consultant Virologist, University Hospitals Division
Debbie Eccles, Clinical Nurse Manager, Substance Misuse Directorate
Mina O'Hara, BBV Nurse, Substance Misuse Directorate
Simone Thorn, Health Protection Nurse, Public Health
Hilda Stiven, Hepatitis MCN Co-ordinator, Public Health Department

1. Pre-vaccination serology

Pre-testing should never act as a barrier or delay to vaccination. Administer the first dose of vaccine and if possible check HBV status to identify those already infected, by taking a blood sample just prior to vaccination. Please indicate this on request form for the laboratory so appropriate tests are conducted. For advice on the management of individuals who are found to be HBV surface antigen (HBsAG) positive please refer to Appendix. HAV serology is not required.

If a blood sample is being obtained consideration should also be given to testing for hepatitis C and HIV.[4] Please see NHS Lothian' BBV Testing in Adults Guideline. All three viral investigations can be performed on a single sample (Brown Cap Gel tube) which should be sent to the lab with a Microbiology Blue request form indicating HIV status HBV status and HCV status tests to be carried out.


AFFIX PRINTED LABEL

CHI NUMBER * DOB *

SURNAME * SEX * M F ☐ PRIVATE ☐ NHS

FORENAME * POSTCODE

* Denotes Mandatory Data Set Please state postcode if CHI unavailable

SENDER / REPORTING DETAILS / GP PRACTICE LABEL

Return report to:

GP / Hospital .....

Dept / Ward .....

GP / Consultant ..... Name Consultant Code

Requestor ..... Bleep/Tel .....

SPECIMEN DETAILS

Date collected ... / ... / ...

☐ Swab in VTM
Nose / Throat / Eye / Genital
Other: .....

☐ Blood (Clotted)
☐ Blood (EDTA)
☐ Faeces (Virology only)
☐ Sputum
☐ Other (Please specify)

☐ Chlamydia / Gonorrhoea DNA
○ 1st void urine
○ Endocervical swab
○ Self taken vaginal swab (SOLVS)
○ Other swab (Please specify)

Previous sample Lab No: .....

INVESTIGATIONS REQUIRED

☐ Acute hepatitis
☐ Lymphadenopathy / Glandular fever (EBV / CMV / Toxo)
☐ VZV (past infection)
☐ Helicobacter pylori serology
☐ Other: .....

Immunisation check - HBV
☐ Pre vaccine - HBcAb
☐ Post vaccine - Anti HBs
Date of last dose: ... / ... / ...

☐ Chronic Hepatitis (HBV & HCV)
☐ Blood Borne Viruses (BBV)
○ HIV, HBV & HCV status
○ HBV status (HBsAg & HBcAb)
○ HCV status (HCV Ab)
○ HIV status (HIV Ag-Ab)
○ BBV Confirmation (please circle) HIV / HBV / HCV

Additional Information
○ Heterosexual ○ MSM
○ Unknown ○ IDU
○ Other: .....

CLINICAL DETAILS / SYMPTOMS Date of Contact / Onset of Illness ... / ... / ...
☐ Fever ☐ URTI ☐ LRTI ☐ Diarrhoea ☐ Conjunctivitis Rash: ☐ Vesicular ☐ Non-vesicular
☐ Travel abroad: Return date ... / ... / ... Destination(s) .....
☐ Pregnant: gestation ... / 40 ☐ Immunosuppressed ☐ Occupational risk ☐ Vaccination
☐ Other (Please specify)

LAB USE ONLY

VIROLOGY, MICROBIAL SEROLOGY, CHLAMYDIA, GONORRHOEA - LLHD

2. Vaccination administration

PATIENT GROUP	VACCINE
Injecting drug users (past and current)	HBV and HAV
Drug users who are infected with HIV or HCV	HBV and HAV
All non injecting drug users	HBV only
Current sexual partners of current injecting drug users	HBV only
Children of problem drug users	HBV only

[4] NHS Lothian Adult BBV Testing Guideline November 2011

3. Vaccination of Drug Users

The most convenient vaccination schedule should be selected for each patient. **It is recommended that the accelerated course of HBV vaccine be used in primary care settings to maximise compliance and early immunity.** This schedule will allow vaccine to be administered opportunistically at appointments made for substitute prescribing. In adults the vaccine should be administered as an intramuscular injection in the deltoid region.

