

Recommended Scope of High-risk and Hospital-only Procedures

General Principles

1. Any procedure defined by ANY one of the following three factors will be regarded as high-risk medical procedure -
 - (a) risk of procedures
 - (b) risk of anaesthesia involved
 - (c) patient's conditions

2. Medical practitioners and dentists should take into account, in addition to the criteria for defining high-risk and hospital-only medical procedures, the age, body size and other physical conditions of the patient when deciding whether a medical procedure is high-risk and should be performed in ambulatory facility or in hospital.

A) Risk of Procedures

3. High-risk surgical procedures include the following procedures –
 - (a) Creation of surgical wound to allow access to major body cavity or viscus³ (including access to central large joints) [except peripheral joints distal to knee and elbow (i.e. ankle and below, and wrist and below)]
 - (b) Removal of tissue and/or fluid of a total volume of 500ml or above [except suprapubic tap]
 - (c) Removal of tissue and/or fluid of any volume from deep seated organ in children aged under 12 years old
 - (d) Removal of any volume of fluid and/or tissue from thoracic cavity [except diagnostic pleural tapping]
 - (e) Insertion of any prosthesis (including tissue filler) [except prosthesis in ENT cavity, dental prosthesis and implants, extra-ocular prosthesis and implants, intrauterine or vaginal prosthesis, bulking agents of urethra, prostatic urethral stent, urethral slings, testicular prosthesis]
 - (f) Any core biopsy [except core biopsy of (1) superficial tissue (such as skin, prostate, breast and uterus) but excluding thyroid or salivary glands; (2) superficial muscle; or (3) peripheral muscle]

³ Not including needle injection into joint cavity, intraocular injection with fine needle by ophthalmologists and injection of Botox

- (g) Any biopsy of organ or tissue requiring image guidance
- (h) Fine needle biopsy of deep-seated organ
- (i) Lumbar puncture
- (j) Transplant of any cell, tissue and organ (including autograft, allograft and processed tissue or blood products⁴) or skin flap (including face lift) [except small skin graft less than 3 cm in any dimension, conjunctival autograft and transplant procedures which primarily involve dental-alveolar region]
- (k) Termination of pregnancy
- (l) Dilation and curettage
- (m) Circumcision with use of skin sutures in paediatric patients

4. High-risk endoscopic procedures include the following -

- (a) Endoscopic procedures requiring image guidance (such as endoscopic retrograde cholangiopancreatography (ERCP))
- (b) Endoscopic procedures involving invasion of a sterile cavity (such as arthroscopy, laparoscopy and hysteroscopy) [except cystoscopy⁵] or gastrointestinal tract
- (c) Therapeutic endoscopic procedures (such as endoscopic resection), [except minor therapeutic procedures (such as removal of foreign body)]
- (d) Bronchoscopy or pleuroscopy

5. High-risk dental procedures include the following -

Maxillofacial surgical procedures that extend beyond dento-alveolar process, including but not limited to -

- (a) Maxillary osteotomies and mandibular osteotomies including angle reduction
- (b) Open reduction and fixation of complex maxillofacial fracture
- (c) Surgical treatment of diagnosed malignancies
- (d) Surgical treatment of complex haemangioma
- (e) Surgery involving major salivary glands
- (f) Open surgery of temporomandibular joint except arthrocentesis and arthroscopy
- (g) Harvesting of autogenous bone from outside the oral cavity
- (h) Primary cleft lip and palate surgery

⁴ Include platelet-rich plasma (PRP)

⁵ Cystoscopy does not include cystoscopic procedures such as cystoscopic biopsy, cystoscopic insertion or removal of ureteric catheter or stent, endoscopic urethral dilatation or urethrotomy, cystoscopic removal of stone or foreign body or polyp, cystoscopic injections/diathermy/cautery or haemostasis, cystoscopic lithotripsy.

6. The following procedures are also classified as high-risk -
- (a) Administration of chemotherapy (cytotoxic) through parenteral routes regardless of therapeutic indication
 - (b) Image-guided core biopsy [except breast and superficial lymph node], or image-guided biopsy of deep seated organ
 - (c) Haemodialysis
 - (d) Transarterial catheterisation or deep venous catheterisation
 - (e) Extracorporeal shock wave lithotripsy (ESWL) requiring image guidance
 - (f) Injection of sclerosing/embolisation agents into vascular/lymphatic compartment of deep-seated head and neck region

B) Scope of High-risk Anaesthetic Procedures⁶

7. A procedure is considered to be high-risk if it involves any of the following modes of anaesthesia or sedation:
- (a) General anaesthesia
 - (b) Neuroaxial blocks (spinal, epidural, caudal)
 - (c) Major plexus block (brachial, lumbar, sacral)
 - (d) Intravenous regional anaesthesia
 - (e) Intercostal nerve block
 - (f) Major nerve block:
 - Glossopharyngeal nerve, vagus nerve or their terminal branches, including superior, inferior and recurrent laryngeal nerves;
 - Sciatic and femoral nerves; or
 - Posterior tibial nerve, pudendal nerve or para-cervical block
 - (g) Use of sedative or analgesic drugs with reasonable expectation that it will, in the manner used, result in deep sedation⁷ for a significant percentage of a group of patients
 - (h) Tumescant anaesthesia

C) Patient's condition

8. A procedure is considered high-risk if it is performed on a patient whose physical status is Class 3-unstable or worse (i.e. Class 3-unstable, Class 4 or Class 5) as classified by the American Society of Anaesthesiologists (ASA) Physical Status Classification System.

6 The risks of anaesthesia considered by the Working Group include risk of gross, vital physiological derangement, risk of inadvertent systemic injection (such as neurovascular bundle and intra-dural injection), loss of protective reflexes, prolonged disturbance of mobility or body balance, disturbance/loss of major functions of vital organs.

7 Definition of "deep sedation" should refer to the "Guidelines on Procedural Sedation" promulgated by the Hong Kong Academy of Medicine.

D) Hospital-only procedures

9. The following high-risk procedures should only be performed in hospitals:
- (a) Administration of chemotherapy (cytotoxic) into body cavity or deep-seated organ
 - (b) Image-guided core biopsy of deep-seated organ
 - (c) Transarterial catheterisation or deep venous catheterisation
 - (d) Continuous venous-venous haemofiltration /haemodiafiltration
 - (e) Organ transplant [except corneal transplant] or complicated transplant procedures
 - (f) Bronchoscopy or pleuroscopy
 - (g) Therapeutic gastrointestinal endoscopy on children aged under 12 years old
 - (h) Injection of sclerosing/embolisation agents into vascular/lymphatic compartment of deep-seated head and neck region