Exposure Prone Procedures Policy for Medical Students

School of Medicine

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What is an Exposure Prone Procedure (EPP)?

The Department of Health defines Exposure Prone Procedures (EPPs) 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. 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'[1,2].

Procedures where the hands and fingertips of the worker are visible and outside the patient's body at all times, and internal examinations or procedures that do not involve possible injury to the worker's gloved hands from sharp instruments and/or tissues, are considered not to be exposure-prone, provided that routine infection-control procedures are adhered to at all times.[1]

Who is allowed to carry out EPPs?

There is a low risk of blood-borne virus (BBV) transmission during EPPs[1]. Healthcare workers who are known to be infectious carriers of HIV, Hepatitis B and Hepatitis C are not allowed to carry out EPPs, as injury to the worker could result in their blood contaminating their patient's open tissues.2

Department of Health guidance states that all new health care workers must undergo health clearance, including screening for BBVs for those performing EPPs. This is not to prevent those infected with BBVs from working in the NHS, but rather to restrict them from working in those clinical areas where their infection may pose a risk to patients in their care'.[1]

Medical students are classified as healthcare workers in the context of EPPs and this policy.

Are medical students allowed to perform EPPs?

Updated guidance from the General Medical Council (GMC) states that the performance of EPPs is not a requirement for students completing a medical degree that is acceptable for gaining provisional medical registration.[2] However, while not a mandatory part of undergraduate medical education, the Medical School believes

that undertaking EPPs can form an important part of medical training and that students should be offered the opportunity to be involved in EPPs, if they wish.

All students will be offered EPP screening prior to commencing their clinical placements. Screening will commence on entry onto the course. Subsequently, any student who has been screened by the University Occupational Health provider and been given EPP clearance (i.e. gained negative results on screening for Hepatitis B, Hepatitis C and HIV) may undertake EPPs. Students who opt out of this enhanced screening, or who do not meet EPP clearance requirements, will be classified as having standard health clearance and must not be involved in EPPs. Students will be asked to confirm their status prior to attending Early Clinical Experience placements and again prior to starting the clinical phase of the programmes.

EPP clearance and standard clearance

All students will have standard occupational health clearance on entry to the course. Enhanced EPP clearance will be offered to all students prior to starting the clinical phase (CP) of the course by the University Occupational Health provider.

It is every student's responsibility to be aware of their level of clearance i.e. standard or EPP throughout the clinical phases. All students will be asked to sign a declaration, to state that they are aware:

1. of what procedures are classed as EPP in accordance with the EPP policy
2. that it is their responsibility to know their EPP clearance status during the clinical phases
3. that until they have completed all vaccination programmes required for EPP clearance that they may not be involved in EPP
4. that if they believe their clearance has changed throughout the course it is their responsibility to immediately contact Occupational Health
5. that being involved in EPP without appropriate clearance is a serious professionalism issue.

Students may be screened for EPP clearance before completing all vaccination programmes but will not receive full EPP clearance until all required vaccination programmes have been completed to a satisfactory level.

Please also note that a student's EPP clearance status is confidential health information. As such students are not required to disclose this information to anyone, but failure to disclose their EPP clearance status when asked to do so by an

authorised trust representative in a confidential setting will result in an assumption of standard occupational health clearance only and will exclude the student from performing any EPP.

What procedures are classed as exposure prone?

Table 1 outlines a traffic light system offering guidance of practical procedure examples classified as: exposure prone, might be exposure prone and not exposure prone.

It must be emphasised that working practices vary between hospitals and healthcare workers. This list is not exhaustive and must be interpreted with some caution. Please note that these are only examples and do not negate the need for further risk assessments.[1]

All open surgical procedures are considered as exposure prone. In view of this students without enhanced EPP clearance are not allowed to assist during these procedures. Students are allowed to learn how to “scrub up” for an open surgical procedure but must not assist in the actual procedure.

Students are advised not to carry out a practical procedure if they are in doubt as to whether it constitutes on EPP or not. Clinical Educators in all trusts have been made aware of this policy. Students will receive the full support of the Medical School for declining to carry out a procedure where there is doubt of it being exposure prone. Students are advised to notify such issues to their Clinical Supervisors or Clinical Sub-Deans responsible for overseeing their attachment.

Are medical students allowed to carry out EPPs whilst on elective?

The restrictions applied to EPPs 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 EPPs whilst on their electives.

All students applying for electives are advised to inform their elective supervisors of the Medical School’s policy. This policy document can easily be downloaded from the School of Medicine website and sent to supervisors.

What are the consequences of not adhering to the EPP Policy?

