



# **GUIDELINES**

## **PERIOPERATIVE MORTALITY REVIEW (POMR): PRIORITISATION OF CASES FOR EMERGENCY AND ELECTIVE SURGERY (2<sup>nd</sup> Revision)**

**2018**

**CLINICAL AUDIT UNIT  
MEDICAL CARE QUALITY SECTION  
MEDICAL DEVELOPMENT DIVISION  
MINISTRY OF HEALTH MALAYSIA**

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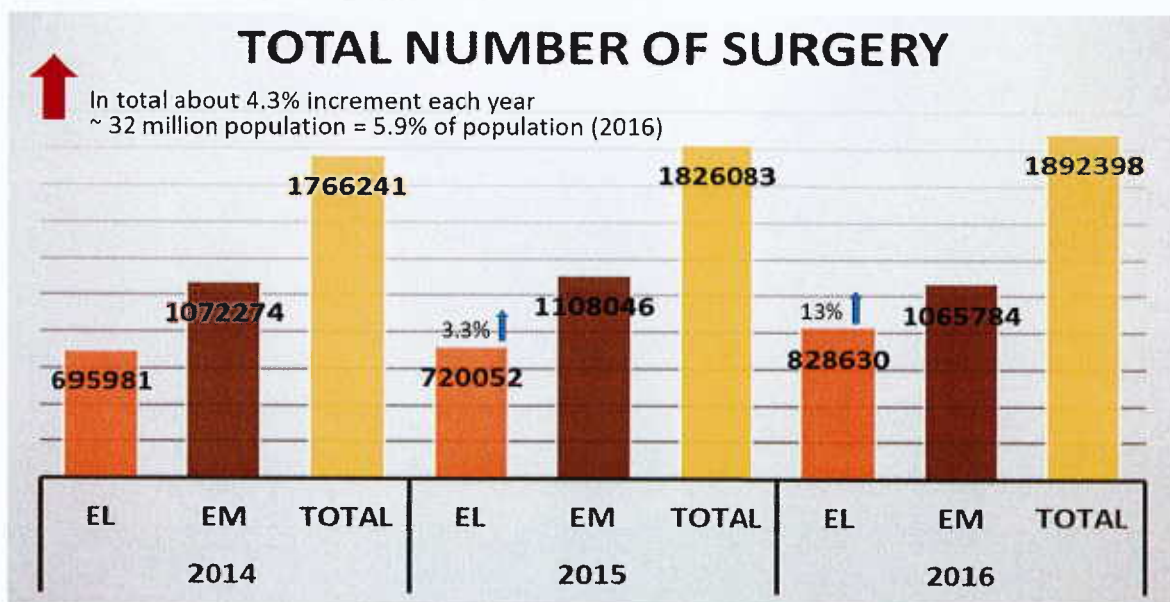
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## 1. INTRODUCTION

Perioperative Mortality Review (POMR) aims to assess the quality of surgical and anaesthetic services in the Ministry of Health (MOH) Malaysia. It also aims to assess the quality of supporting and logistic services that are related to surgical and anaesthetic services with the objective of identifying shortfalls in services and act upon the remedial measures accordingly. Specifically, POMR is looking into the pre-operative, intra-operative and post-operative care of the patient in MOH hospitals.

The operation theatre (OT) facility in MOH hospitals plays an important role in the patient's care, pre-operatively and intra-operatively. The operation theater (OT) facilities in most of the MOH hospitals are frequently inadequate to cope with the increasing workload, i.e. increasing number of surgery. The MOH HMIS Report 2014-2016 reported that the number of surgery increases each year at about 4.3%, which includes Emergency and Elective surgery (Figure 1). This increase in number of surgery may results in delays in both Emergency and Elective surgery. This may also leads to an increase in Perioperative morbidity and mortality as shown in the Perioperative Mortality Review.



Source: Laporan Tahunan HMIS, Sub-sistem Rawatan Perubatan, MOH

The POMR National Committee, thus, recommended a Guideline for Prioritization of Cases for Elective and Emergency Surgery in 1996. The Guideline was formulated based on the degree of emergency and urgency for the surgical cases to be done. With the expansion of the surgical services in Malaysia, the Guideline is revised in accordance with the current international definitions and standards, which are applicable with our current healthcare environment.

The compilation of the list of surgery in this Guideline is established from the recommendations made by the Head of Services and senior consultant surgeons in each field of specialty based on the current situation in Malaysia. The list serves as a guideline for the rational use of the OT facilities in the MOH hospitals and becomes part of the management of Emergency and Elective surgery. This Guideline also serves as an important tool for surgical services as MOH strives to ensure highest possible standard of care, that is acceptable internationally, is being practiced in the MOH hospitals. Surgeons, anaesthetists and hospital administrators of each hospital shall agree to the implementation of this Guideline and administer it at their own hospital setting as an integral component of the MOH continuous effort in improving the quality of care for the patients. Nevertheless, this Guideline should be applied with care based on the individual hospital setting and suitability.

## 2. TERMINOLOGY

2.1 For Emergency surgery, the categories of priority of surgery are as follow:

<b>EMERGENCY SURGERY</b>		
<b>Acute Emergency*</b>	Patient condition, which requires immediate operation, i.e. life-threatening situation, failing which life/ limb will be lost. Surgery may proceed without baseline investigation/ patient being fasted.	
<b>Emergency</b>	Patient condition which haemodynamically stable that requires operative procedure to be carried out, otherwise life is threatened or morbidity is increased.	<b>A. Trauma (&lt; 6 Hours)</b> - Non-life-threatening condition but if the operation is carried out after 6 hours, it will increase patient morbidity and mortality risk.
		<b>B. Non-trauma (&lt; 8 Hours)</b> - Non-life-threatening condition but if the operation is carried out after 8 hours, it will increase patient morbidity and mortality risk.
<b>Urgent</b>	Patient condition, which requires operative procedure within 24-hours otherwise there is increased in morbidity.	
<b>Semi-urgent</b>	Patient condition, which requires operative procedure within 1/52 otherwise there is increased in morbidity.	

\* The Anaesthetic Team may need to mobilize a second OT if the Emergency OT is occupied by another case.



2.2 For Elective surgery, the categories of priority of surgery are as follow:

<b>ELECTIVE SURGERY</b>		
<b>Category 1</b>	<b>Malignancy</b>	Case requiring operative procedure within 1/12 after diagnosis is made and patient is fully optimised.
<b>Category 2</b>	<b>Non-malignancy</b>	<b>Intermediate</b> Case requiring operative procedure within 3/12, which if it was not done, it will become an emergency case.
<b>Category 3</b>	<b>Non-malignancy</b>	<b>A. Congenital</b> Case requiring operative procedure within 6/12, which if it was not done, it will not become an emergency case but may affects patient's development.
		<b>B. Functional/ Quality of Life</b> Case requiring operative procedure within 6/12, which if it was not done, it will not become an emergency case but may affect the patient's function and quality of life.
		<b>C. Corrective</b> Case requiring operative procedure on the next available date to within 1 year, which if it was not done, it will not become an emergency case and will not affects patient's function and quality of life.

