



College of Medical and Dental Sciences

# **Exposure Prone Procedures**

Protocol for screening and risk management of  
Medical Students

Last reviewed: 17<sup>th</sup> December 2019

Date of next review: September 2022



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## 1. Introduction:

1.1. The Department of Health (DoH) defines Exposure Prone Procedure (EPP) as: invasive procedures where there is a risk that injury to the worker may result in the exposure of the patient's open tissues to the blood of the worker. This is described as "bleed-back".<sup>1</sup>

These include procedures where the worker's gloved hands may be in contact with sharp instruments, needle tips or sharp tissues (e.g. spicules of bone or teeth) inside a patient's open body cavity, wound or confined anatomical space where the hands may not be completely visible at all times.<sup>1</sup>

1.2. The risk of blood-borne virus (BBV) transmission during EPP is low.<sup>1</sup>

1.3. A risk-based categorisation of clinical procedures has been developed, including procedures where there is negligible risk of bleed-back (non-EPP) and 3 categories of EPP with increasing risk of bleed-back.<sup>2-4</sup>

### 1.3.1. *Non-exposure prone procedures:*

The majority of clinical procedures (including many which are invasive) come under this category and can safely be performed:

- Procedures where the hands and fingertips of the worker are visible and outside the patient's body at all times.
- Internal examinations or procedures that do not involve possible injury to the worker's gloved hands from sharp instruments and/or tissues.
- "provided that routine infection prevention and control procedures are adhered to rigorously at all times"

### 1.3.2. *Category 1:*

Procedures where the hands and fingertips of the worker are usually visible and outside the body most of the time and the possibility of injury to the worker's gloved hands from sharp instruments and/or tissues is slight. This means that the risk of bleed-back is remote.

### 1.3.3. *Category 2:*

Procedures where the fingertips may not be visible at all times but injury to the worker's gloved hands from sharp instruments and/or tissues are unlikely. If injury occurs it is likely to be noticed and acted upon quickly to avoid the bleed-back.

### 1.3.4. *Category 3:*

Procedures where the fingertips are out of sight for a significant part of the procedure, or during certain critical stages, and in which there is a distinct risk of injury to the worker's gloved hands from sharp instruments and/or tissues. It is possible that the bleed-back may go unnoticed or would not be noticed immediately.

1.4. Previously, medical students at the University of Birmingham have been prohibited from undertaking EPP, however that policy has been revised and, subject to the



conditions set out in this protocol, students who have undergone enhanced screening for BBV will be allowed to undertake EPP under appropriate supervision. This means that University of Birmingham medical students will be classified as healthcare workers in the context of EPP<sup>1</sup> and screening and management of BBV infection must be consistent with current UK guidelines. This is not to prevent those infected with BBV from working in the NHS, but rather to restrict them from working in those clinical areas where patients are at risk of bleed-back.<sup>1,5,6</sup>

- 1.4.1. It is important to ensure that the protocols for the testing of medical students for BBV, and the management of those testing positive, are aligned with the DoH recommendations.<sup>5</sup>
- 1.4.2. Vaccination and clearance status for EPP should be transferred on a strictly confidential basis to the NHS Occupational Health Service after graduation, enabling a seamless transition into clinical practice without the automatic requirement for the repetition of tests for UK-trained graduates. Students will be bound by their professional obligations to inform Occupational Health if they may have been exposed to a risk of contracting a BBV and, based on an individual risk assessment, further testing may be required.<sup>5</sup>

## 2. General Rules

- 2.1. Admission to medical school is not conditional on the results of BBV testing because of the many career paths available.<sup>5</sup>
- 2.2. The Medical school will make clear their requirements with respect to BBV screening on the website and in information supplied to students and applicants.<sup>5</sup>
- 2.3. The applicants to the Medical School are deemed to be a low risk group; therefore, the number of screen positive students or those who decline screening is predicted to be small. It is expected that the majority of students will agree to be screened for BBV required for all new healthcare workers.<sup>5</sup>
- 2.4. Testing and vaccinations of registered students will be managed by College of Medical and Dental Sciences (CMDS) Occupational Health Provider (OHP).
- 2.5. The cost of managing the BBV screening and vaccinations process should not be the responsibility of the registered student.<sup>7</sup>
- 2.6. The Medical school will ensure the screening and vaccinations are completed during the first year of admission across each new cohort i.e. well before clinical placements that may contain EPP.
- 2.7. All aspects of a student's medical record will be bound by the same duty of confidentiality as for any doctor-patient interaction and informed by the same ethical guidance. Students should be reassured that test results will not be disclosed.
- 2.8. The Medical school, in conjunction with its NHS partners, is responsible for arranging appropriate training for those ineligible to undertake EPP.
- 2.9. By ensuring that all students, regardless of EPP status, are provided with appropriate training and learning opportunities to meet the learning outcomes for the MB ChB Programme and the requirements for the award of a Primary Medical Qualification as set out by the General Medical Council the University's obligations under the Equality Act 2010 will be met.



