DH Department of Health

Health Protection Agency

Health protection in prisons

2009-2010 report

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List of acronyms

ARV	Anti-retroviral therapy
BBV	Bloodborne viruses
GI	Gastrointestinal
HCV	Hepatitis C Virus
HPA	Health Protection Agency
HPU	Health Protection Unit
IDU	Injecting Drug User
NCSP	National Chlamydia Screening Programme
PCT	Primary Care Trust
PIP team	Prison Infection Prevention team
SOPHID	Survey of Prevalent HIV Infections Diagnosed
TB	Tuberculosis
YOI	Young Offender Institution
PHPQI	Prison Health Performance and Quality Indicator
HBsAg	Hepatitis B surface antigen
Anti-HCV	Anti-hepatitis C core antigen
Anti-HBc	Anti-hepatitis B core antigen

Citation

Health Protection in Prisons: 2009-2010 report.
London: HPA, Colindale, March 2011

Contents

Figure 1

Location of prisons and young offender institutions in England and Wales

last updated April 2010. More prison and probation information can be found on www.justice.gov.uk

Key messages

1 The prison hepatitis B immunisation programme has made a significant contribution to the reported increase in vaccine coverage, and the decreased incidence of acute hepatitis B viral infections among injecting drug users (IDUs). Health Protection Agency (HPA) national monitoring of the prison hepatitis B vaccination programme was replaced with regional surveillance on 1 April 2010.

2 A higher proportion of individuals test positive for hepatitis C in prisons and specialist services for drug users, compared with a variety of other health settings in the community. The number of individuals tested for hepatitis B and C in prison has increased between 2005 and 2008. However, there still remain a significant number of people passing through the prison estate without being tested and this situation needs to change.

3 Over three-quarters of prisons in England and Wales took part in the National Chlamydia Screening Programme (NCSP) between April 2008 and March 2009. Testing in prisons represented 2% of all the NCSP screens. However, prevalence of infection with *Chlamydia trachomatis* among tested prisoners is higher than those people tested in the community, and screening programme uptake needs to increase.

4 Surveillance data on HIV in prisons are required to develop policies to improve the quality of HIV services and also develop care pathways. Current surveillance systems are inadequate for accurately capturing data on the number of individuals diagnosed with HIV in prison.

5 Prisons were spared any significant impact from the swine flu pandemic during 2009, despite concerns that they might be at risk of large outbreaks. This has been attributed to effective planning and preparation, ahead of the event, by Her Majesty's Prison Service, Ministry of Justice and Department of Health in partnership with the HPA, and high-quality intelligence and effective response to outbreaks. The successful management of pandemic flu has been important in reducing the risk to the health of staff, prisoners and others entering the prison system. This has also maintained the operational effectiveness of prisons, which is essential to preserving a fully-functional criminal justice system.

6 A number of gastrointestinal (GI) disease outbreaks occurred simultaneously in the prison estate in late December and early January 2009/10, which caused some prisons to close temporarily. Effective reporting lines from HPUs to the Prison Infection Prevention (PIP) team resulted in timely information flows to key stakeholders and the production of infection control guidelines, to enable a standard approach to GI outbreaks across the prison estate. This led to the rapid control of the outbreaks and return to normal operations.

Recommendations

1 Primary care trusts (PCTs) and health protection units (HPUs) should continue supporting prisons to ensure that vaccination activity is maintained and improved, in order to sustain the achievements made in relation to hepatitis B among IDUs. Prisons should strive to achieve 80% for hepatitis B vaccine coverage as noted in the Prison Health Performance and Quality Indicators. PCTs should ensure that prisons continue to submit data on hepatitis B immunisation, for monitoring purposes.

2 There is a need to continue to develop appropriate prison-specific educational materials aimed at raising awareness of bloodborne viruses (BBV) among prisoners. These should also result in increased uptake of voluntary testing by prisoners for hepatitis B, hepatitis C and HIV. Prison healthcare providers should develop care pathways for hepatitis C, to provide high-quality services for the assessment and treatment of all infected patients.

3 Prisoners should have access to sexual health services in prisons, including access to condoms and lubricant, genitourinary medicine services and the national chlamydia screening programme (NCSP). A mapping exercise of sexual health services will be undertaken to gain a better understanding of service provision in the prison estate, with the aim of developing a sexual health toolkit.

4 Prison populations carry a disproportionate burden of BBVs and sexually transmitted infections (STIs). Existing surveillance systems should be adapted to capture prison-related data.

