



Blood borne viruses – fact sheet for primary care dental teams

The purpose of this fact sheet is to support primary care dental teams with their legal, ethical and clinical responsibilities to provide fair access to dental services for people living with a blood borne virus and to manage their dental care effectively and appropriately.

People living with blood borne virus infections sometimes experience barriers accessing dental services. This may arise for a variety of reasons including misperceptions and misunderstanding by health practitioners of the risks of transmission during dental care.

People living with a blood borne virus who are otherwise well, may be treated routinely in primary dental care without any change or restriction to the care that they receive.

Blood borne viruses

Blood borne viruses are transmitted through blood or other body fluids. This risk of transmission from saliva is minimal unless contaminated with blood. The most common blood borne viruses are human immunodeficiency virus (HIV), hepatitis B virus (HBV) and hepatitis C virus (HCV). All three viruses may cause serious and life threatening diseases, especially if diagnosed late or if untreated.

HIV is a virus that attacks the immune system, weakening the body's ability to fight infections. In 2014 there were an estimated 103,700 people living with HIV in the UK. It is important to note that an estimated 17% of people are unaware of their HIV infection.¹ Hepatitis B and C are viruses that infect the liver. If left unmanaged, the viruses can cause liver failure and liver cancer. It is estimated that 214,000 people in the UK are living with chronic HCV.²

These three infections are often insidious and can have chronic asymptomatic carrier states. Therefore, the risks of transmission to other people can be both hidden and protracted. The acute phase of hepatitis B, when a person experiences symptoms, lasts between one and three months. However, many people with hepatitis B will not experience any symptoms. Acute hepatitis C often does not have any noticeable symptoms. The latency period for HIV can be up to 10 years, during which people can be unaware they have been infected.

People living with chronic hepatitis C can be treated successfully with a combination of two to three antivirals and achieve viral clearance with antiviral therapy.³ Chronic hepatitis B can

be managed with antivirals to limit liver damage, however, they won't necessarily eliminate the infection and some people may need lifelong treatment. Antiretroviral therapy in persons living with HIV can achieve viral suppression.

These viruses are particularly important in primary care dentistry as they can be transmitted through exposure to bodily fluid (predominantly blood) containing the viruses.

Routes of transmission

Blood borne viruses can be transmitted when a susceptible individual is exposed to infected blood or other body fluids that carry the virus. This exposure can occur via broken tissues, mucous membranes or directly into the bloodstream. Therefore potential routes of transmission include direct exposure, vertical transmission or sexual contact. Not everyone who is exposed to a blood borne virus will become infected.

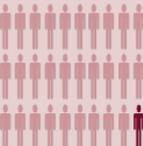
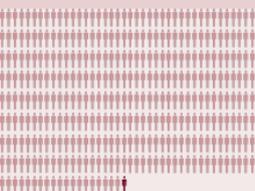
Occupational transmission

Dental staff, especially those undertaking exposure-prone procedures, are at risk of transmission of blood borne viruses from infected patients. Needlestick injuries (30% of exposures) and other sharps injuries (50% of exposures) are the most common mechanisms of exposure in dental practice. There is also a risk of blood borne virus transmission from a bite or scratch, as well as mucocutaneous transmission such as eye splashes, though these are much less common.³

It is important to recognise that the observed rates of occupational blood borne virus transmission following percutaneous exposure are significantly lower than the published risks of transmission. In fact there has not been any reported transmission for HIV and HBV (Table 1). This is based on data reported to the surveillance of significant occupational exposure system voluntarily. The difference is likely to be due to the success of the HBV healthcare workers' immunisation programme and effective management of exposures thereby preventing transmission of BBVs among healthcare workers. It is important that dental team members report incidents promptly to support accurate assessment of the risk of seroconversion (PHE, 2014).

It is also important to note that if a person living with a blood borne virus achieves viral suppression through antiretroviral therapy, the risk of transmission to a healthcare worker through an exposure injury is greatly reduced, due to the suppressed viral load.