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.

Students are reminded of 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.

This policy is also available to view and download from Moodle.

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[1] Department of Health and Social Care. (2007, March 16). Health clearance for tuberculosis, hepatits B, hepatitis C and HIV

[2] Medical Schools Council, Dental Schools Council, Public Health England, Health Protection Scotland, Association of UK University Hospitals, and Higher Education occupational Practitioners. (n.d.). Medical and dental students: Health clearance for Hepatitis B, Hepatits C, HIV, and Tuberculosis

Appendices

Appendix item 1: Table 1 - Guidance on classification of exposure prone and not exposure prone procedures

The following table outlines examples of practical procedures which are classified as exposure prone and those which are not exposure prone. Procedures which might be exposure prone are listed in the yellow column with further guidance.

Procedure	Exposure Prone	Might be Exposure Prone	Not Exposure Prone
General			• Taking blood (venepuncture) • Setting up and maintaining IV lines or central lines (provided that any skin-tunnelling procedure used for the latter is performed in a non-exposure- prone manner, i.e. without the operator's fingers being at any time concealed in the patient's tissues in the presence of a sharp instrument) • Minor surface suturing • Incision of external abscesses • Routine vaginal or rectal examinations • Arterial blood gas sampling • Nasogastric tube insertion • Urethral catheterisation • Peripheral venous cannulation • Intramuscular injection • Subcutaneous injection • Lumbar puncture • Capillary blood glucose testing • Wound care and basic wound dressing

Procedure	Exposure Prone	Might be Exposure Prone	Not Exposure Prone
Accident and Emergency (A&E)	• **Any** pre-hospital trauma care • Physical examination or handling of acute trauma patients with open tissues because of the unpredictablerisk of injury from sharp tissues suchas fractured bones • Rectal examination in the presenceof a suspected pelvic fracture • Deep suturing to arresthaemorrhage • Internal cardiac massage		

Procedure	Exposure Prone	Might be Exposure Prone	Not Exposure Prone
Anaesthetics	The only procedures currently performed by anaesthetists which wouldconstitute EPPs are: • the placement of portacaths (very rarely done), which involves excavatinga small pouch under the skin and may sometimes require manoeuvres which are not under direct vision • the insertion of chest drains in A&E trauma cases such as patients with multiple rib fractures	The insertion of a chest drain may or may not be considered as exposure-prone, dependingon how it is performed. Procedures where, following a small initial incision, the chest drain with its internal trochar is passed directly through the chest wall (as may happen for example with a pneumothorax or pleural effusion) and where the lung is well clear of the chest wall, would not be considered to be exposure-prone. However, where a larger incision is made, and a finger is inserted into the chest cavity, as may be necessary for example with a flail chest, and where the healthcare worker couldbe injured by the broken ribs, the procedure should be considered exposure-prone. Modern techniques for skin tunnelling involve wire-guided techniques and putting steel or plastic trochars from the entry site to the exit site where they are retrieved in full vision. Therefore, skin tunnelling is no longer considered to be exposure-prone.	Procedures performed purely percutaneously are not exposure-prone, nor have endotracheal intubation nor the use of a laryngeal mask been considered so.

Procedure	Exposure Prone	Might be Exposure Prone	Not Exposure Prone
Arterial cutdown			Although the use of more percutaneous techniques has made arterial or venous cutdown to obtain access to blood vesselsan unusual procedure, it may still be usedin rare cases. However, as the operator's hands are always visible, it should no • longer be considered exposure prone.

Biting		Staff who are working in areas that pose a significant risk of biting should not be treated as performing EPPs. In October 2003, UKAP* considered a review of the available literature on the risk of onward transmission from healthcare workers infected with BBVs to patients. The review showed that the published literature on this subject is very scarce. In follow-up studies of incidents involving infected healthcare workers workingwith patients known to be 'regular and predictable' biters, there were no documented cases of transmission from the healthcare worker to the biter. However, where biters were infected, there were documented cases of seroconversion in their victims, and the risk of infection was increased in the presence of: • blood in the oral cavity; risk proportionateto the volume of blood • broken skin due to the bite • a bite associated with a previous injury, i.e. non-intact skin. The risk of infection also increased where the biter was deficient in anti-HIV salivary elements (IgA deficient). Based on the available information, it can only be tentatively concluded that even though there is a theoretical risk of BBV transmission from an infected healthcare worker to a biting patient, the risk remains	