### 3. PRIORITISATION OF CASES ACCORDING TO DISCIPLINE

#### 3.1 GENERAL SURGERY

<b>EMERGENCY SURGERY</b>	
<b>Acute Emergency</b>	<ol style="list-style-type: none"><li>1. Femoral Embolectomy (Acute Limb Ischemia)</li><li>2. Trauma: Abdominal/ Chest/ Neuro (blunt/ penetrating)</li><li>3. Bleeding GIT</li><li>4. Repair of Abdominal Aortic Aneurysm (Rupture AAA)</li><li>5. Rupture of Mycotic Aneurysm</li><li>6. Torsion of Testis</li></ol>
<b>Emergency</b>	<p><b>A. Trauma (&lt;8 Hours)</b> Suspected Intra-abdominal Injury</p> <p><b>B. Non-trauma (&lt;8 Hours)</b></p> <ol style="list-style-type: none"><li>1. Peritonitis</li><li>2. Acute Intestinal Obstruction /Ischaemia</li><li>3. Perforated Viscus</li><li>4. Fistula Ligation (Bleeding AV Fistula)</li><li>5. Necrotising Fascitis</li></ol>
<b>Urgent</b>	<ol style="list-style-type: none"><li>1. Acute Appendicitis</li><li>2. Cholecystitis /Empyema /Cholangitis</li><li>3. Diagnostic Laparoscopy</li><li>4. Abscess /Carbuncle</li><li>5. Toilet &amp; Suturing (Laceration Wound)</li></ol>
<b>Semi-urgent</b>	Secondary Suturing

<b>ELECTIVE SURGERY</b>	
<b>Category 1</b>	<ol style="list-style-type: none"> <li>1. Right Hemicolectomy/ Left Hemicolectomy/ Total Colectomy (Colon Cancer)</li> <li>2. Low Anterior Resection/ Ultra Low Anterior Resection/ APR (Rectal Cancer)</li> <li>3. Wide Local Excision/ Mastectomy and Axillary Clearance (Breast Cancer)</li> <li>4. Total Thyroidectomy (Thyroid Cancer)</li> <li>5. Esophagectomy (Esophageal Cancer)</li> <li>6. Gastrectomy (Gastric Cancer)</li> <li>7. Pancreatectomy (Pancreas Cancer)</li> <li>8. Tenckhoff/ Salvage</li> </ol>
<b>Category 2</b>	<ol style="list-style-type: none"> <li>1. Cholecystectomy (Cholelithiasis)/ CBD Exploration</li> <li>2. Fistula Repair (Fistula in Ano)</li> <li>3. Thyroidectomy (Multinodular Goitre)</li> <li>4. Reversal/ Closure of Stoma</li> <li>5. AVF Creation (ESRF)</li> </ol>
<b>Category 3</b>	<p><b>A. Congenital</b></p> <ol style="list-style-type: none"> <li>1. Sistrunk Procedure (Thyroglossal Cyst)</li> <li>2. Umbilical Hernia Repair</li> <li>3. Hydrocele Repair (Hydrocele)</li> </ol> <p><b>B. Functional/ Quality of Life</b></p> <ol style="list-style-type: none"> <li>1. Excision Biopsy (Lipoma)</li> <li>2. Excision Biopsy (Sebaceous Cyst)</li> <li>3. Excision Biopsy (Dermoid Cyst)</li> <li>4. Excision of Breast Lump (Fibroadenoma)</li> <li>5. Excision Breast Tissue (Accessory Breast)</li> </ol> <p><b>C. Corrective</b></p> <ol style="list-style-type: none"> <li>1. Inguinal Hernia (Hernioplasty)</li> <li>2. Para Umbilical Hernia Repair (Paraumbilical Hernia)</li> <li>3. Incisional Hernia Repair (Incisional Hernia)</li> </ol>

### 3.2 ORTHOPAEDIC

<b>EMERGENCY SURGERY</b>	
<b>Acute Emergency</b>	<ol style="list-style-type: none"> <li>1. Major Vessel injury with uncontrolled haemorrhage</li> <li>2. Hemodynamically unstable pelvic injuries</li> </ol>
<b>Emergency</b>	<p><b>A. Trauma (&lt;6 Hours)</b></p> <ol style="list-style-type: none"> <li>1. Open Fractures ± Severe Soft tissue Injuries</li> <li>2. Spinal injuries with Neurology</li> <li>3. Revascularization/ Replantation of limbs/digits</li> <li>4. Fasciotomy for Compartment syndrome</li> <li>5. Mangled limb</li> <li>6. Floating joints</li> </ol> <p><b>B. Non-trauma (&lt;8 Hours)</b></p> <ol style="list-style-type: none"> <li>1. Gangrene, Necrotising Fascitis in sepsis</li> <li>2. Revision surgery for post op major neurological or vascular complications</li> </ol>
<b>Urgent</b>	<ol style="list-style-type: none"> <li>1. Reduction ± Fixation of joint fracture/ dislocations</li> <li>2. Arthrotomy washout for septic joints</li> <li>3. Debridement and curettage for bone infection (osteomyelitis)</li> <li>4. Debridement or amputation for infected diabetic foot ulcer/ abscesses</li> <li>5. Debridement for any infected or potentially infected internal fixation, arthroplasty, reconstructive procedures, surgical site infection</li> <li>6. Post traumatic tendon or nerve repair</li> <li>7. Damage Control Orthopaedic (DCO) surgery for polytrauma/ polyfractures</li> <li>8. Fractures involving epiphyseal growth plates</li> <li>9. Spine infection including pyogenic discitis/ tuberculosis with neurology/ instability</li> <li>10. Locked knee</li> <li>11. Neck of femur fracture in young patients</li> <li>12. Human or animal bite wound debridement</li> </ol>

<b>EMERGENCY SURGERY</b>	
	13. Fixation of fractures with fat embolism syndrome 14. Ischemic limbs
<b>Semi-urgent</b>	1. Fixation of close fractures 2. Definitive fixation following initial temporary external fixator 3. Biopsy for suspected bone/ soft tissue malignant tumour or infection 4. Chemoport insertion 5. Chronic OM 6. Periprosthetic fracture fixation 7. Elderly patients with lower limb fractures 8. Slipped capital femoral epiphysis 9. Implant failures 10. Revision of fracture fixation 11. Open wounds requiring closure 12. Unstable spine fractures without a neurological deficit 13. Fractures at risk of AVN (neck of talus, scaphoid) 14. Bone metastases at risk of fracture

<b>ELECTIVE SURGERY</b>	
<b>Category 1</b>	1. Malignant Primary bone tumor 2. Soft tissue malignancies 3. Metastatic bone disease with no immediate risk of fracture
<b>Category 2</b>	1. Spinal stenosis (e.g. laminoplasty, PSIF or ACDF/ ACCF for cervical spondylotic myelopathy) 2. Constriction band syndrome 3. Removal of paediatric trauma implants 4. Manual examination and manipulation under general anaesthesia

## ELECTIVE SURGERY

### Category 3

#### **A. Congenital**

1. Syndactaly
2. Polydactaly
3. DDH
4. CTEV correction

#### **B. Functional/ Quality of Life**

1. Ligament injury of knee, ankle and shoulder requiring reconstruction/ repair surgery
2. Shoulder arthroscopy procedure
3. Arthroplasty
4. Stenosing tenosynovitis release
5. Entrapment neuropathy
6. Cerebral palsy related surgery
7. Symptomatic benign soft tissue and bone tumour
8. Non-union
9. Brachial plexus injury requiring surgery (neurotisation)
10. Tendon transfer
11. TA lengthening