5 In response to the potential ongoing risk of pandemic flu during 2010, prisons are requested to follow a containment policy to prevent the spread of infection and maintain the functioning of the criminal justice system. Effective containment relies on rapid identification of cases in prisons, early notification of the local HPU and coordinated multi-agency response to contain transmission of infection. Prisons should develop strong links with their PCTs and HPUs as part of ongoing preparedness.

6 HPUs should build partnerships with prisons and PCTs to ensure that robust mechanisms are in place for the reporting of infectious diseases and the management of communicable disease outbreaks.

1 Background

The 136 prisons and young offender institutions (YOIs) in England and Wales have a population of over 80,000 people at any one time. The prison population is transient, with nearly 200,000 prisoners passing through the system annually. Groups with alcohol/drug dependencies, such as injecting drug users, the homeless and those with mental illness, are disproportionately represented within prisons. Prisons represent an important opportunity to access hard-to-reach groups that may otherwise have poor contact with health services. As a result, health promotion in prison benefits the wider community, as well as the prisoners themselves.

Prisoners are entitled to the same standard of healthcare and treatment as the general public. For the past four years, Offender Health has commissioned the Health Protection Agency (HPA) to develop and jointly deliver a programme to survey and prevent infectious diseases in prisons. This commissioned work led to the establishment of the Prison Infection Prevention (PIP) team. The PIP team works closely with the Health Protection Services Prison Network, comprising prison representatives from each region in England, who support work undertaken by local Health Protection Units (HPUs) with individual prisons and Primary Care Trust (PCTs) on their patch.

The work programme for 2009-2010 covered three key areas: improving infectious disease surveillance, the hepatitis B vaccination monitoring programme, and information and communication. This report outlines the progress made in meeting the objectives of the work programme in these key areas.

2 Infectious disease surveillance

2.1 Objectives

- Work with Health Protection Services Prison Network to develop, facilitate and support the surveillance of infectious diseases in prisons.

- Audit the capabilities of established surveillance systems to capture relevant prison data, prioritising surveillance systems for tuberculosis, bloodborne viruses, and sexually transmitted infections.

2.2 Improving surveillance of infectious diseases in prison

Monitoring infectious diseases in prison will help us alert health professionals to incidents/outbreaks occurring there, ensuring that support is provided and effective control measures are established. This will reduce the risk of disease transmission and the impact of incidents on the functioning of the criminal justice system. Intelligence can also help inform the commissioning of health services in prison and the targeting of health promotion and disease prevention strategies. In the absence of an adequate surveillance system, the PIP team maintains an incident log which records single-case infections and outbreaks which are reported by HPUs.

The Health Protection Services Prison Network and the PIP team have worked to establish reporting pathways from prisons to HPUs and from HPUs to the PIP team. A standardised list of reportable infectious disease of relevance to prison health has been produced and is available on the PIP team website. In addition to this, information on prison-related infections can be captured on HPZone[1]. Currently, HPZone prompts the reporter to contact the PIP team when a case or outbreak is reported. In time, when the software becomes available, the PIP team will be able to interrogate HPZone at a national level.

2.2.1 Outbreaks of gastrointestinal (GI) disease

In 2009, of the 12 reported outbreaks, seven were caused by Norovirus, one by Clostridium perfringens, one by Cryptosporidium and one by Salmonella O9 g (enteritidis) Phage Type 4. The salmonella outbreak was the largest, with over 300 prisoners showing symptoms of diarrhoea and/or vomiting. The causative organism for two outbreaks was unknown. The affected prisons were located in the East of England, London, North East, South East, South West and Yorkshire and Humber regions.
The number of GI outbreaks is likely to be under-reported.

Effective planning and robust collaboration are required between organisations responsible for the health and welfare of prisoners to manage communicable disease outbreaks posing a risk to the health of staff, prisoners and prison visitors. The Multi-agency contingency plan for the management of outbreaks of communicable diseases or other health protection incidents in prisons in England and Wales provides guidance on the actions required to identify and manage an incident

[1]HPZone is a web-based support tool designed to provide Health Protection Professionals at the local level with timely and comprehensive information on threats and incidents.

or outbreak, together with the roles and responsibilities of partner organisations (see the PIP team website). This guidance was revised in January 2010 to include Appendix 9 – Managing outbreaks of diarrhoea and vomiting in prisons – in response to numerous GI outbreaks which occurred simultaneously in the prison estate during December 2009.