It may be difficult to complete a full course of vaccination with many drug users because of poor attendance. However, **even one dose may confer some immunity** and this opportunity should not be missed.

HAV vaccine is available as a single component vaccine or combined with HBV (Twinrix). These vaccines are not interchangeable within a course as the combined vaccine contains only half the amount of HAV antigen as the single component vaccine. Twinrix is not licensed for the accelerated schedule. It is recommended that the single component HAV vaccine is administered separately into a different site, and a booster administered 6-12 months later to maximise early immunity.

Other schedules can be considered in circumstances where their use may increase the chance of completion of a full immunisation course.

4. Vaccination of pregnant women who use drugs or who are partners of injecting drug users

Pregnant women in the above groups should have full screening for HBV. This includes a request for HBV core antibodies (indicating past infection) as well as the routinely performed Hepatitis B surface antigen test. If the HBV core antibody test is not requested initially it should be subsequently requested on the stored serum sample at the Specialist Virology Centre, Royal Infirmary.

All women in the above group with no evidence of past or current Hepatitis B infection should be offered Hepatitis B vaccination antenatally, using the accelerated or super-accelerated schedules. Immunisation can be safely carried out during pregnancy.

Women found to be Hepatitis B carriers need referral to specialist Midwife for obstetric care. HIV screening is already part of the antenatal screen but hepatitis C is not. Antenatal booking of women who use drugs is a good opportunity to offer the hepatitis C antibody test.

5. Prevention of Vertical Transmission

Transmission from a HBV carrier mother to her baby can be prevented in over 90% of cases by appropriate vaccination (starting at birth) of all infants born to infected mothers. All such babies should receive active immunisation with HBV vaccine. Where there is a high risk of mother to baby transmission, e.g. where the mother is e-antigen positive, or has a very high viral load, the infant should also receive HBV immunoglobulin (HBIG) as soon as possible within 24 hours of birth. See Hepatitis B Resource Pack for midwives. Subsequent doses of HBV immunisation should be given at 1 month, 2 months and 12 months after the first dose. Testing for HBsAg at one year of age will identify any babies for whom this intervention has not been successful and who have become chronically infected with HBV, and will allow them to be referred for assessment and any further management. A preschool booster dose is recommended for this group of children.

6. Vaccination of partners of current injecting drug users

HBV can be transmitted through sexual contact and non-sexual intimate contact. It is best practice to vaccinate sexual partners of currently injecting drug users. Organising the vaccination of partners may not be straightforward. Healthcare workers need to work with injecting drug users to advise them of the risks and encourage them to discuss vaccination with their sexual partners. Sexual partners can discuss vaccination with their GP or other healthcare worker.

7. Vaccination of children living with problem drug users

There is potential risk of transmission to children through household contact and it is important to address this as children infected with HBV have a far higher risk of progression to chronic infection than adults. NHS Lothian's policy is to vaccinate all babies born into households where there is a problem drug user (mothers or fathers/other carers identified as a problem drug user) with first dose at birth and subsequent doses at 1 month, 2 months and 12 months after the first dose. Post vaccination serology is not required. Please see NHS Lothian protocol *Pre-exposure Hepatitis B immunisation for babies born to problem drug using parents,* April 2012. http://intranet/NHSLothian/Healthcare/ClinicalGuidance/General/Hep%20B%20immunisation%20for%20babies%20born%20to%20problem%20drug%20using%20parents.pdf

Every opportunity should also be taken for opportunistic immunisation of other children in the household of problem drug users.