#### **C. Corrective**

1. Angular deformity e.g.: malunion/ Blount disease
2. Limb length discrepancy
3. Scoliosis
4. Ankle and foot deformity e.g.: hallux valgus
5. Bone transport
6. Any cosmetic surgeries

### 3.3 GYNAECOLOGY

EMERGENCY SURGERY	
<b>Acute Emergency</b>	<ol style="list-style-type: none"><li>1. Ruptured ectopic pregnancy</li><li>2. Bleeding miscarriage</li><li>3. Twisted ovarian cyst</li></ol>
<b>Emergency</b>	<b>A. Trauma (&lt;6 hours)</b> <ol style="list-style-type: none"><li>1. Perineal trauma</li><li>2. Intra-abdominal pelvic injury</li></ol>
<b>Urgent</b>	<ol style="list-style-type: none"><li>1. Incomplete miscarriage</li><li>2. Septic miscarriage</li><li>3. Perineal abscess</li><li>4. Bleeding molar pregnancy</li></ol>
<b>Semi-urgent</b>	<ol style="list-style-type: none"><li>1. Pelvic inflammatory disease</li><li>2. Pelvic abscess</li><li>3. Missed miscarriage</li></ol>

<b>ELECTIVE SURGERY</b>	
<b>Category 1</b>	<ol style="list-style-type: none"> <li>1. Ovarian tumour</li> <li>2. Endometrial/ Uterine carcinoma</li> <li>3. Cervical carcinoma</li> <li>4. Vulvar carcinoma</li> <li>5. Vaginal carcinoma</li> </ol>
<b>Category 2</b>	<ol style="list-style-type: none"> <li>1. Ovarian cyst (low suspicion of malignancy)</li> <li>2. Uterine fibroid with menorrhagia</li> </ol>
<b>Category 3</b>	<p><b>A. Congenital</b></p> <ol style="list-style-type: none"> <li>1. Imperforate hymen</li> <li>2. Transverse vaginal septum</li> </ol> <p><b>B. Functional/ quality of life</b></p> <ol style="list-style-type: none"> <li>1. Tubal patency for infertility</li> <li>2. Polycystic Ovarian Syndrome (PCOS) with infertility</li> <li>3. Asymptomatic uterine fibroid</li> <li>4. Cervical incompetence</li> </ol> <p><b>C. Corrective</b></p> <p style="padding-left: 20px;">Utero-vaginal prolapse</p>



### 3.4 NEUROSURGERY

<b>EMERGENCY SURGERY</b>	
<p>This Clinical Priority Access Criteria to operative intervention do not replace clinical judgment and will not determine the most appropriate treatment or treatment pathway for a patient. Local surgeons will continue to make these decisions.</p>	
<p><b>Some examples of cases are:</b></p> <p><b>Cranial Trauma Causes:</b></p> <ol style="list-style-type: none"> <li>1. Traumatic intracerebral, acute subdural, or epidural hematoma.</li> <li>2. Brain contusion</li> <li>3. Traumatic cerebellar haemorrhage</li> <li>4. Penetrating cranial object</li> <li>5. Acute hydrocephalus</li> <li>6. Large chronic subdural haematoma</li> </ol> <p><b>Spinal Trauma Causes:</b></p> <ol style="list-style-type: none"> <li>1. Spinal column fracture</li> <li>2. Subluxation/dislocation of facet joints in cervical spine</li> <li>3. Collapse of vertebral body</li> <li>4. Lumbar disc herniation with significant canal compromise</li> </ol>	<p><b>Cranial Non-Trauma Causes:</b></p> <ol style="list-style-type: none"> <li>1. Non-traumatic intracerebral and brainstem haemorrhage</li> <li>2. Non-traumatic cerebellar haemorrhage.</li> <li>3. Non-traumatic subarachnoid haemorrhage</li> <li>4. Acute hydrocephalus</li> <li>5. Supratentorial mass lesion with midline shift &gt;5mm or obliterated basal cistern</li> <li>6. Posterior fossa mass lesion with brainstem compression.</li> <li>7. Pituitary tumour with acute visual failure/ pituitary apoplexy</li> </ol> <p><b>Spinal Non-Trauma Causes:</b></p> <p>Extrinsic and intrinsic spinal mass lesion with spinal cord or corda equinae compression on imaging.</p>

<b>EMERGENCY SURGERY</b>	
<b>Acute Emergency</b>	<p>Haemodynamically stable patients with:</p> <ul style="list-style-type: none"> <li>• Markedly elevated ICP and coma (GCS &lt;8) or</li> <li>• Rapidly increasing ICP with rapidly deteriorating consciousness to coma</li> </ul> <p>from any cranial trauma or non-trauma causes as listed above.</p> <p><b>Criteria of markedly elevated ICP:</b></p> <p><b>Clinical criteria:</b></p> <ul style="list-style-type: none"> <li>• Coma or GCS &lt;8 not attributable to intoxicants with,</li> <li>• Motor posturing with,</li> <li>• Dilated pupils with or without,</li> <li>• Bradycardia with hypertension</li> </ul> <p><b>Imaging criteria:</b></p> <ul style="list-style-type: none"> <li>• Acute hydrocephalus with periventricular lucency or,</li> <li>• Brain shift &gt; 5mm or absence basal cistern caused by a mass lesion or,</li> <li>• Brain stem compression caused by posterior fossa mass lesion</li> </ul>
<p style="text-align: center;"><b>Emergency</b></p> <ul style="list-style-type: none"> <li>• Cranial trauma causes: &lt;6 hours</li> <li>• Cranial non-trauma causes: &lt;8 hours</li> </ul>	<p>Haemodynamically stable patients with:</p> <ul style="list-style-type: none"> <li>• High ICP and moderately impaired consciousness or,</li> <li>• Rapidly increasing ICP with deteriorating consciousness</li> </ul> <p>from any cranial trauma or non-trauma causes as listed above.</p> <p><b>Criteria of high ICP with moderately impaired consciousness:</b></p> <p><b>Clinical criteria:</b></p> <ul style="list-style-type: none"> <li>• Impaired (stuporous or obtunded or GCS 9-12) consciousness not attributable to intoxicants or deteriorating consciousness level with or without,</li> <li>• Impaired or worsening in motor functions with or</li> </ul>