2.2.2 Swine flu

During the first (June to August 2009) and second wave (September to December 2009) of swine flu, prisoners were rarely infected in English and Welsh prisons (figure 2). In 2009, only two large outbreaks of swine flu were reported, which occurred in YOIs in the South Central and North West regions. In the South Central YOI over 150 detainees and 10 frontline staff were clinically-confirmed cases, while 40 detainees were affected in the North West YOI.

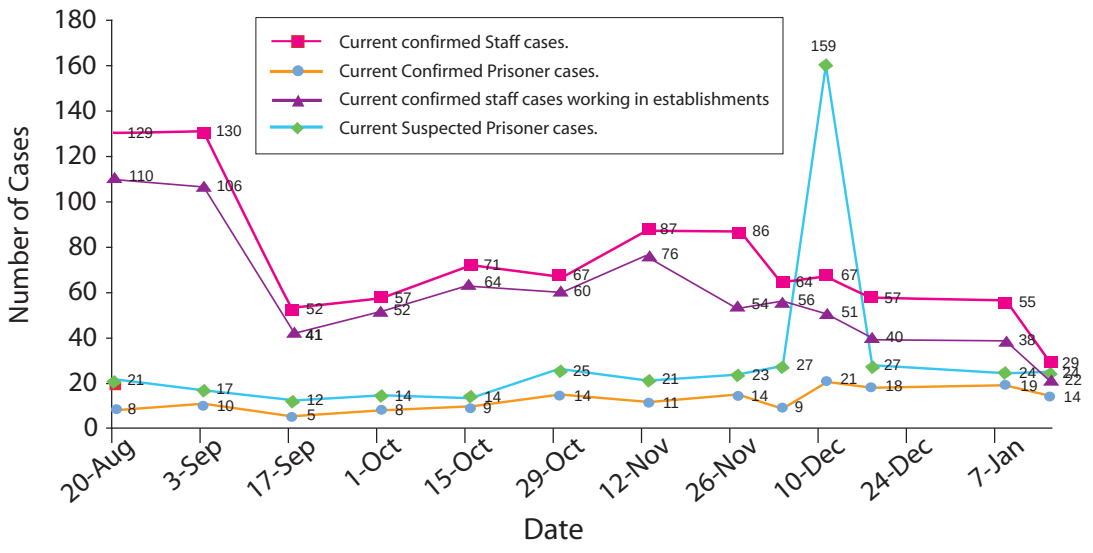
Although national policy for the management of swine flu changed from containment to treatment in July 2009, it was recognised that prisons and other institutional settings required a different management strategy, based on risk assessment. England and Wales continue to pursue a policy of containment in prisons, using all reasonable measures to prevent infection spread. Prisons are encouraged to agree clear arrangements with their HPUs and Primary Care Trusts (PCTs) to ensure the institutions: (i) access public health advice and support, (ii) rapidly access swab testing to support timely diagnosis, (iii) access anti viral medication and (iv) adopt a 'low threshold to treat' policy for at-risk groups.

2.3 Existing surveillance systems

2.3.1 Testing for hepatitis B and C

Data on HBsAg, anti-HBc and anti-HCV testing in English prisons were obtained from the Sentinel Surveillance of Hepatitis Testing study, which collects data on hepatitis testing from sentinel laboratories in England. Data were available from 16 laboratories performing testing for 39 prisons (30% of the prison estate). Between 2005 and 2008, 10,723 people were tested for anti-HCV[1] - (n=9,965), anti-HBc[2] (n=5,175) and HBsAg[3] (n=8,416) (figure 3).

Figure 2
Number of prisoners and staff in England with laboratory or clinically confirmed swine flu between August 2009 and January 2010.



