Royal College of General Practitioners

Guidance for hepatitis A and B vaccination of drug users in primary care and criteria for audit

RCGP Drug Misuse Training Programme
RCGP Sex, Drugs and HIV Task Group
SMMGP

1st Edition 2005

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Completed November 2004
For review November 2006
Available at: www.rcgp/drug/index/asp
www.smmgp.co.uk

Thanks to: The RCGP National Expert Advisory Group

Supported by: The RCGP Drug Misuse Training Programme,
The RCGP Sex, Drugs & HIV Task Group, SMMGP Advisory Group

Introduction

Injecting drug users (IDUs) are at high risk from hepatitis B due to sharing of injection equipment and through sexual spread. It is estimated that 21% of injecting drug users in England and Wales have evidence of past or current hepatitis B infection.[1] Hepatitis B disease can be prevented by vaccination. IDUs have been targeted since 1988 for vaccination. Despite this, both availability of vaccination and uptake by IDUs are recognised to be poor in the UK.[2, 3] Proactive provision of hepatitis B vaccination through widely available services is critical for protecting this difficult to reach target group.

Practices who opt to provide a National Enhanced Service to patients with drug misuse problems under the new GMS contract will be expected to undertake six-monthly audits of hepatitis B screening and immunisation data of this patient population (http://www.doh.gov.uk/gmscontract/nesdrug.pdf). This paper contains guidance on how screening and immunisation should be carried out and suggests criteria to facilitate audits.

Availability and accessibility

Hepatitis B vaccination should be considered an essential component of the care offered to drug users in primary care. Poor patient attendance is often reported as a major barrier. To address this issue, vaccination needs to be carried out opportunistically at the time when the drug user makes contact with the practice, e.g. at the time of methadone prescribing. Practices should keep a stock of hepatitis B vaccine.

Pre-vaccination testing

It has been standard practice to advise that clinicians wait for hepatitis B test results before giving the first dose of vaccine. The rationale for this advice was to prevent unnecessary vaccination of those who have already been infected or previously vaccinated. Due to poor uptake of vaccination, current expert advice is to focus on protection through vaccination rather than testing. The Department of Health has dispensed with routine pre-vaccination testing in the national hepatitis B immunisation programme for prisons.[4]

Pre-testing should never act as a barrier or delay to vaccination. Drug users should have access to vaccination without testing if desired. If a drug user wishes to be tested, the first dose of vaccine should be offered at the same time.[2, 5] Delaying vaccination can do harm because a drug user may become infected before the next visit or may not return.[2]

The aims of testing need to be considered to ensure that it is of benefit. Testing for hepatitis B surface antigen (HBsAg) is worthwhile if those found to be positive are followed up in primary care with advice about prevention of transmission and contact tracing for vaccination.[2] All HBsAg positive patients should be offered referral to a specialist (hepatologist, infectious diseases physician or gastroenterologist) for further assessment.

The patient is less likely to benefit from testing for antibody to hepatitis B core antigen (anti-HBc). A positive result indicates present or past hepatitis B infection. Current advice is that further hepatitis B vaccination is not necessary if positive.[2]

Primary vaccination schedule

A pragmatic approach to vaccination schedule is recommended. Every time a drug user contacts the practice, the healthcare worker should consider whether hepatitis B vaccination should be offered. Emphasis needs to be placed on giving as many doses as possible. Lack of certainty of vaccination status should not act as a barrier to vaccination and reliance on recall of history of vaccination is not advised.

- Accelerated schedules (0, 1 and 2 months or 0, 7 and 21 days) are now widely recognised as the most appropriate for people at high risk including drug users. A study of homeless drug users at an inner city primary care centre found a seven times higher completion rate with the 0, 7 and 21 day schedule compared with the conventional 6 month schedule.[7] The 0, 7 and 21 day schedule is being promoted by the Department of Health for prisons.[4]
- Even incomplete vaccination schedules offer some protection.[6]
- In addition services need to ensure that there is a robust system for recall.

Booster doses

Current best practice is to give a booster at 12 months if an accelerated schedule is used.[8] Again, a flexible pragmatic approach is advisable for IDUs who are often not in sustained contact with services. When a drug user presents to services, the healthcare worker should consider whether this is an opportune time to offer a booster dose.