<b>EMERGENCY SURGERY</b>	
	<p>without,</p> <ul style="list-style-type: none"> <li>• Impaired or worsening pupils' functions.</li> </ul> <p><b>Imaging criteria:</b></p> <ul style="list-style-type: none"> <li>• Acute hydrocephalus or,</li> <li>• Brain shift &gt; 5mm or absence basal cistern caused by a mass lesion or,</li> <li>• Brain stem compression caused by posterior fossa mass lesion.</li> </ul>
<b>Urgent</b>	<p><b>A. Haemodynamically stable patients with:</b></p> <ul style="list-style-type: none"> <li>• High ICP and mildly impaired consciousness or,</li> <li>• Rapidly increasing ICP with deteriorating consciousness</li> </ul> <p>from any cranial trauma or non-trauma causes as above.</p> <p><b>Criteria of high ICP with mildly impaired consciousness:</b></p> <p><b>Clinical criteria:</b></p> <ul style="list-style-type: none"> <li>• Impaired (drowsy or lethargic or GCS 13-15) not attributable to intoxicants or deteriorating consciousness level with or without,</li> <li>• Impaired or worsening in motor functions with or without,</li> <li>• Impaired or worsening pupils' functions</li> </ul> <p><b>Imaging criteria:</b></p> <ul style="list-style-type: none"> <li>• Acute hydrocephalus or,</li> <li>• Brain shift &gt; 5mm or absence basal cistern caused by a mass lesion or,</li> <li>• Brain stem compression caused by posterior fossa mass lesion</li> </ul> <p><b>B. Haemodynamically stable patients with:</b></p> <ul style="list-style-type: none"> <li>• Markedly or rapidly developing motor deficits from injury or a mass lesion.</li> <li>• Acute (&lt;48hrs) spinal cord or cauda equine injury or compression syndrome on imaging</li> </ul> <p>from any spinal trauma or non-trauma causes as listed above.</p>

<b>EMERGENCY SURGERY</b>	
<b>Semi-urgent</b>	<p><b>A. Haemodynamically stable patients with:</b></p> <ul style="list-style-type: none"> <li>• High ICP without altered consciousness or</li> <li>• Slowly increasing ICP with worsening of high ICP symptoms or deteriorating in neurological functions</li> </ul> <p>from any cranial trauma or non-trauma causes as above.</p> <p><b>Criteria of high ICP symptoms:</b></p> <p><b>Clinical criteria:</b></p> <ul style="list-style-type: none"> <li>• High ICP symptoms (nausea, vomiting, headache) or worsening of high ICP symptoms with or without,</li> <li>• Impaired or worsening in neurological functions (cranial nerve or motor deficit or seizures)</li> </ul> <p><b>Imaging criteria:</b></p> <ul style="list-style-type: none"> <li>• Acute hydrocephalus or,</li> <li>• Brain shift &lt; 5mm caused by a mass lesion</li> <li>• Hydrocephalus caused by posterior fossa mass lesion</li> </ul> <p><b>B. Haemodynamically stable patients with:</b></p> <ul style="list-style-type: none"> <li>• Spinal instability or,</li> <li>• Spinal cord or corda equina equina syndrome compression</li> <li>• Neurologic dysfunction or severe unremitting spinal nerve pain.</li> </ul> <p>from any spinal trauma or non-trauma causes as listed above</p>

## ELECTIVE SURGERY

### Category 1

#### 1. Brain Tumours

- Intra axial space-occupying lesion with minimal and/ or slowly progressing symptoms
- Extra axial symptomatic small benign tumours (e.g. acoustic neuroma/ vestibular schwannoma, meningioma, craniopharyngioma epidermoid cyst, arachnoid cyst) without cerebral oedema
- Pituitary tumour associated with visual field deficits and/or symptomatic hyper-/ hypopituitarism

#### 1. Neurovascular Disorders (AVM, Aneurysm)

- Asymptomatic AVM or aneurysm, i.e. not associated with an intracranial haemorrhage or acute neurological deficit

#### 2. Hydrocephalus and VP Shunt

- Previously diagnosed hydrocephalus with evidence of raised intracranial pressure
- New diagnosis of hydrocephalus on CT or MRI
- Patient with complications or suspected complications of an in-situ VP shunt
- Idiopathic intracranial hypertension – in patients with persistent symptoms or visual deterioration despite medical therapy including repeat lumbar punctures

#### 3. Non-acute Traumatic Brain Injury

- Non-acute skull fracture
- Non-acute traumatic brain injury

#### 4. Spine/ Neck/ Back Pain

- Irreversible deficit if not seen within 1-4 weeks
- Significant spinal nerve root compression or spinal cord compression with slower evolving neurological signs/ symptoms
- Severe pain with significant functional impairment
- Moderate to severe sciatica with recent reflex and muscle power deficit e.g. foot weakness

<b>ELECTIVE SURGERY</b>	
	<ul style="list-style-type: none"> <li>• Moderate to severe neck and arm pain with recent reflex and muscle power deficit</li> </ul> <p>5. Peripheral Nerve Compression</p> <ul style="list-style-type: none"> <li>• Carpal tunnel syndrome or severe ulnar entrapment neuropathy with weakness/ wasting and electrophysiological confirmation of diagnosis</li> <li>• Peripheral nerve compression with neurological deficit and/ or severe pain syndrome</li> </ul>
<b>Category 2</b>	<p>1. Brain Tumours</p> <ul style="list-style-type: none"> <li>• Functioning or non-functioning pituitary adenoma, pituitary tumours with slowly progressive visual field deficit</li> <li>• Incidental finding on imaging e.g. epidermoid cyst, arachnoid cyst and/or newly diagnosed chiari malformation, empty sella, venous angioma</li> </ul> <p>2. Spine/ Neck/ Back Pain</p> <ul style="list-style-type: none"> <li>• Less severe and more long-standing pain with significant functional impairment</li> <li>• Acute cervical and lumbar disc prolapse with stable neurological signs/ symptoms</li> <li>• Severe degenerative spinal disorders with limitation of activity of daily living (ADL)</li> <li>• Acute cervical or lumbar disc prolapse with moderate to severe limb pain but minimal neurological deficit</li> <li>• Documented severe lumbar canal stenosis with significant neurogenic claudication/ limitation of walking distance</li> <li>• Acute Pars defect in young adult</li> <li>• Anterolisthesis/ spondylolisthesis with lower limb neurology and/ or instability on flexion/ extension X-rays</li> </ul>

## ELECTIVE SURGERY

### Category 3

#### A. Congenital

1. Craniostenosis
  - with or without slowly neurological deficits
2. Craniofacial disorder
  - with or without slowly neurological deficits
3. Encephalocele/ meningocele
  - with or without slowly neurological deficits

#### B. Functional/ Quality of Life

1. Spine/ Neck/ Back Pain
  - Mechanical lower back pain without lower limb pain
  - Stable mild neurological symptoms/signs which is unlikely to progress if left untreated or in whom a good surgical outcome is uncertain
  - Pain that is manageable or reasonably controlled with analgesia
  - Chronic LBP/ neck pain (without leg or arm pain)
  - Most cases of chronic cervical and lumbar disc prolapse and degenerative spinal disorders with no to stable mild neurological deficit
  - Long-standing spondylolisthesis with stable neurology
2. Peripheral Nerve Compression
  - Ulnar entrapment neuropathy when no response to  $\geq 6$  months of maximal medical management
3. Trigeminal neuralgia/ Hemifacial spasm
  - When no response to  $\geq 6$  months of maximal medical management
4. Seizures
  - When no response to  $\geq 6$  months of maximal medical management
5. Movement disorders
  - When no response to  $\geq 6$  months of maximal medical management