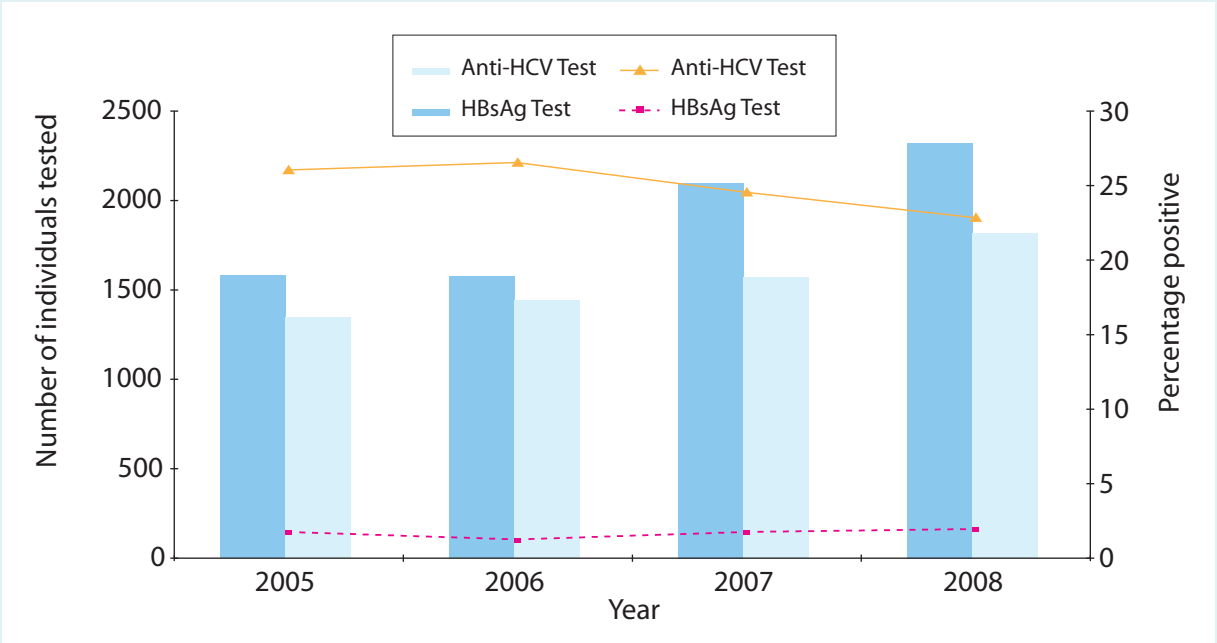
Between 2005 and 2008, 2,413 (24.2%) people tested positive for anti-HCV and 714 (13.9%) for anti-HBc. Out of 5,151 people tested for anti-HBc, 4,433 were also tested for HBsAg; of these, 107 (2.4%) tested positive for HBsAg. Between 2005 and 2008, testing increased 35% for HBsAg and 47% for anti-HCV. The proportion testing positive for anti-HCV in prison decreased slightly, from 26% in 2005 to 23% in 2008, and there was no significant change in the proportion testing positive for HBsAg. This suggests that people are increasingly accessing anti-HCV testing through prison services, and that testing may be being extended to individuals at relatively lower risk of infection.

2.3.2 Survey of Prevalent HIV Infections Diagnosed (SOPHID)

There were 55,520 adults (aged 15 years or over) with a diagnosed HIV infection resident in England in 2008 (SOPHID). Of these, 171 were reported to be resident in English prisons at the time of reporting, and an additional 82 individuals were reported as resident in prison prior to 2008. These data from SOPHID are likely to underestimate the true figure, with under-reporting particularly affecting prisoners with shorter custodial sentences. Prisoners who are reported with a residential address are not identified in this dataset.

IDU risk is likely to be substantially under-reported, as the proportion of prisoners with diagnosed HIV infection reported in 2008 through IDU (19%, 32) was much lower than heterosexual sex (64%, 109) and higher than men who have sex with men (11%, 18). British HIV Association guidelines recommend antiretroviral therapy (ARV) commences when a patient's CD4 cell count reaches <350 per mm^3. In 2008, the proportion of prisoners with CD4 counts under this threshold and the proportion treated with ARV is similar to the background proportion for England.

Figure 3
Number of individuals tested and positivity for HBsAg and anti-HCV: 2005-2008*



* Some individuals were tested for more than one infection marker.

2.3.3 Screening for *Chlamydia trachomatis* through the National Chlamydia Screening Programme (NCSP)

The English NCSP offers opportunistic testing and free treatment for genital chlamydial infection to sexually active young people aged under 25 in a range of settings, including prisons and YOIs. More than 110 prisons and YOIs (82% of all prisons and YOIs) took part in the NCSP and, between 1April 2008 and 31 March 2009, 2% (12,444) of all NCSP screens were done in this setting. The overall detected positivity for *Chlamydia trachomatis* was 9% in prisons, which is higher than the national average of 7%. At 10%, the positivity among women prisoners was slightly higher than that seen in men (9%). Data quoted are based on NCSP returns, as of 22 May 2009.

