



Public Health
England

Protecting and improving the nation's health

Urology exposure prone procedure (EPP) categorisation

Advice from the United Kingdom
Advisory Panel for Healthcare Workers
Infected with Bloodborne Viruses
(UKAP)

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. We do this through world-leading science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. We are an executive agency of the Department of Health and Social Care, and a distinct delivery organisation with operational autonomy. We provide government, local government, the NHS, Parliament, industry and the public with evidence-based professional, scientific and delivery expertise and support.

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Executive summary

This exposure prone procedure (EPP) categorisation list is not exhaustive of all procedures carried out in urology, but is to be used as a guide only. Individual variation between surgeons does not allow for a higher EPP risk category to be incorporated in a personal interpretation of a procedure.

If any procedures in this document are semi-laparoscopic, when the hand is inserted into the abdomen via skin incision, then the procedures would certainly be categorised as EPP category 2, or possibly 3. Laparoscopic assisted procedures are likely to be EPP category 3. **Robotic procedures should be categorised the same as laparoscopic.**

In any case of uncertainty about any of the procedures listed here, or procedures that have not been included, please contact the UKAP Secretariat for guidance at:
ukap@phe.gov.uk

Exposure prone procedures (EPPs)

Provided appropriate infection prevention and control precautions are adhered to scrupulously at all times, the majority of clinical procedures (including many which are invasive) in the healthcare setting pose no risk of transmission of BBVs from an infected HCW to a patient, and can safely be performed.

Those procedures where an opportunity for HCW-to-patient transmission of BBV does exist are described as 'exposure prone' procedures (EPPs), where injury to the HCW could result in the worker's blood contaminating the patient's open tissues. This is described as "bleed-back" in this guidance.

EPPs include procedures where the worker's gloved hands may be in contact with sharp instruments, needle tips or sharp tissues inside a patient's open body cavity, wound or confined anatomical space where the hands or fingertips may not be completely visible at all times.

The definition of EPPs covers a wide range of procedures, in which there may be very different categories of risk of bleed-back. 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 EPPs with increasing risk of bleed-back.

It should be noted that the majority of HCWs do not perform EPPs.

The definitions and examples of categories 1, 2 and 3 are:

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 the HCW bleeding into a patient's open tissues should be remote.

Examples: local anaesthetic injection in dentistry, removal of haemorrhoids.

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 is unlikely. If injury occurs it is likely to be noticed and acted upon quickly to avoid the HCW's blood contaminating a patient's open tissues.

Examples: routine tooth extraction, colostomy.

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. In such circumstances it is possible that exposure of the patient's open tissues to the HCW's blood may go unnoticed or would not be noticed immediately.

Examples: hysterectomy, caesarean delivery, open cardiac surgical procedures.

Non-exposure prone procedures

Non-EPPs are those 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. These procedures are considered not to be exposure prone provided routine infection prevention and control procedures are adhered to at all times.

Examples in urology:

- endoscopic biopsy of prostate
- percutaneous fine needle biopsy of lesion of kidney
- therapeutic endoscopic operations on urethra

Urology EPP categorisation

Kidney/Renal Pelvic

EPP Category	Procedure
Category 1 (Lowest risk of bleed-back)	Laparoscopic nephrectomy (including live donor nephrectomy)*
	Laparoscopic partial excision of kidney*
	Laparoscopic nephro-ureterectomy*
	Laparoscopic pyeloplasty
	Endoscopic fragmentation of calculus of kidney
	Percutaneous nephrolithotomy (including cystoscopy and retrograde catheterisation)
Category 2 (Intermediate risk of bleed-back)	Open Drainage of perinephric abscess
Category 3 (Higher risk of bleed-back)	Allotransplantation of kidney
	Autotransplantation of kidney
	Open Nephrectomy and excision of perirenal tissue
	Open Nephro-ureterectomy
	Open Nephrectomy
	Open Partial excision of kidney
	Open Pyeloplasty
	Open Repair of kidney wound
	Open removal of calculus from kidney
	Open Drainage of kidney
	Open Drainage of pyonephrosis
	Other open operations on kidney
*If hand-assisted, then category 2	