#### C. Corrective

Cranioplasty for trauma or non-trauma skull defects

### 3.5 COLORECTAL SURGERY

EMERGENCY SURGERY	
<b>Acute Emergency</b>	Laparotomy for massive lower gastrointestinal bleeding
<b>Emergency</b>	<p><b>A. Trauma (&lt; 6 Hours)</b></p> <ol style="list-style-type: none"> <li>1. Intra-abdominal injury with suspected bowel perforation.</li> <li>2. Anal sphincter injury</li> </ol> <p><b>B. Non-trauma (&lt; 8 Hours)</b></p> <ol style="list-style-type: none"> <li>1. Laparotomy with bowel resection for ischaemia</li> <li>2. Laparotomy for intestinal obstruction</li> <li>3. Laparotomy for post-operative hemorrhage</li> <li>4. Laparotomy for perforated Diverticulitis [Hinchey 3&amp;4]</li> </ol>
<b>Urgent</b>	<ol style="list-style-type: none"> <li>1. Incision and drainage (I&amp;D) for perianal abscess</li> <li>2. Clot evacuation/ haemorrhoidectomy for prolapsed, thrombosed haemorrhoids</li> <li>3. Appendicectomy</li> </ol>
<b>Semi-urgent</b>	I&D for perianal abscess

ELECTIVE SURGERY	
<b>Category 1</b>	Surgeries for colorectal malignancy
<b>Category 2</b>	<ol style="list-style-type: none"> <li>1. Fistula in ano</li> <li>2. Hemorrhoid surgery</li> <li>3. Panproctocolectomy with ileo-rectal anastomosis for FAP</li> <li>4. Surgery for rectal mucosal prolapse</li> </ol>
<b>Category 3</b>	<p><b>B. Functional/ Quality of Life</b></p> <p>Colectomy for slow transit constipation</p>



### 3.6 PAEDIATRIC SURGERY

<b>EMERGENCY SURGERY</b>	
<b>Acute Emergency</b>	<ol style="list-style-type: none"> <li>1. Midgut volvulus with or without malrotation</li> <li>2. Uncontrolled bleeding from trauma</li> <li>3. Ventilated Tracheo-Oesophageal fistula especially with Duodenal atresia or Perforated stomach</li> <li>4. Abdominal compartment syndrome for laparostomy</li> </ol>
<b>Emergency</b>	<p><b>B. Non-trauma (&lt; 8 Hours)</b></p> <ol style="list-style-type: none"> <li>1. Malrotation</li> <li>2. Ventilated Congenital Lung lesions e.g. CPAM</li> <li>3. Perforated viscus in neonates especially NEC</li> <li>4. Tracheo-Oesophageal fistula repair</li> <li>5. Intra &amp; Extra tumoural bleeding e.g. Wilm's tumour</li> <li>6. Closed loop obstruction in SBO</li> <li>7. Endoscopic variceal bleeding control</li> </ol>
<b>Urgent</b>	<ol style="list-style-type: none"> <li>1. Irreducible intussusception</li> <li>2. Perforated viscus in older children</li> <li>3. Bowel atresias</li> <li>4. Colostomy for Anorectal anomalies</li> <li>5. Decortication for empyema thoracis</li> </ol>
<b>Semi-urgent</b>	<ol style="list-style-type: none"> <li>1. Congenital diaphragmatic hernia repair</li> <li>2. Reduced inguinal hernia for Herniotomy</li> <li>3. Adhesive small bowel obstruction</li> <li>4. Appendicectomy</li> <li>5. Choledochal cyst causing jaundice and bowel obstruction</li> <li>6. Pyloromyotomy</li> <li>7. Bleeding haemangiomas</li> <li>8. Delayed diagnosis of Hirschprung's disease for Colostomy</li> <li>9. Orchidectomy for Testicular tumours</li> <li>10. Vesicostomy or Vaginostomy in cloacal anomalies with urinary tract obstruction</li> <li>11. Vascular Access Devices surgery for initiation of chemotherapy</li> </ol>

<b>ELECTIVE SURGERY</b>	
<b>Category 1</b>	<ol style="list-style-type: none"> <li>1. Pull through procedures e.g. PSARP, Duhamel or Transanal</li> <li>2. Closure of stomas</li> <li>3. Kasai operation</li> <li>4. Any “planned” tumour surgeries, both abdominal and thoracic</li> </ol>
<b>Category 2</b>	<ol style="list-style-type: none"> <li>1. Choledochal cyst</li> <li>2. Congenital lung malformations e.g. CPAM</li> <li>3. Pyeloplasty for PUJ obstruction</li> <li>4. Redo Oesophageal surgeries</li> </ol>
<b>Category 3</b>	<p><b>A. Congenital</b></p> <ol style="list-style-type: none"> <li>1. Hypospadias surgery</li> <li>2. Undescended testis</li> <li>3. Inguinal herniotomy</li> </ol> <p><b>B. Functional/ Quality of Life</b></p> <ol style="list-style-type: none"> <li>1. Gastrostomy for Mentally impaired children</li> <li>2. Small lumps and bumps</li> </ol> <p><b>C. Corrective</b> Exstrophy surgeries</p>

### 3.7 BREAST AND ENDOCRINE SURGERY

EMERGENCY SURGERY	
<b>Acute Emergency</b>	
<b>Emergency</b>	<p><b>B. Non-trauma (&lt; 8 Hours)</b> Simple mastectomy for severe breast abscess/ infection (e.g. necrotizing fasciitis)</p>
<b>Urgent</b>	<ol style="list-style-type: none"> <li>1. Incision &amp; Drainage of Breast Abscess</li> <li>2. Evacuation of haematoma post mastectomy or breast conserving surgery</li> <li>3. Total Thyroidectomy for Thyroid Malignancy with Airway Obstruction (e.g. Anaplastic Ca; Lymphoma)</li> <li>4. Total Thyroidectomy for Huge Goitre with Airway Obstruction</li> </ol>
<b>Semi-urgent</b>	<ol style="list-style-type: none"> <li>1. Mastectomy for Bleeding Fungating (T4) Advanced Breast Cancer</li> <li>2. Wound debridement for SSI or flap necrosis following breast surgery/ reconstruction</li> <li>3. Total Thyroidectomy for Toxic Goitres with Uncontrolled Thyrotoxicosis</li> </ol>

## ELECTIVE SURGERY

<b>Category 1</b>	<ol style="list-style-type: none"> <li>1. Mastectomy with or without Axillary Clearance or Sentinel Lymph Node Biopsy for Breast Carcinoma</li> <li>2. Oncoplastic surgery with or without Axillary Clearance or Sentinel Lymph Node Biopsy for Breast Carcinoma including Immediate breast reconstruction (implant, autologous or combination of both)</li> <li>3. Mastectomy with or without Immediate breast reconstruction for DCIS</li> <li>4. Radical Mastectomy for Sarcoma; Malignant Phyllodes with or without chest wall flap cover</li> <li>5. Wide Local Excision with or without Axillary Clearance or Sentinel Lymph Node Biopsy for Breast Carcinoma</li> <li>6. Wide Local Excision for Suspicious Lesions of the Breast</li> <li>7. Total Thyroidectomy for Thyroid Malignancy with or without Modified Neck Dissection</li> <li>8. Hemithyroidectomy for Suspicious Thyroid Nodule</li> <li>9. Open Adrenalectomy for Adrenal Malignancy</li> <li>10. Parathyroidectomy for Parathyroid Carcinoma</li> </ol>
<b>Category 2</b>	<ol style="list-style-type: none"> <li>1. Total Thyroidectomy for Large/ Retrosternal Goitres with Compressive Symptoms</li> <li>2. Total Thyroidectomy for Toxic Goitres after failure of medical control</li> <li>3. Parathyroidectomy in Primary Hyperparathyroidism with symptomatic/ severe hypercalcaemia</li> <li>4. Adrenalectomy for Functional Adrenal Tumours</li> </ol>