2.3.4 Tuberculosis (TB)

TB is a significant public health problem and is thought to be concentrated in non-UK born individuals, as well as high-risk groups, such as the homeless, drug users and prisoners. Currently, we do not have reliable information on TB diagnoses in prison. However, the new web-based enhanced TB surveillance system will enable the rate of TB diagnoses among prisoners to be estimated. The Stop TB Strategy identifies prisoners as an important part of the TB control strategy. In recognition of this, the HPA has produced guidance for HPUs on responding to TB incidents and outbreaks in prisons, supporting HPUs in providing a consistent approach to the management of such incidents or outbreaks. This guidance is available on the PIP team website.

TB is one of the most frequently-reported infections to the PIP team. In spring 2009, a case of pulmonary TB in a YOI in the South East region was reported to the local HPU. A subsequent investigation identified 11 cases of current or latent TB. Although it is not clear whether this represents transmission within the YOI or infection prior to entry, this investigation highlighted the need for more sensitive detection of TB on entry into detention settings. The Department of Health is installing digital X-ray machines in five London prisons and three prisons in other English regions; these will be used for contact tracing purposes in large-scale X-ray exercises, alongside more routine use.

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[1]Anti-HCV - The anti-HCV test is the most common test performed. Its presence in the blood is indicative of an active or chronic hepatitis C infection).

[2]Anti-HBc – The anti-HBs test is the most common one used. Its presence indicates previous exposure to the hepatitis B virus, but the virus is no longer present).

[3]HBsAg - HBsAg is a protein antigen produced by the hepatitis B virus. This antigen is the earliest indicator of acute hepatitis B and frequently identifies infected people before symptoms appear).

3 Hepatitis B vaccination monitoring programme

3.1 Objectives

- Continue to monitor and improve hepatitis B vaccination delivery in prison.
- Investigate the feasibility of a regional surveillance system for the hepatitis B vaccination monitoring programme.

3.1.1 Delivery of hepatitis B vaccination

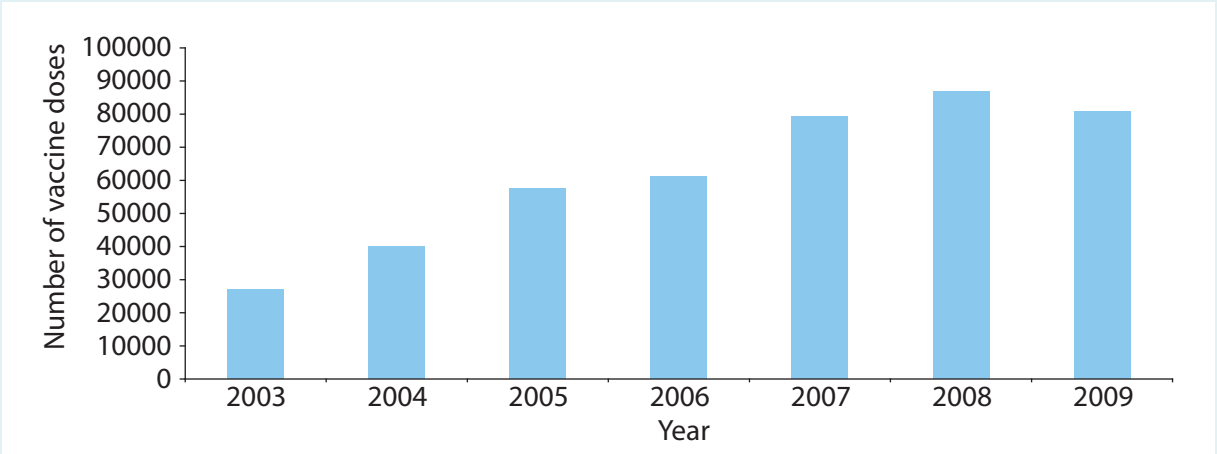
The number of hepatitis B vaccine doses delivered to prisoners in England and Wales, reported to the Prison Hepatitis B Vaccination Monitoring Programme, has increased since the inception of the programme in 2003 (figure 4). This increase is due, in part, to more prisons participating in the programme over time.

In 2009, 80,762 doses of hepatitis B vaccine were reported to have been delivered to prisoners in England and Wales. The majority of these doses were delivered in local prisons (26%), compared with other prison types, such as training prisons (18.9%) and YOI or juvenile establishments (19.6%). At least one dose was reported to have been given to 55,489 prisoners, while 20,148 prisoners received their third dose.