Procedure	Exposure Prone	Might be Exposure Prone	Not Exposure Prone
		negligible. The lack of information may suggest that this has not been perceived to be a problem to date, rather than that there is an absence of risk. UKAP has advised that, despite the theoretical risk, since there is no documented case of transmission from an infected healthcare worker to a biting patient, individuals infected with BBVs should not be prevented from working in or training for specialties where there is a risk of being bitten. The evidence is dynamic, and the area will be kept under review and updated in the light of any new evidence that subsequently emerges suggesting there is a risk. However, it is important for biting incidents to be reported and risk assessments conducted in accordance with NHS procedures. Biting poses a much greater risk to healthcare workers than to patients. Therefore, employers should take measures to prevent injury to staff, and healthcare workers who have been bitten by patients should seek advice and treatment, in the same way as after a needle stick injury. *UKAP – UK Advisory Panel for Healthcare Workers Infected with Bloodborne Viruses	

Procedure	Exposure Prone	Might be Exposure Prone	Not Exposure Prone
Cardiology		Implantation of permanent pacemakers (for which a skin-tunnelling technique is used to site the pacemaker device subcutaneously) may or may not be exposure prone. This will depend on whetherthe operator's fingers are or are not concealed from view in the patient's tissues in the presence of sharp instruments during the procedure.	Percutaneous procedures, including angiography/cardiac catheterisation, arenot exposure prone.

Procedure	Exposure Prone	Might be Exposure Prone	Not Exposure Prone
Dentistry and Orthodontics (including hygienists)	The majority of procedures in dentistryare exposure prone. This includes: • taking impressions from dentate or partially dentate patients • the fitting of partial dentures and fixed or removable orthodontic appliances where clasps and other pieces of metal could result in injuryto the dentist.		The following are considered as notexposure prone: • examination using a mouth mirror only • taking extra-oral radiographs • visual and digital examination of thehead and neck • visual and digital examination of the edentulous mouth • taking impressions of edentulouspatients • the construction and fitting of full dentures.

Procedure	Exposure Prone	Might be Exposure Prone	Not Exposure Prone
Ear, nose and throat(ENT) surgery	ENT surgical procedures generally should be regarded as exposure-prone,except for simple ear or nasal procedures.		Non-exposure-prone ear proceduresinclude: • stapedectomy/ stapedotomy • insertion of ventilation tubes • insertion of a titanium screw for abone-anchored hearing aid • procedures performed using endoscopes (flexible and rigid), provided that the operator's fingertipsare always visible.

Procedure	Exposure Prone	Might be Exposure Prone	Not Exposure Prone
Endoscopy			Simple endoscopic procedures (e.g. gastroscopy, bronchoscopy) have not been considered exposure prone. In general, there is a risk that surgical endoscopic procedures (e.g. cystoscopy,laparoscopy) may escalate due to complications which may not have been foreseen and may necessitate an open EPP, which is strictly **not** allowed.

Procedure	Exposure Prone	Might be Exposure Prone	Not Exposure Prone
General Practice – see Accident and Emergency, Biting, Minor surgery, Obstetrics & Gynaecology, Resuscitation			

Procedure	Exposure Prone	Might be Exposure Prone	Not Exposure Prone
Haematology			Bone-marrow transplants are considerednot exposure-prone

Procedure	Exposure Prone	Might be Exposure Prone	Not Exposure Prone
Laparoscopy	Laparoscopy is exposure-prone if a main trochar is inserted using an open procedure, e.g. in a patient who has hadprevious abdominal surgery. It is also exposure-prone if the rectus sheath is closed at port sites using a J-needle, and if fingers rather than needle holdersand forceps are used. In general, there is a risk that a therapeutic, rather than a diagnostic, laparoscopy may escalate due to complications which may not have been foreseen necessitating an open EPP.		Laparoscopy is mostly non-exposure prone as long as the operator's fingers are not concealed in the patient's tissues.

Procedure	Exposure Prone	Might be Exposure Prone	Not Exposure Prone
Minor Surgery			In the context of general practice, the following minor surgical procedures do not usually constitute EPP: • excision of sebaceous cysts and skin lesions • cauterisation of skin warts • aspiration of bursae • cortisone injections into joints • vasectomies.

Procedure	Exposure Prone	Might be Exposure Prone	Not Exposure Prone
Nursing	The duties of operating theatre nursesshould be considered individually.		General nursing procedures do not include EPPs.