8. Vaccination schedules

All past and current injecting drug users and drug users with HIV and / or HCV should be offered HBV and HAV

Injections	**HBV Accelerated Schedule plus HAV vaccination : separate vaccines**		HBV & HAV (Twinrix) Super-accelerated Schedule *
	HBV	**HAV**	
1st injection	**0 months**	**0 months**	0 days
2nd injection	**1 month**	**No 2nd injection**	7 days
3rd injection	**2 months**	**No 3rd injection**	21 days
4th injection	**12 months**	**6- 12 months booster**	12 months

*** Super-accelerated schedule licensed for Twinrix in adults only.**

All non-injecting drug users and current sexual partners of injecting drug users and children of problem drug users should be offered HBV

Injections	Routine Schedule	**Accelerated Schedule (Recommended)**	Super-accelerated Schedule*
1st injection	0 months	**0 months**	0 days
2nd injection	1 month	**1 month**	7 days
3rd injection	6 months	**2 months**	21 days
4th injection	Not applicable	**12 months**	12 months

*** Super-accelerated schedule licensed for Engerix B vaccine only in adults. It may be used in individuals aged 16 to 18 in an unlicensed capacity where rapid protection is required or compliance may be an issue.**

9. Post-vaccination serology

It is recognised that there may not be an optimal immunological response to the vaccine in this population. It is worth noting that even if there is poor antibody response there is increasing evidence that there may be adequate cellular response, and that some protection will have been gained. Checking the antibody response is not recommended for drug users unless checking antibody response to all vaccines is being done regarding investigations for immunological deficiency[5].

If serology is to be checked, the sample must be taken two to four months after completion of the 4 doses (on the accelerated or super-accelerated schedules) or 3 doses if on routine schedule. Please

[5] European Consensus Group on Hepatitis B immunity. Consensus statement. Are booster immunisations needed for lifelong hepatitis B immunity? Lancet 2000;355:561-65

indicate on the laboratory serology request form the date of the final injection of the course.

Antibody level(mIU/ml)	Status	Action
< 10	Non-response	Screen for markers of past or current infection: if negative, repeat primary course.
10-100	Low Antibody Response. Should be sufficient to protect.	Give booster now and again at 5 years.
> 100	Protective	One booster at 5 years.

5-10% of healthy people will not mount an effective antibody response after vaccination (<10miu/ml). They should be advised that there continues to be some risk of infection but that the course of vaccine may lessen the likelihood of serious illness [5].

Further advice is available from the Specialist Virology Centre at the Royal Infirmary of Edinburgh. It is not recommended to test for immunity after HAV vaccination.