3.1.2 Regional surveillance of the hepatitis B vaccination programme

Prison is recognised as one of the best venues for delivering hepatitis B vaccines to injecting drug users . One of the underlying aims of the prison hepatitis B vaccination programme is to improve vaccine coverage among injecting drug users, thereby reducing the number of acute cases of hepatitis B among IDUs in the community . Two-thirds of IDUs are reported to be immunised against hepatitis B and the incidence of acute cases of hepatitis B among IDUs is reported to have fallen between 2003 and 2008 . With the success of the prison vaccination programme, intensive national surveillance is moving to regional surveillance, to maintain and improve current levels of vaccination activity.

Figure 4
Hepatitis B vaccine doses delivered to prisoners in England and Wales between 2003 and 2009



From July to December 2009, the PIP team and NHS South West piloted a regional surveillance model to improve and develop the prison hepatitis B vaccination monitoring programme. The aim was to establish whether a reporting system via PCTs to the Strategic Health Authority could replace the current national surveillance system. Prison healthcare departments were requested to complete summary data forms and submit these to PCTs at the end of annual quarters 3 and 4 2009. Training on the completion of the forms was provided by the regional Offender Health.

All prison healthcare departments submitted data summary forms to their PCTs. The majority of prisons were able to comply with the request for information using the summary data forms and they acknowledged that they could operate this system to monitor the delivery of hepatitis B vaccine in the future. From 1 April 2010, this regional surveillance system will be rolled out to all regions in England. The new Prison Health Performance and Quality Indicator (PHPQI) for hepatitis B will be based on vaccine coverage. Prisons will achieve green status if vaccine coverage is 80% or above. From February to April 2010, workshops were undertaken with the prison healthcare staff to explain the new regional surveillance system and provide training in how to process the hepatitis B vaccination data and complete the data summary forms. These forms and supporting materials are available on the PIP team website.

4 Information and communication

4.1 Objectives

- Develop and disseminate research, guidelines, protocols and policies.

4.1.1 Reports and guidelines produced in 2009/10

- Guidance for Health Protection Units on responding to TB incidents and outbreaks in prisons. London: Health Protection Agency, January 2010.

- Multi-agency contingency plan for the management of outbreaks of communicable diseases or other health protection incidents in prisons in England and Wales. Health Protection Services Prison Network – revised January 2010.

- List of reportable infectious diseases of relevance to prison health. Health Protection Services Prison Network.

These reports are available on the PIP team website. Infection Inside, a quarterly bulletin of infectious diseases and related policies affecting the prison population, continues to be produced and distributed to prison healthcare staff, Health Protection Services, and other stakeholders with an interest in prison health.

5 Bloodborne virus resources

- Prisons can order this literature free from the Department of Health at www.orderline.dh.gov.uk or by calling 0300 123 1002 (quote BBVLEAFLET).

- Hepatitis C in the UK; 2009 Annual Report. www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1259152221168

- Shooting Up – Infections among injecting drug users in the United Kingdom 2008. An update: October 2009. www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1195733837406?p=1191942172215

- Hepatitis B vaccination programme monitoring reports. www.hpa.org.uk/HPA/Topics/InfectiousDiseases/InfectionsAZ/1203582653813/

5.1 Increasing awareness of bloodborne viruses

Educational materials concerned with bloodborne viruses (BBVs) (hepatitis B, hepatitis C and HIV) specifically targeted at prisoners and prison staff have been developed by the British Liver Trust, in close consultation with Offender Health, the HPA, drug and alcohol teams, HIV charities and prison clinics. The resources, which have been well received by prison staff and have received a number of awards, explain modes of BBV transmission, prevention strategies and harm-minimisation practices. All the materials use cartoon graphics and straightforward language to give clear messages: 'keep it clean, protect yourself, get tested and, if necessary, get treated'.

Useful links

Health Protection Agency
www.hpa.org.uk

Prison Infection Prevention team website
www.hpa.org.uk/HPA/Topics/InfectiousDiseases/InfectionsAZ/1191942126463/

Offender Health
www.dh.gov.uk/en/Healthcare/Offenderhealth/index.htm

National Treatment Agency
www.nta.nhs.uk/

National AIDS Trust
www.nat.org.uk/

Offender Health Research Network
www.ohrn.nhs.uk/

Her Majesty's Prison Service
www.hmprisonservice.gov.uk/

National Chlamydia Screening Programme (NCSP).
www.chlamydiascreening.nhs.uk/ps/index.html

STOP TB Strategy
www.who.int/tb/strategy/en

Hepatitis C: get tested. Get treated
www.nhs.uk/hepatitisc/Pages/default.aspx

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