## ELECTIVE SURGERY

### Category 3

#### A. Congenital

1. Excision of Accessory Breast
2. Corrective Surgery for Congenital Inverted Nipple
3. Sistrunk's Operation for Thyroglossal Cyst

#### B. Functional/ Quality of Life

1. Total Thyroidectomy for Large Goitres
2. Hemithyroidectomy for Large Thyroid Nodule
3. Parathyroidectomy for Primary Hyperparathyroidism
4. Total Parathyroidectomy for Renal Hyperparathyroidism
5. Adrenalectomy for Adrenal Tumours

#### C. Corrective

1. Delay Breast Reconstruction in patients with previous history breast neoplasm
2. Microdochectomy for Ductal Ectasia or Intraductal Papilloma
3. Excision biopsy for Benign Breast Diseases
4. Oncoplastic Surgery for Hypoplastic Breast, Severe Deformity post Wide Local Excision
5. Subcutaneous Mastectomy for Gynaecomastia

### 3.8 CARDIOVASCULAR AND THORACIC SURGERY

<b>EMERGENCY SURGERY</b>	
<b>Acute Emergency</b>	<ol style="list-style-type: none"> <li>1. Failed Angioplasty with hemodynamic collapse</li> <li>2. Cardiac tamponade</li> <li>3. Failed endovascular procedures with hemodynamic instability</li> <li>4. Failed intracardiac device insertion for device retrieval/ hemodynamic instability</li> </ol>
<b>Emergency</b>	<p><b>A. Trauma (&lt;6 Hours)</b></p> <ol style="list-style-type: none"> <li>1. Blunt Chest trauma with massive hemothorax</li> <li>2. Transected tracheobronchial tree</li> <li>3. Aortic transection</li> <li>4. Penetrating chest injury with hemodynamic collapse or hemopneumothorax</li> </ol> <p><b>B. Non-trauma (&lt;8 Hours)</b></p> <ol style="list-style-type: none"> <li>1. Pulmonary embolism with hemodynamic compromise</li> <li>2. Congenital Heart disease with hypercyanotic spells requiring urgent BT shunt</li> <li>3. Leaking Aortic Dissection or Aortic aneurysms</li> <li>4. Post cardiac surgery with hemodynamic instability</li> <li>5. Aortic Dissection (type A or B) with end organ dysfunction</li> <li>6. Massive pleural effusion</li> <li>7. Heart or Lung Conditions requiring ECMO (extracorporeal Membrane Oxygenation) support</li> </ol>
<b>Urgent</b>	<ol style="list-style-type: none"> <li>1. Type A Aortic Dissection</li> <li>2. Left main stem disease with ongoing ischemia (chest pain)</li> <li>3. Triple vessel coronary artery disease with ongoing ischemia/ arrhythmias</li> <li>4. Acute mitral valve prolapses with hemodynamic instability</li> <li>5. Obstructed TAPVD (Total Anomalous Pulmonary Venous Drainage)</li> </ol>

<b>EMERGENCY SURGERY</b>	
<b>Semi-urgent</b>	<ol style="list-style-type: none"> <li>1. Left main stem disease or severe triple vessel disease with recent NSTEMI (Non-ST Elevation MI) or STEMI (ST Elevation MI)</li> <li>2. STEMI complicated by VSR (Ventricular Septal Rupture) or Acute Mitral Valve Regurgitation</li> <li>3. Infective valve endocarditis not responsive to antibiotic therapy</li> <li>4. Thoracic Empyema not responding to antibiotic treatment</li> <li>5. Pneumothorax not responding to conservative treatment</li> <li>6. Truncus Arteriosus</li> </ol>
<b>ELECTIVE SURGERY</b>	
<b>Category 1</b>	<ol style="list-style-type: none"> <li>1. Coronary artery disease</li> <li>2. Valvular Heart Disease for repair or replacement</li> <li>3. Thoracic Aortic Aneurysm</li> <li>4. Chronic Thoracic Aorta Dissection</li> </ol>
<b>Category 2</b>	<ol style="list-style-type: none"> <li>1. Chronic Thoracic Empyema</li> <li>2. Mediastinal Tumour</li> <li>3. Lung tumours including Lung cancers</li> </ol>
<b>Category 3</b>	<p><b>A. Congenital</b></p> <ol style="list-style-type: none"> <li>1. Atrial or Ventricular Septal Defect</li> <li>2. Tetralogy of Fallot</li> <li>3. Patent Ductus arteriosus</li> <li>4. Coarctation of Aorta</li> <li>5. Interrupted Aortic Arch</li> <li>6. Double outlet right ventricle</li> <li>7. Univentricular Heart</li> <li>8. Patent Ductus Arteriosus</li> </ol> <p><b>B. Functional/ Quality of Life</b></p> <ol style="list-style-type: none"> <li>1. Chronic constrictive pericarditis</li> <li>2. End stage renal failure with angina</li> <li>3. Chronic pericardial effusion</li> <li>4. Advance lung cancer for palliative treatment of pleural or pericardial effusion</li> </ol> <p><b>C. Corrective</b></p> <p>Congenital Heart conditions</p>

### 3.9 VASCULAR SURGERY

EMERGENCY SURGERY	
<b>Acute Emergency</b>	<ol style="list-style-type: none"> <li>1. Ruptured Abdominal Aortic Aneurysm</li> <li>2. Ruptured arterial aneurysms</li> <li>3. Major arterial injuries</li> <li>4. Grade IIb (Rutherford Classification) Acute Limb Ischemia</li> <li>5. Ruptured thoracic aneurysm/ dissection</li> </ol>
<b>Emergency</b>	<p><b>A. Trauma (&lt; 6 Hours)</b> Vascular trauma</p> <p><b>B. Non-trauma (&lt; 8 Hours)</b></p> <ol style="list-style-type: none"> <li>1. Grade IIa (Rutherford Classification) Acute Limb Ischemia</li> <li>2. Bleeding arteriovenous fistula</li> </ol>
<b>Urgent</b>	<ol style="list-style-type: none"> <li>1. Abdominal aortic aneurysm with contained leak</li> <li>2. Complicated Type B aortic dissection</li> <li>3. Stable Thoracic Aortic Injury</li> </ol>
<b>Semi-urgent</b>	<ol style="list-style-type: none"> <li>1. Symptomatic Abdominal Aortic Aneurysm</li> <li>2. Critical Limb Ischemia</li> <li>3. Vascular access induced limb ischemia</li> <li>4. Thrombosed peripheral bypass graft</li> <li>5. Thrombosed vascular access</li> </ol>



<b>ELECTIVE SURGERY</b>	
<b>Category 1</b>	Angiosarcoma (rare)
<b>Category 2</b>	<ol style="list-style-type: none"> <li>1. Asymptomatic Abdominal Aortic Aneurysm Repair</li> <li>2. Carotid artery stenosis</li> <li>3. Arterio-venous fistula for hemodialysis</li> <li>4. Arterio-venous fistula aneurysm/ Giant fistula</li> <li>5. Bypass graft stenosis/ in-stent restenosis</li> <li>6. Chronic venous insufficiency/ venous ulcer</li> </ol>
<b>Category 3</b>	<p><b>A. Congenital</b> Vascular malformation</p> <p><b>B. Functional/ Quality of Life</b></p> <ol style="list-style-type: none"> <li>1. Surgery for intermittent claudication</li> <li>2. Varicose veins surgery</li> </ol> <p><b>C. Corrective</b> Arterio-venous malformation</p>