Table 1. Blood borne virus risk of transmission among healthcare workers after a percutaneous injury (England, Wales and Northern Ireland data only) Source – Eye of the Needle. Public Health England, 2014¹³

Virus	Published risk of transmission	Healthcare workers exposed, 2004-2013	Seroconversions, 2004-2013	Observed risk of transmission
HBV	One in 3 	590	0	-
HCV	One in 30 	2566	9	1 in 285
HIV	One in 300 	1478	0	-

Prevention

The key ways to reduce blood borne virus transmissions are by preventing exposure in the first place and timely clinical management following any exposures. Preventive measures include universal cross-infection precautions, hepatitis B virus immunisation for the dental team including post vaccination blood tests to verify adequate immunisation, implementing a robust sharps protocol and a comprehensive dental practice infection control policy.

Universal precautions

Universal infection control precautions are the most effective way to minimise the transmission of blood borne viruses. This is because people may not know they are infected with a blood borne virus. Dental practices must have infection control policies and procedures that comply with the requirements of *Health Technical Memorandum 01-05: Decontamination in primary care dental practice*.⁴

Prevent exposure

All new clinical staff must undergo standard health checks including being tested for HIV, HBV and HCV. National guidance states that all dental professionals should be immunised against HBV and there is a 85% to 90% chance of responding effectively to the vaccine. Dental team members should seek occupational health advice regarding the latest information describing the hepatitis B vaccination procedure.⁵

The practice infection control policy should specify when personal protection and when personal protective equipment should be worn and changed. Personal protection includes

hand hygiene and skin care and personal protective equipment includes disposable gloves, aprons, masks, face and eye protection and adequate footwear.⁴

Sharps injuries with hollow bore needles are the most commonly reported occupational exposure to blood borne viruses in a healthcare setting, though other sharps injuries are more common in a dental setting. For dental professionals most sharps injuries are sustained during a procedure.³ The *Health and Safety (Sharp Instruments in Healthcare) Regulations 2013* provides guidance on the safe use of sharps.

Dental practices must have written policies for sharps management, significant splashes to the eyes and broken skin.⁶

Dental team members must complete five hours verifiable continuing professional development per cycle in disinfection and decontamination in accordance with General Dental Council registration requirements.⁷

Reduce transmission post exposure

In the event of an exposure, appropriate management can reduce the risk of transmission of a blood borne virus. Immediate management includes active bleeding of the wound (without sucking the wound) and washing the wound using soap and warm running water.

A risk assessment should be carried out based on the type of exposure and information about the source patient. Advice about post exposure prophylaxis can be obtained from the local health protection team, virology or microbiology, occupational health services, hospital infection control officer or infectious disease or HIV teams.⁸ It is important that dental practice teams are aware of their local arrangements.

Post exposure prophylaxis within 72 hours is recommended when a healthcare worker experiences a blood exposure injury from a person thought to be infected with HIV. Starting the treatment as soon as possible is associated with improved effectiveness of post exposure prophylaxis.

The need for post exposure prophylaxis for HBV depends on the hepatitis status of the source patient and the vaccination status of the exposed person.⁵ Management can include no treatment (if the exposed person has an adequate antibody response from a previous vaccine and the exposure is considered non-significant), hepatitis B immunoglobulins and vaccination boosters or full hepatitis B vaccination series.^{5,9}

Employers are legally required to make arrangements to deal with exposures, which include providing first aid facilities, access to post exposure prophylaxis and follow up through the occupational healthcare provider.