Category Zero (NOT exposure prone, no risk of bleed-back)	Procedure
	Percutaneous fine needle biopsy of lesion of kidney
	Percutaneous insertion of nephrostomy tube
	Percutaneous tru-cut needle biopsy of lesion of kidney
	Extracorporeal fragmentation of calculus of kidney (lithotripsy)

Ureter

EPP Category	Procedure
Category 1 (Lowest risk of bleed-back)	Ureterostomy – closure
	Laparoscopic ureteric re-implantation, (unilateral or bilateral)
	Laparoscopic ureterolysis (unilateral or bilateral)
	Therapeutic nephroscopic operations on ureter
Category 2 (Intermediate risk of bleed-back)	<i>NONE IDENTIFIED</i>
Category 3 (Higher risk of bleed-back)	Excision of section of ureter
	Construction of ileal conduit including ureteric implantation
	Bilateral reimplantation of ureter into bowel
	Unilateral reimplantation of ureter into bowel
	Bilateral reimplantation of ureter into bladder
	Unilateral reimplantation of ureter into bladder
	Other connection of ureter including TUU (trans-uretero-ureterostomy)
	Ileal or colonic replacement of ureter
	Ureterostomy
	Open correction vesico-ureteric reflux – unilateral
	Open correction vesico-ureteric reflux – bilateral
	Open ureterolithotomy
	Ureterolysis – unilateral
	Ureterolysis – bilateral
	Operations on ureteric orifice

	Procedure
Category Zero (NOT exposure prone, no risk of bleed-back)	Ureteroscopic extraction of calculus of ureter
	Endoscopic insertion of prosthesis into ureter
	Endoscopic removal of prosthesis from ureter
	Ureteric meatotomy
	Endoscopic examination of ureter
	Endoscopic retrograde pyelography
	Extracorporeal shockwave lithotripsy of calculus of ureter
	Endoscopic meatotomy of ureteric orifice

Please note robotic procedures should be categorised the same as laparoscopic

Bladder

EPP Category	Procedure
Category 1 (Lowest risk of bleed-back)	Laparoscopic partial cystectomy
	Laparoscopic diverticulectomy of bladder
	Laparoscopic repair of bladder
	Cystostomy and insertion of suprapubic tube into bladder
	Stab cystostomy
	Incision of bladder neck
	Sacral nerve stimulation
	Laparoscopic colposuspension to support outlet of female bladder
Category 2 (Intermediate risk of bleed-back)	Closure of cystostomy
	Suprapubic sling operation
	Open vesicolithotomy
	Vaginal operations to support outlet of female bladder
	Open removal of foreign body from bladder
Category 3 (Higher risk of bleed-back)	Total cystectomy (with construction of intestinal conduit of bladder)
	Open Partial cystectomy
	Open Diverticulectomy of bladder
	Enlargement of bladder
	Repair of bladder
	Repair of colovesical fistula
	Open repair of vesicovaginal fistula
	Repair of cutaneous vesical fistula
	Open removal of calculus from bladder
	Open excision of lesion from bladder
	Combined abdominal and vaginal operations to support outlet of female bladder
	Retropubic suspension of neck of bladder
	Implantation of artificial urinary sphincter into bladder and/or removal

Bladder non-EPPs continued overleaf

Please note robotic procedures should be categorised the same as laparoscopic

Category Zero (NOT exposure prone, no risk of bleed-back)	Procedure
	Endoscopic anti-reflux procedures
	Endoscopic resection of lesion of bladder
	Endoscopic destruction of lesion of bladder
	Endoscopic transection of bladder
	Endoscopic hydrostatic distention of bladder
	Urethral sphincterotomy
	Litholapaxy
	Endoscopic extraction of calculus of bladder
	Endoscopic removal of foreign body from bladder
	Diagnostic endoscopic examination of bladder (incl. biopsy)
	Urodynamic studies/urodynamic assessment
	Dilatation of outlet of female bladder (with cystoscopy)
	Endoscopic incision of outlet of male bladder (with cystoscopy)
	Intravesical chemotherapy instillation
	Cystoscopy and Botulinum toxin injections