### 3. Medical students performing EPP

- 3.1. The performance of EPP is not a requirement for students completing a medical degree that is acceptable for gaining provisional medical registration.<sup>8</sup>
  - 3.1.1. Generally speaking, students with BBV can study medicine but they should not perform EPP in their clinical placements, and they must limit their medical practice when they graduate.<sup>8</sup>
  - 3.1.2. Nevertheless, students with BBV, if satisfying certain conditions described in appendix 2, will be permitted to undertake EPP assuming they take responsibility for complying with the necessary regime of medical assessment and viral load monitoring.<sup>5</sup>
  - 3.1.3. DoH guidelines do not prevent students assisting in surgical procedures, even if the surgeon is performing EPP, as long as the student themselves do not personally undertake any action that could be considered as exposure prone e.g. it is acceptable to be holding retractors outside of body cavities.<sup>9</sup>
- 3.2. The Medical School believes that undertaking EPP can form an important part of medical training and that students should be offered the opportunity to be involved, if they wish, in EPP both in the UK and during periods of elective study overseas.<sup>5</sup>
- 3.3. Medical students will be made aware of the advantages of undertaking enhanced EPP screening; including (i) satisfying their professional responsibility for the welfare of their patients, and (ii) potential benefits for them such as early treatment, involvement in EPP if they wish, and the ability to make informed decisions about career.<sup>5</sup>
- 3.4. Medical students will not, however, be pressurised to undertake enhanced EPP screening, as long they understand that they will not be able to perform EPP in the absence of enhanced EPP screening.<sup>7</sup>

### 4. The clearance process

4.
  - 4.1. All prospective students are advised of our health and vaccination policies
  - 4.2. Prior to admission all applicants who have accepted an offer are required to submit an immunisation form that describes their current vaccination status. This form requests details of the immunological status of the following conditions:
    - Rubella, Measles, Chicken Pox, Tuberculosis. Applicants are also advised to commence screening/vaccination for Hepatitis B
  - 4.3. After admission the immune status of all students will be checked and, where necessary, all will be offered the following screening (and vaccination as required) before starting their clinical placements :
    - **Standard clearance** (Rubella, Measles, Chicken Pox and Tuberculosis).
    - **Enhanced EPP screening** (Hepatitis B, Hepatitis C and HIV). All students will also have a blood test for Hepatitis B antibody after the course of vaccinations is completed.
  - 4.4. The Medical School will meet the cost of screening and vaccinations for both the standard and enhanced clearance (for those aspects not completed prior to registration).
  - 4.5. The CMDS OHP should endeavour to complete screening and vaccinations within the first year in which the student joins the medical school to avoid overlaps.



#### 4.6. Details of the standard clearance:

- All students are required to have received 2 doses of MMR vaccine or to have a blood test result for rubella and measles screen.
- All students are required to have a blood test result for varicella screen (if non-UK students) or do not have a history of chicken pox infection (if UK born or raised).
- All students are required to provide proof of BCG vaccination (or scar check by an occupational health professional) or evidence of positive Mantoux test (or interferon-gamma testing) within the last 5 years. All new entrants to the UK from countries of high TB incidence will have a chest X-ray.
- The University Occupational Health provider would be filling the gaps for blood test and vaccination.

#### 4.7. Possible outcomes and actions as regards enhanced EPP clearance (please see schematic on page 7):

- Student who has been given EPP clearance may undertake EPP, if they so wish, subject to completion of all vaccination programmes.
- Students who decline EPP screening will be classified as having standard health clearance and must not be involved in EPP. They are required to sign a declaration to inform CMDS OHP if they become aware of changed circumstances (i.e. if became positive for BBV).
- Students who have been screened positive for BBV will be classified as having standard health clearance and must not be involved in EPP unless they meet the criteria described in appendix 2.