Management of an infected healthcare worker

Healthcare workers who are living with blood borne viruses must be supported to work in primary care dentistry. The risk of transmission of HIV from an infected healthcare worker to the patient is considered to be extremely low to negligible.^{3,10} Dental professionals living with HIV can perform exposure prone procedures if they are on combination antiretroviral therapy and have a plasma viral load that is less than 200 copies per millilitre.¹⁰

Dental professionals living with HBV can perform exposure prone procedures whilst taking continuous oral antiviral therapy if they are HBeAg negative and have a HBV DNA level below 1,000 genome equivalents per millilitre.⁹

Dental professionals living with blood borne viruses must be under the joint supervision of a consultant occupational physician and their treating physician, have their viral load monitored every three months and be registered with UK Advisory Panel Occupational Health Monitoring Register.¹⁰

Legal and ethical responsibilities

Under the *Equality Act 2010*¹¹ patients with blood borne viruses are entitled to fair access and equitable care. Therefore, people living with blood borne viruses cannot be refused treatment or asked to attend an appointment at the end of the day, for example. Such practices are unlawful and clinically unnecessary.

The Care Quality Commission is responsible for enforcing outcome 8 of the national quality standards, which includes infection control. If appropriate universal infection control precautions are not undertaken the Care Quality Commission can de-register practices and can take action against practices under criminal law, including prosecution. The General Dental Council is also likely to be notified.¹²

The General Dental Council's *Standards for the Dental Team* make clear that the whole dental team has a duty to treat patients fairly, without discrimination and in line with the law. This includes patients who reveal to them that they are living with a blood borne virus.¹³

The General Dental Council standard 4.2 also makes clear that the whole dental team must protect patients' confidentiality including their personal and medical details. Non-registered members of the dental team such as receptionists must be made aware of the importance of patient confidentiality.¹³ The General Dental Council also outlines the principles for effective complaints handling to enable patients to express any concerns they may have and to enable the dental team to learn from these.^{13,14}

Further resources

Further information may be obtained from:

- *British Dental Association Advice – Infection Control England*¹⁵
- *British Dental Association Evidence Summary – Attitude to patients with blood borne viruses*¹⁶

Public Health England - Yorkshire and the Humber

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Checklist to support best practice

Access

Does your practice accept patients from all members of the community without restrictions with consideration of the legal and ethical responsibilities?

Policies

Does your practice have the following policies that are readily accessible by all staff and part of staff induction?

- Confidentiality to ensure security of patient information
- Hand hygiene
- Safe sharps disposal
- Minimising the risk of blood borne virus transmission and needlestick injuries
- Infection control
- Complaints

Staff recruitment, induction and training

Is hand hygiene included in your staff induction with regular updated training provided to all staff?

Do contracts of employment at your practice include a statement of the need to ensure patient confidentiality?

Does your practice keep records of staff infection control training, including five hours verifiable CPD in disinfection and decontamination per GDC cycle?

Have all your practice staff had the standard health clearance checks including hepatitis B immunisation status and tests for hepatitis B and C and HIV as required by national guidance?

Are all the dental team familiar with the practice complaints policy?

Do team members in your practice have complaints handling training as recommended by the GDC?

Does your practice take actions to support patients to raise any concerns they may have, and effectively respond to and learn from them?

Practice links

Does your practice have formal links with an occupational health service to undertake management of sharps injuries encountered by staff?

Has your practice clarified with the occupational health service the local arrangements for PEP for staff if needed?

Practice environment

Is there an appropriate environment at your practice to ensure that patients can disclose sensitive information?

Does your practice keep a written log of complaints and use this to identify possible areas of improvement in patient care?

Does your practice provide adequate supplies and training in the use of personal protective equipment (PPE), disposable gloves, masks and eye protection for all staff?

Is the HTM 01-05 poster illustrating hand hygiene displayed above every hand wash basin at your practice?

Compliance with HTM 01-05

Does your practice prepare an annual statement of infection control that includes known infection transmission events and actions taken from this, audits undertaken, risk assessments undertaken, staff training and practice policy updates?

Does your practice carry out six-monthly infection audits in line with HTM 01-05?

Is your practice compliant with the essential quality requirements of HTM 01-05?

Is your practice compliant with the best practice requirements of HTM 01-05? If not, do you have a date set to achieve best practice requirements?

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