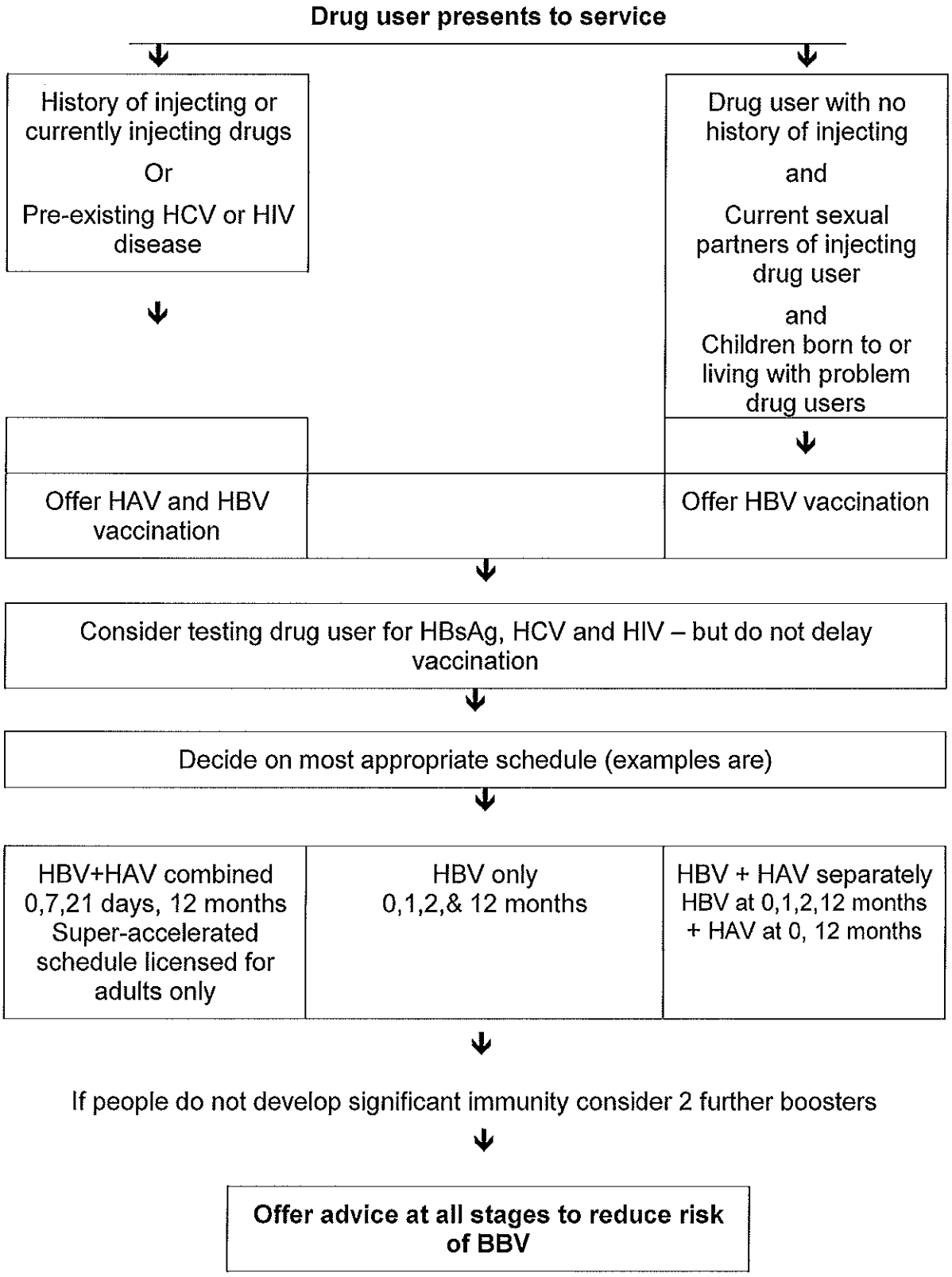
10. Incomplete courses

If a patient presents with a confirmed history of incomplete immunisation then give the remaining doses. In this situation there is no need to restart the course (BASHH 2005). If previous doses of immunisation cannot be confirmed then restart the course – serology is only required for those at risk of occupational exposure and patients with renal failure

11. Advice to reduce the risk of blood-borne viruses

Every opportunity should be taken to offer advice and information to reduce the risk of spread of all blood borne viruses. You can obtain NHS Lothian prevention cards *Blood Borne Viruses – How do people get hepatitis C, B or HIV?* from NHS Lothian's Health Promotion Resource Centre Tel 0131 537 9337.

FLOW-CHART SUMMARISING LOTHIAN GUIDANCE



Appendix **Management of HBV**

Interpretation of serological markers

Status	Detection of				
	HbsAg	HbeAg	Anti-HBc	Anti-HBs	IgM anti-HBc
Acute Infection	+	+/-	+/-	-	+
Chronic Infection (>6months)	+	+/-	+	+/-	-
Past Infection (immune)	-	-	+	+/-	-
Vaccine	-	-	-	+	-

If further assistance is required please contact the Specialist Virology Centre: Tel: 0131 242 6048

Management of newly identified case of hepatitis B infection
If an individual is found to be HBsAg positive, mechanisms need to be in place to ensure that:

- Advice is given to reduce the risk of transmission
- Sexual and household contacts be tested and immunised as appropriate
- For pregnant women, advice and care is given for the woman and the infant.
- The patient is referred for medical assessment (see below)

The Health Protection Team at NHS Lothian is available to offer advice on the management of contacts of cases of acute and chronic hepatitis B. (Tel: 0131 465 5420/2). Cases of acute and chronic hepatitis B are reported to the Health Protection Team by the laboratory. Information is sent from the Team directly to those found positive as well as to their GP.

Where appropriate, sexual contacts of patients may be referred to Chalmers Sexual Health Centre for follow-up.

Medical assessment
Advice and treatment are available for patients with Hepatitis B at two treatment centres in Lothian.

- The Centre for Liver and Digestive Disorders (CLDD) Tel: 0131 242 1625 or via RIE switchboard 0131 536 1000
- The Regional Infectious Diseases Unit (RIDU) Tel No 0131 537 2820 or via WGH switchboard Tel: 0131 537 1000

Usually those with co-infection with HIV are initially referred to RIDU.