#### 4.8. Declarations:

All students must sign a declaration stating that they are aware of:

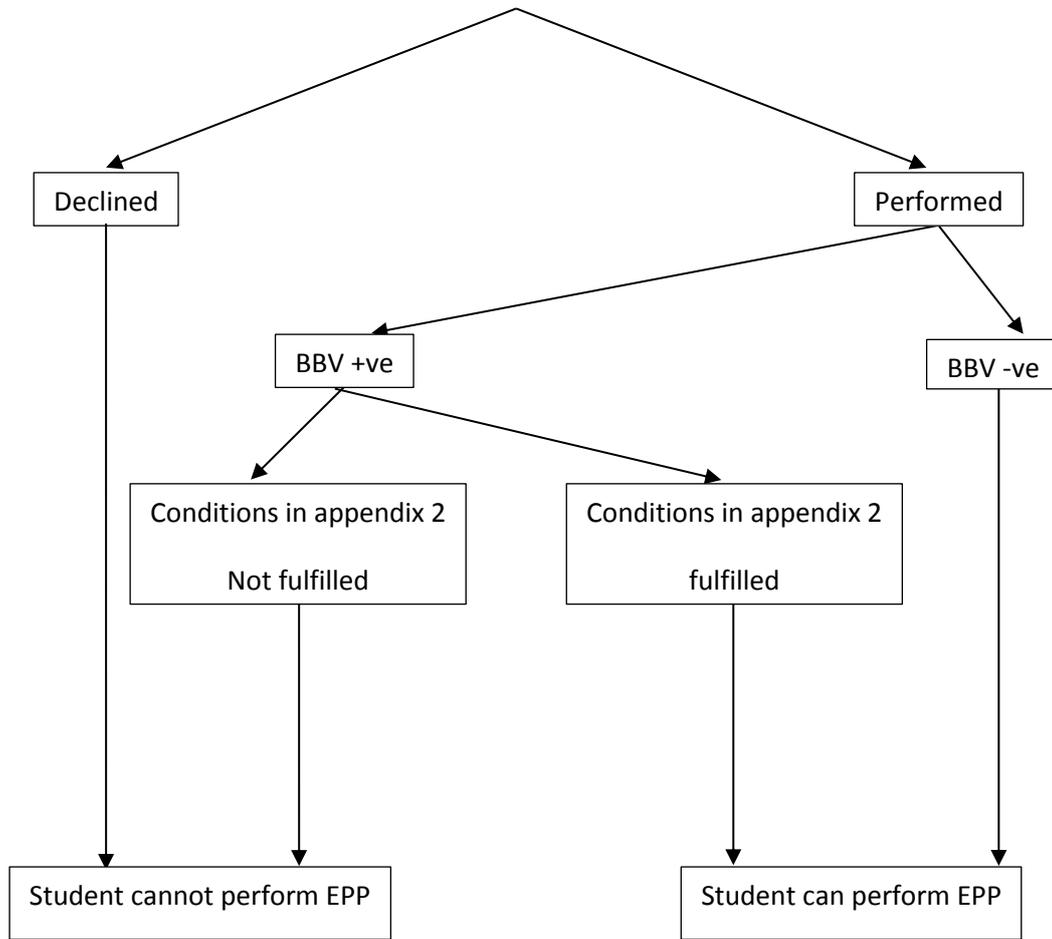
- What procedures are classed as EPP.
- Not to carry out a practical procedure if they are in doubt as to whether it constitutes an EPP or not.
- Their responsibility to know their EPP clearance status.
- Their responsibility to immediately contact CMDS OHP if their EPP clearance status has changed throughout the course.
- Being involved in EPP without appropriate clearance is a serious professionalism and probity issue and may constitute a fitness to practise concern.<sup>5</sup>

#### 4.9. Others:

- Pre-course Health Questionnaire, including immunization history record, is provided to applicants when they are made an offer. It is a condition for entry to complete and return this form.
- Code of conduct form must be filled in by students after arrival.