Urethra

EPP Category	Procedure
Category 1 (Lowest risk of bleed-back)	Excision of urethral caruncle
	Repair of hypospadias
	Repair of epispadias
	Excision of prolapse of urethra
Category 2 (Intermediate risk of bleed-back)	Urethrocele
	Closure of fistula of urethra
	Excision of diverticulum of urethra
	Urethroplasty (simple)
Category 3 (Higher risk of bleed-back)	Urethrectomy
	Repair of urethrorectal fistula
	Urethroplasty (complex)
	Repair of rupture of urethra

Category Zero (NOT exposure prone, no risk of bleed-back)	Procedure
	Therapeutic endoscopic operations on outlet of female bladder
	Urethral valve resection
	Therapeutic endoscopic operations on urethra
	Removal of foreign body from urethra
	Diagnostic endoscopic examination of urethra (in isolation)
	Dilation of urethra
	Peri-urethral injection of bulking agents
	Internal urethrotomy (including cystoscopy)

Please note robotic procedures should be categorised the same as laparoscopic

Prostate

EPP Category	Procedure
Category 1 (Lowest risk of bleed-back)	Laparoscopic excision of prostate
	Laparoscopic Radical prostatectomy, reconstruction of bladder neck including bilateral pelvic lymphadenopathy
	Drainage of prostatic abscess
Category 2 (Intermediate risk of bleed-back)	Open biopsy of lesion of prostate
Category 3 (Higher risk of bleed-back)	Open excision of prostate
	Radical prostatectomy, reconstruction of bladder neck including bilateral pelvic lymphadenopathy

Category Zero (NOT exposure prone, no risk of bleed-back)	Procedure
	Endoscopic resection of prostate (TUR)
	Urolift procedure
	Endoscopic biopsy of prostate
	Transurethral microwave therapy
	Prostatic hyperthermia
	Prostate, needle biopsy
	Prostatic massage
	Insertion of urethral stent for relief of prostatic obstruction

Please note robotic procedures should be categorised the same as laparoscopic

Genitalia

EPP Category	Procedure
Category 1 (Lowest risk of bleed-back)	Meatoplasty
	External meatotomy of urethral orifice
	Bilateral excision of testes
	Laparoscopic orchidectomy
	Orchidectomy and excision of spermatic cord
	Excision of lesion of testis
	Orchidopexy – bilateral
	Orchidopexy
	Prosthesis of testis (insertion or removal)
	Correction of hydrocele
	Fixation of testis
	Biopsy of testis
	Exploration of testis (including biopsy)
	Bilateral fixation of testis
	Bilateral epididymectomy
	Unilateral epididymectomy
	Excision of epididymal cyst
	Operation(s) on varicocele
	Vasography
	Repair of injury on penis
	Division of preputial adhesions
	Circumcision
	Vasovasostomy
	Vasectomy
Category 2 (Intermediate risk of bleed-back)	Microvascular transfer of testis to scrotum
	Partial amputation of penis
	Operation for Peyronie's disease
	Insertion of malleable penile prosthesis
	Reconstruction of penis
	Repair of avulsion on penis
	Biopsy of lesion of penis
	Total amputation of penis
Category 3 (Higher risk of bleed-back)	Abdominal undescended testis
	Operation(s) on seminal vesicle
	Insertion of inflatable penile prosthesis

Category Zero (NOT exposure prone, no risk of bleed-back)	Procedure
	<i>NONE IDENTIFIED</i>

Other

EPP Category	Procedure
Category 2 (Intermediate risk of bleed-back)	Block dissection of inguinal/femoral lymph nodes
Category 3 (Higher risk of bleed-back)	Block dissection of para-aortic lymph nodes

Contributors

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