Post-vaccination testing

An alternative approach is to test for antibodies to the hepatitis B surface antigen (anti-HBs) at least 1 month after the primary course and make a decision about whether a booster dose is needed depending on the antibody levels (table 1).[9] Routine post-vaccination testing is not recommended for drug users as a group because of the practical difficulties with follow-up.[9] 5–10% of healthy people will not mount an effective antibody response after vaccination.[10] Some of these apparent non-responders may still be protected against clinically significant infection.[9] People with an immune disorder, e.g. due to HIV infection, are at higher risk of failing to respond and may need regular testing for anti-HBs and a booster injection when the level falls below 10mIU/ml.[9]

Promotion of vaccination

Prominent display of posters and use of leaflets promoting hepatitis B vaccination may be helpful. Promotion of vaccination is dependent on motivated knowledgeable staff. In drug services, uptake rates have been found to be higher where staff training and confidence were better.[12] GPs and practice nurses may also need training and awareness sessions to ensure greater uptake of vaccination.

Table 1: Post vaccination antibody testing and actions to consider [9,10,11]

Antibody level (miu/ml)	Status	Action
<10	Non-response	Screen for markers of present or past infection (HbsAg, antiHBc). Give additional dose. Consider repeating full course.
10–100	Poor response	Give additional dose.
>100	Protective	No further action needed if immunocompetent.

Vaccination of partners and children of drug users

The partners and children of drug users are also at risk of hepatitis B infection but their need for vaccination is often overlooked. Hepatitis B can be transmitted through sexual contact and non-sexual intimate contact. Children infected with hepatitis B have a higher risk of chronic infection than adults.

Organising the vaccination of families may not be straightforward. Families may not be registered with the same practice as the drug user. Some drug users may be reluctant to disclose the risk to their partners. Healthcare workers need to work with drug users to advise them of the risks and promote the routine offering of vaccination to partners and children.

Hepatitis A vaccination

IDUs are at higher risk of hepatitis A infection due to poor living conditions with spread probably occurring through faecal contamination of drugs or injecting paraphernalia.[13] Blood to blood spread through needle sharing during viraemia is also possible.

Hepatitis A vaccination of IDUs infected with hepatitis C and / or with chronic liver disease has been recommended for many years because of the risk of more serious illness if they became infected.[11] The Public Health Laboratory Service Advisory Committee on Vaccination and Immunisation expanded this recommendation in 2001 to include all IDUs.[14]

As for hepatitis B, it is advisable to offer drug users a hepatitis A vaccine without pre-testing because of the risk that the opportunity to vaccinate may be lost, e.g. due to the drug user not returning.[14]

Hepatitis A vaccine is available as a single component vaccine or combined with hepatitis B vaccine (table 2). The likelihood of a drug user returning for a subsequent dose needs to be taken into account when selecting the single vaccine or the combined vaccine. One dose of hepatitis A vaccine confers greater protection against hepatitis A than one dose of the combined vaccine because the combined vaccine only has half the amount of hepatitis A antigen than the single component vaccine.

Monitoring

Local information on vaccine uptake and completion is crucial in order to judge the quality of the service and plan achievable improvements. The minimum information required is the number of vaccinations received by a drug user.[15] An easy recording system is needed.

Suggested criteria for audit

Criteria for audit should be kept simple.
The minimum criteria should be:

- The number and percentage of drug users who have received 1 dose of hepatitis B vaccine (HBV).
- The number and percentage of drug users who have received 2 doses of HBV.
- The number and percentage of drug users who have received 3 doses of HBV.

Other criteria to consider include:

- The number and percentage of drug users who have been offered hepatitis B vaccination.
- The percentages of drug users who have received 1 and 2 doses of hepatitis A vaccine.

Table 2: Recommended schedules of hepatitis A and B vaccines [8]

Hepatitis Vaccines	Schedule
Single A	2 doses with second dose after 6–12 months. Second dose may be delayed for up to 3 years.
Combined A and B	Routine: 0, 1, 6 months. Accelerated: 0, 7, 21 days with booster ideally at 12 months.

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Summary of recommendations

- Vaccinate **all** drug users against hepatitis B (non-injectors may become injectors).
- **No need** to carry out pre-vaccination testing.
- Use accelerated 0, 7 and 21 day schedule.
- Offer hepatitis B vaccination to partners and children.
- Vaccinate **all** injecting drug users against hepatitis A.
- Single component hepatitis A vaccine preferable to combined hepatitis A and B vaccine.
- Devise and use an easy recording system to enable audit.

For additional copies, and for further information about training on hepatitis and other issues relevant to primary care based drug and alcohol treatment, please contact

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This guidance, and other resources including an interactive discussion forum, are available on the SMMGP website at **www.smmgp.co.uk**