## Enhanced EPP screening





## 5. Graduate Entry Course Students

- 5.1. They will be subject to the same principles and testing protocols as those who join the undergraduate course.<sup>5</sup>
- 5.2. The CMDS OHP should complete screening and vaccinations within the first year in which the student joins the medical school to ensure the EPP status is known before starting the clinical placement.

## 6. EPP during the elective placement:

- 6.1. The restrictions applied to EPP also apply to students on elective placements regardless of the country that the elective takes place in. Hence, medical students without EPP clearance are not allowed to perform EPP whilst on their electives.<sup>7</sup>
- 6.2. Students applying for elective placements are advised to inform their elective supervisors of the Medical School's policy. This policy document can be downloaded and sent to supervisors.
- 6.3. Whether or not students are cleared for EPP in the UK, in some countries or areas they should consider carefully whether they should participate in EPP as some areas carry more risk than others.<sup>7</sup>
- 6.4. Students returning from overseas elective placement in areas where BBV are common may require retesting if they may have been inadvertently exposed in a high-risk setting.<sup>5</sup> Students have a professional responsibility to inform the CMDS OHP if this is the case.

## 7. Cooperation between the Medical School and placement providers:

- 7.1. The organisation and delivery of clinical training for BBV positive students, and those declining testing, is conducted through cooperation with NHS Trusts partners and others who provide clinical placements which should provide a robust system that ensures optimal patient protection.<sup>5</sup>
  - Head of Academy, have been made aware of this policy.
  - Head of Academy, in all in all placement provider organisations where EPP are performed, will be made aware of students who are not cleared for EPP.
- 7.2. Students will receive the full support of the Medical School for declining to carry out EPP.
- 7.3. The placement providers are responsible for:
  - The delivery of an adjusted clinical training programme for EPP-ineligible medical students.
  - Producing a list of restrictions on clinical training for EPP-ineligible medical students.
- 7.4. Medical students are responsible for reporting promptly, any accidental exposure of patients to risk during a condoned activity, to:
  - The CMDS OHP ± NHS Occupational Health (if immediate management is required).
  - Senior Academy Tutor or Head of Academy (in the placement provider).
  - Year Lead or Deputy Year Lead (in the medical school).



- 7.5. Medical students who fail enhanced screening are advised not to carry out a practical procedure if they are in doubt as to whether it constitutes an EPP or not. They are advised to notify such issues to their Senior Academy Tutors or Head of Academy responsible for overseeing their placement.
- 7.6. A student EPP clearance status is confidential health information. Students are not required to disclose this information to anyone. However; failure to disclose their EPP clearance status when asked to do so by an authorised placement provider representative in a confidential setting will result in an assumption of standard clearance only and will exclude the student from performing any EPP.

## **8. Care provided to BBV-infected students**

- 8.1. They should be reassured that the results of any test remain completely confidential.<sup>5</sup>
- 8.2. They will be referred to the CMDS OHP for counselling, clinical assessment, treatment and monitoring. Occupational Health physician will facilitate referral to an appropriate specialist, in full consultation with the student's GP.<sup>5</sup>
- 8.3. They are offered wellbeing support.
- 8.4. They are offered an appointment with a career advisor to discuss career options early on during their Medical School journey.<sup>7</sup>
- 8.5. The CMDS OHP should offer advice, guidance and support including information on how to avoid the risk of BBV transmission occupationally during certain placements or from lifestyle choices.<sup>5</sup>

## **9. The consequences of not adhering to the EPP Policy:<sup>5,9</sup>**

- 9.1. Failure to adhere to the EPP policy restrictions has potential patient safety implications and will constitute a serious breach of professionalism. This may result in Fitness to Practice procedures being initiated.
- 9.2. Students are reminded of their professional obligations to inform CMDS OHP if they might have been exposed to a risk of contracting a BBV and, based on an individual risk assessment, further testing may be required.