### 3.10 UPPER GASTROINTESTINAL SURGERY

EMERGENCY SURGERY	
<b>Acute Emergency</b>	<p>Hemodynamically unstable:</p> <ol style="list-style-type: none"> <li>1. Massive UGIB failed endoscopic hemostasis: requires urgent underrunning of bleeding ulcer</li> <li>2. Penetrating intra-abdominal injury: requires urgent exploratory laparotomy</li> <li>3. Penetrating neck injury: urgent exploration</li> <li>4. Penetrating thoracic injury</li> </ol>
<b>Emergency</b>	<p><b>A. Trauma (&lt; 6 Hours)</b> <b>Haemodynamically stable:</b></p> <ol style="list-style-type: none"> <li>1. Upper GI bleed but failed endoscopic hemostasis/ not amenable to endoscopic intervention: requires urgent underrunning of bleeding ulcer/ resection</li> <li>2. Penetrating intra-abdominal injury: requires exploratory laparotomy</li> <li>3. Penetrating neck injury: urgent exploration</li> <li>4. Penetrating thoracic injury</li> <li>5. Perforation of the oesophagus/ stomach/ duodenum with septic manifestations - empyema thoracic/ peritonitis</li> </ol> <p><b>B. Non-trauma (&lt; 8 Hours)</b></p> <ol style="list-style-type: none"> <li>1. Iatrogenic perforations of the oesophagus/ stomach/ duodenum - during rigid/ flexible endoscopy - without septic manifestation</li> <li>2. Acute gastric volvulus - acute presentation with severe pain - with septic/ obstructive manifestations</li> <li>3. Traumatic diaphragmatic herniation</li> <li>4. Complications post-surgery: anastomotic leaks, conduit ischaemia, collections - septic manifestations present</li> </ol>

<b>EMERGENCY SURGERY</b>	
<b>Urgent</b>	<ol style="list-style-type: none"> <li>1. Bleeding gastric tumours/ ulcers - recurrent bleeding episodes necessitating regular transfusions</li> <li>2. Acute gastric volvulus - acute presentation with severe pain - no septic/ obstructive manifestations</li> <li>3. Complications post-surgery: anastomotic leaks, conduit ischaemia, collections - no septic manifestation</li> </ol>
<b>Semi-urgent</b>	<ol style="list-style-type: none"> <li>1. Gastric outlet obstruction due to recalcitrant ulcers necessitating parenteral nutrition - enteral conduits/ nasojejunal access impossible</li> <li>2. Chronic gastric volvulus (CT scan detected, no septic/ obstructive) manifestation</li> <li>3. Complications post-surgery: afferent loop syndrome post Billroth II reconstruction, anastomotic ulcers/ stenosis</li> <li>4. Superior mesenteric artery syndrome</li> <li>5. Obstructed/ bleeding tumours of the stomach/ duodenum - for palliation</li> </ol>

<b>ELECTIVE SURGERY</b>	
<b>Category 1</b>	<ol style="list-style-type: none"> <li>1. ALL operable gastric/ oesophageal tumours</li> <li>2. Bleeding/ symptomatic gastrointestinal stromal tumours</li> </ol>
<b>Category 2</b>	<ol style="list-style-type: none"> <li>1. Non-bleeding/ asymptomatic gastrointestinal stromal tumours</li> <li>2. Achalasia cardia</li> <li>3. Malrotation - symptomatic (not obstructed)</li> </ol>

## ELECTIVE SURGERY

### Category 3

#### A. Congenital

1. Malrotation - asymptomatic (not obstructed)
2. Asymptomatic oesophageal diverticulum
3. Asymptomatic duodenal diverticulum

#### B. Functional/ Quality of Life

1. Gastroesophageal reflux disease requiring fundoplication
2. Metabolic surgery with significant medical comorbidities
3. Re-do metabolic surgery for complications

#### C. Corrective

1. Metabolic surgery without significant medical comorbidities
2. Re-do metabolic surgery for weight gain

### 3.11 Hepatobiliary Surgery

EMERGENCY SURGERY	
<b>Acute Emergency</b>	<ol style="list-style-type: none"> <li>1. Visceral HPB Trauma with Hemodynamic instability</li> <li>2. Bleeding HPB Malignancies</li> <li>3. Psuedoaneurysms requiring surgical intervention (non-availability of IR services)</li> <li>4. Liver Transplant for Acute Liver Failure</li> </ol>
<b>Emergency</b>	<p><b>A. Trauma (&lt; 6 Hours)</b></p> <ol style="list-style-type: none"> <li>1. Blunt visceral injuries with evidence of peritonitis</li> <li>2. Penetrating visceral injuries with evidence of peritonitis</li> </ol> <p><b>B. Non-trauma (&lt; 8 Hours)</b></p> <ol style="list-style-type: none"> <li>1. Post procedural perforated viscus/ haemorrhage</li> <li>2. Impending Rupture Liver tumours</li> <li>3. Retained ERCP implements</li> </ol>
<b>Urgent</b>	<ol style="list-style-type: none"> <li>1. BileLeaks</li> <li>2. Pancreatic leaks</li> <li>3. Empyema Gall bladder/ Acute Cholecystitis</li> <li>4. Obstructive jaundice requiring surgical drainage</li> <li>5. Obstructive jaundice requiring endoscopic drainage under anaesthesia (ERCP)</li> <li>6. Intestinal Obstruction secondary to adhesions/ malignancy with impending visceral perforation</li> </ol>
<b>Semi-urgent</b>	<ol style="list-style-type: none"> <li>1. Intestinal Obstruction without impending visceral perforation</li> <li>2. Biliary Colic</li> <li>3. Pancreatic Necrosectomy</li> </ol>

<b>ELECTIVE SURGERY</b>	
<b>Category 1</b>	<ol style="list-style-type: none"> <li>1. Primary Liver Malignancy</li> <li>2. Secondary Liver Malignancies</li> <li>3. Metastatic HPB Malignancies</li> <li>4. Pancreatic Malignancies</li> <li>5. Biliary Malignancies</li> <li>6. Bowel Malignancies</li> </ol>
<b>Category 2</b>	<ol style="list-style-type: none"> <li>1. Hepatolithiasis</li> <li>2. Biliary Obstruction — Benign Stented</li> <li>3. Symptomatic Pancreatic Pseudocysts</li> <li>4. Anastomotic Stricture Revisions</li> </ol>
<b>Category 3</b>	<p><b>A. Congenital</b> Choledochal cysts</p> <p><b>B. Functional/ Quality of Life</b></p> <ol style="list-style-type: none"> <li>1. Asymptomatic Gall Stone disease</li> <li>2. Chronic Pancreatitis</li> <li>3. Choledochal cysts</li> <li>4. Benign HPB tumours</li> <li>5. Liver Transplant</li> </ol>