Procedure	Exposure Prone	Might be Exposure Prone	Not Exposure Prone
Obstetrics and Gynaecology	• Obstetricians perform surgical procedures, many of which will be exposure-prone according to the criteria • Open surgical procedures are exposure-prone, this includes caesarean sections and students are not allowed to assist with theseprocedures • Repairs following episiotomies and perineal tears are also considered as exposure prone • Performing cone biopsies with ascalpel (and with the necessarysuturing of the cervix) would be exposure-prone.	Cone biopsies performed with a loop or laser would not in themselves be classified as exposure-prone, but if local anaesthetic was administered to the cervix other than under direct vision (i.e. with fingers concealed in the vagina), then the latter would be an EPP. Instrumental vaginal delivery – case by case basis.	Many minor gynaecological procedures are not considered exposure-prone theseinclude: • dilatation and curettage • suction termination of pregnancy • colposcopy • surgical insertion of depot contraceptive implants/devices • fitting intrauterine contraceptivedevices (coils) • vaginal egg collection (if fingers always remain visible when sharpinstruments are in use). The following Obstetric procedures are considered as not exposure prone: • Simple vaginal delivery • amniotomy using a plastic device • attachment of fetal scalp electrodes • infiltration of local anaesthetic prior toan episiotomy and the use of scissorsto make an episiotomy.

Procedure	Exposure Prone	Might be Exposure Prone	Not Exposure Prone
Ophthalmology	• Orbital surgery (usually performedby maxillo-facial surgeons).		Routine ophthalmological surgical procedures are not exposure prone as long as the operator's fingers are not concealed in the patient's tissues. Exceptions may occur in some acute trauma cases, which must be avoided.

Procedure	Exposure Prone	Might be Exposure Prone	Not Exposure Prone
Orthopaedics	• Open surgical procedures • Procedures involving the cutting or fixation of bones, including the useof K-wire fixation and osteotomies • Procedures involving the distant transfer of tissues from a secondsite (such as in a thumb reconstruction) • Acute hand trauma • Nail avulsion of the toes for in-growing toenails and Zadek's procedure.	Arthroscopy is considered non-exposure prone but there is a possibility that an open procedure might become necessary which will constitute an EPP and students must not assist in open surgical procedures.	• Manipulation of joints with the skinintact • Superficial surgery involving the soft tissues of the hand • Work on tendons using purely instrumental tunnelling techniques that do not involve fingers and sharp instruments together in the tunnel • Procedures for secondary reconstruction of the hand, providedthat the operator's fingers are in full view • Carpal tunnel decompression, provided that fingers and sharp instruments are not together in thewound • Closed reductions of fractures andother percutaneous procedures.

Procedure	Exposure Prone	Might be Exposure Prone	Not Exposure Prone
Podiatrists	Procedures undertaken by podiatric surgeons include surgery on nails, bones and soft tissue of the foot and lower leg, and joint replacements. In a proportion of these procedures, part of the operator's fingers will be inside the wound and out of view, thereby making them EPPs.		• Routine procedures undertaken by podiatrists who are not trained in and do not perform surgical techniques are not exposure prone.

Procedure	Exposure Prone	Might be Exposure Prone	Not Exposure Prone
Radiology			All percutaneous procedures, including imaging of the vascular tree, biliary system and renal system, drainage procedures and biopsies as appropriate are not EPPs.

Procedure	Exposure Prone	Might be Exposure Prone	Not Exposure Prone
Renal Medicine			The 2002 guidance stated: “Obtaining vascular access at the femoral site in a distressed patient may constitute an exposure-prone procedure as the risk of injury to the health-care worker may be significant.” There have since been technological advances in the way venous access is obtained, including in renal units. In procedures performed now, the operator’s fingers remain visible at all times during the procedure. Therefore, these procedures are not exposure-proneand neither haemofiltration nor haemodialysis constitute EPPs. The working practices of those staff who supervise haemofiltration and haemodialysis circuits do not include EPPs. Different guidance applies for hepatitis B-infected healthcare workers.

Procedure	Exposure Prone	Might be Exposure Prone	Not Exposure Prone
Resuscitation			Resuscitation performed wearing appropriate protective equipment does notconstitute an EPP. The Resuscitation Council (UK) recommends the use of a pocket mask when delivering cardio- pulmonary resuscitation. Pocket masks incorporate a filter and are single use.

Procedure	Exposure Prone	Might be Exposure Prone	Not Exposure Prone
Surgery	Open surgical procedures are exposure prone. This applies equally to major organ retrieval because there is a very small, though remote, risk that major organs retrieved for transplant could be contaminated by a healthcare worker's blood during what are long retrieval operations while the patient's circulationremains intact. It is possible for some contaminated blood cells to remain following pre-transplantation preparatoryprocedures and for any virus to remain intact since organs are chilled to only 10°C.		