## Appendix 1 - Procedures classed as exposure prone

-Public Health England publish multiple documents listing what procedures are classed as EPP in various specialties. These guides are not prescriptive but represent consensus of the multi-professional groups.<sup>2-4</sup> Similarly, South Thames Foundation School produced a document for Foundation Programme candidates in England, Northern Ireland, Scotland, and Wales.<sup>10</sup>

-The lists provided in these documents may not be exhaustive. The procedures mentioned are only examples and do not negate the need for further risk assessments.<sup>2-4,10</sup>

-It must be emphasised that working practices vary between hospitals and healthcare workers.<sup>1</sup>

-The lists of EPP can be found in these documents produced by Public Health England:

<https://www.gov.uk/government/publications/emergency-healthcare-workers-exposure-prone-procedures>

<https://www.gov.uk/government/publications/ent-and-omfs-exposure-prone-procedure-categorisation>

<https://www.gov.uk/government/publications/obstetrics-and-gynaecology-exposure-prone-procedure-categories>

<https://www.gov.uk/government/publications/urology-exposure-prone-procedure-epp-categorisation>

<https://www.gov.uk/government/publications/general-surgery-exposure-prone-procedure-epp-categorisation>

<https://www.gov.uk/government/publications/vascular-surgery-exposure-prone-procedure-categories>



## Appendix 2 - Conditions that must be fulfilled for BBV-infected students to perform EPP<sup>5</sup>

-Students who are successfully treated for BBV infection and appropriately monitored will normally become eligible to perform EPP.

-The table summarises the criteria to be met by BBV-infected students for EPP clearance.

Virus	Infective status
Hepatitis B	HBsAg positive and HBeAg negative students may perform EPP if they: <ol style="list-style-type: none"> <li>1. have a viral load &lt;200 IU/ml (either from natural suppression or 12 months after cessation of antiviral therapy), and</li> <li>2. be subject to annual plasma viral load monitoring, and</li> <li>3. be under joint supervision of a consultant occupational physician and their treating physician, and</li> <li>4. be registered with the UK Advisory Panel Occupational Health Register (UKAP-OHR).</li> </ol>
Hepatitis B	HBsAg positive and HBeAg negative students with a pre-treatment viral load of 200 IU/ml – 20000 IU/ml may perform EPP if they: <ol style="list-style-type: none"> <li>1. have a viral load &lt;200 IU/ml whilst on continuous antiviral therapy, and</li> <li>2. be subject to plasma viral load monitoring every 3 months, and</li> <li>3. be under joint supervision of a consultant occupational physician and their treating physician, and</li> <li>4. be registered with the UKAP-OHR.</li> </ol>
Hepatitis C	Must be HCV RNA negative: <ol style="list-style-type: none"> <li>1. as a consequence of natural clearance, or</li> <li>2. at 6 months after cessation of antiviral therapy.</li> </ol>
HIV	1- Must either: <ol style="list-style-type: none"> <li>a) be on effective combination antiretroviral therapy (cART), and have a plasma viral load &lt;200 copies/ml.</li> <li>Or</li> <li>b) be an elite controller*, and</li> </ol> 2- be subject to plasma viral load monitoring every 3 months, and 3- be under joint supervision of a consultant occupational physician and their treating physician, and 4- be registered with the UKAP-OHR.

\*An elite controller is defined as a person living with HIV who is not receiving antiretroviral therapy and who has maintained their viral load below the limits of assay detection for at least 12 months, based on at least three separate viral load measurements.



## References

- 1- [Department of Health. Health Clearance for Tuberculosis, Hepatitis B, Hepatitis C and HIV: New Healthcare Workers, March 2007.](#)
- 2- [Public Health England. Emergency Healthcare Workers, Exposure Prone Procedures \(EPPs\) and the Exposure Prone Environment. April 2017.](#)
- 3- [Public Health England. Ear, Nose & Throat \(ENT\) and Oral and Maxillofacial Surgery \(OMFS\) Exposure Prone Procedure \(EPP\) Categorisation. October 2017.](#)
- 4- [Public Health England. Obstetrics and gynaecology \(O&G\) exposure prone procedure \(EPP\) categorisation. March 2018.](#)
- 5- [Medical and Dental schools councils. Medical and dental students: Health clearance for Hepatitis B Hepatitis C HIV and Tuberculosis. 2014.](#)
- 6- [The Management of HIV infected Healthcare Workers who perform exposure prone procedures: updated guidance, January 2014](#)
- 7- [BMA's Medical Students Committee \(MSC\), 2007](#)
- 8- [General Medical Council. Tomorrow's Doctors. February 2003.](#)
- 9- [Simon Gay – University of Nottingham. School of Medicine: Exposure Prone Procedures Policy for Medical Students, May 2018.](#)
- 10- [South Thames Foundation Schools. Foundation doctors with blood-borne virus infection. November 2017.](#)