### 3.12 UROLOGY

<b>EMERGENCY SURGERY</b>	
<b>Acute Emergency</b>	<ol style="list-style-type: none"> <li>1. Exploration for haemodynamically unstable renal injuries</li> <li>2. Repair of major Intraperitoneal bladder rupture/ perforation</li> <li>3. Exploration for Torsion of Testis</li> <li>4. Endoscopic haemostasis for severe bleeding post TURP</li> <li>5. Exploration for severe bleeding post urological surgery</li> <li>6. Exploration post renal transplant for suspected vascular thrombosis</li> <li>7. On table referral for iatrogenic urinary tract injury</li> </ol>
<b>Urgent</b>	<p><b>A. Trauma (&lt;6 Hours)</b></p> <ol style="list-style-type: none"> <li>1. Suprapubic catheter diversion for urethral injuries</li> <li>2. Exploration for penetrating urinary tract injuries</li> <li>3. Repair of major male genital injuries</li> <li>4. Repair of Penile fracture</li> </ol> <p><b>B. Non-trauma (&lt;8 Hours)</b></p> <ol style="list-style-type: none"> <li>1. Relief of ureteric obstruction with renal failure/ anuria/ urosepsis</li> <li>2. Surgical procedures for Priapism</li> </ol>
<b>Emergency</b>	<ol style="list-style-type: none"> <li>1. Relief of unilateral ureteric obstruction</li> <li>2. Clot evacuation for persistent haematuria with clot blockage despite bladder irrigation</li> <li>3. Drainage of Scrotal, testicular abscess and debridement for Fournier's gangrene</li> <li>4. Drainage of perinephric abscess, pyonephrosis</li> <li>5. Endoscopic management of impacted urethral stone</li> </ol>
<b>Semi-urgent</b>	<ol style="list-style-type: none"> <li>1. Nephrectomy for infected kidney</li> <li>2. Ureteric reimplantation for iatrogenic ureterovaginal fistula</li> <li>3. TURP for Benign Prostatic Hyperplasia causing bladder outlet obstruction with renal failure.</li> <li>4. Ureteroscopic lithotripsy for obstructive ureteric stone in a single functioning kidney</li> </ol>

<b>ELECTIVE SURGERY</b>	
<b>Category 1</b>	<ol style="list-style-type: none"> <li>1. Transurethral resection of bladder tumour</li> <li>2. Radical Orchiectomy for Testicular tumour</li> <li>3. Bilateral Orchiectomy for Metastatic Ca prostate</li> <li>4. Prostate biopsy for suspected Ca prostate</li> <li>5. Radical Cystectomy with urinary diversion (after completion of full workup including radiological, Medical and Anaesthetics assessment)</li> <li>6. Radical Prostatectomy for high risk Ca prostate (after completion of full workup including radiological, Medical and Anaesthetic assessment)</li> <li>7. Penile mass wedge biopsy for suspected penile Cancer</li> <li>8. Total or partial penectomy for histologically confirmed Ca penis</li> <li>9. Diagnostic Ureterorenoscopy (rigid and flexible ureteroscopy) with Biopsy for Suspected Upper urinary tract Transitional Cell carcinoma</li> <li>10. Radical Nephroureterectomy for high grade or extensive Upper Transitional Cell Carcinoma (after completion of full workup including radiological, Medical and Anaesthetic assessment)</li> <li>11. Radical Nephrectomy for Renal Tumour (after completion of full workup including radiological, Medical and Anaesthetic assessment)</li> <li>12. Partial Nephrectomy for indicated renal tumours after decision made to treat surgically and after completion of full workup including radiological, Medical and Anaesthetic assessment)</li> </ol>
<b>Category 2</b>	<ol style="list-style-type: none"> <li>1. Ureteroscopic (URS) lithotripsy for ureteric stones</li> <li>2. Percutaneous Nephrolithotomy (PCNL) for renal stone</li> <li>3. Vesicolithotripsy / vesicolithotomy for bladder stones</li> <li>4. Retrograde Intrarenal Surgery (RIRS) for indicated renal stones</li> <li>5. Internal Urethrotomy for short urethral strictures</li> </ol>



<b>ELECTIVE SURGERY</b>	
	<ol style="list-style-type: none"> <li>6. Endopyelotomy or Endoureterotomy for indicated PUJ or ureteral stricture</li> <li>7. TURP for BPH with surgical indications including urinary retention</li> <li>8. Surgery for bladder neck obstruction/stricture</li> <li>9. Surgery for symptomatic benign renal masses e.g. cyst deroofing</li> </ol>
<b>Category 3</b>	<p><b>A. Congenital</b></p> <ol style="list-style-type: none"> <li>1. Hypospadias Repair</li> <li>2. Pyeloplasty for Congenital Pelviureteric Junction (PUJ) obstruction</li> <li>3. Orchidopexy for undescended testis</li> <li>4. Ablation of Posterior Urethral Valve</li> <li>5. Anti-reflux procedure for Vesicoureteric Junction (VUJ)</li> </ol> <p><b>B. Functional/ Quality of Life</b></p> <ol style="list-style-type: none"> <li>1. TURP for Failed medical treatment of Benign Prostatic Hyperplasia</li> <li>2. Surgery for severe Stress Urinary Incontinence – synthetic slings or colposuspension or artificial urinary sphincter</li> <li>3. Surgery for Neurogenic Bladder – intravesical botox or augmentation cystoplasty</li> <li>4. Penile prosthesis for severe erectile dysfunction</li> <li>5. Surgery for male infertility including varicocele ligation, testicular biopsy</li> </ol> <p><b>C. Corrective</b></p> <ol style="list-style-type: none"> <li>1. Urethroplasty for urethral injuries</li> <li>2. Definitive reconstructive surgery for ureteral strictures</li> <li>3. Repair of chronic urinary fistula</li> <li>4. Corrective surgery for penile deformity (Peyronie’s disease)</li> <li>5. Surgery for non-tumour scrotal masses</li> </ol>

### 3.13 PLASTIC & RECONSTRUCTIVE SURGERY

<b>EMERGENCY SURGERY</b>	
<b>Acute Emergency</b>	<ol style="list-style-type: none"> <li>1. Acute uncontrolled bleeding requiring hemostasis (post-palatoplasty, AVF, vascular malformation, Post-operative resection)</li> <li>2. Acute vascular compromise post free tissue transfer</li> <li>3. Facial fractures with threatened vision</li> <li>4. Facial fractures with airway obstruction</li> <li>5. Uncontrolled bleeding post facial trauma</li> <li>6. Burn with compromised circulation requiring escharotomy</li> <li>7. Fasciotomy</li> <li>8. Revascularisation procedure</li> <li>9. Replant procedure</li> <li>10. Amniotic band syndrome with vascular compromise to the limb</li> </ol>
<b>Emergency</b>	<p><b>A. Trauma (&lt;6 hours)</b></p> <ol style="list-style-type: none"> <li>1. skin and soft tissue injury requiring wound toilet and suturing</li> <li>2. Infected wound in a clinically septic patient</li> <li>3. Exploration of wounds with potential disruption of vital structures.</li> </ol> <p><b>B. Non-trauma (&lt;8 hours)</b></p> <ol style="list-style-type: none"> <li>1. Bleeding skin lesion</li> <li>2. Drainage of abscess</li> <li>3. Drainage of haematoma</li> </ol>
<b>Urgent</b>	<ol style="list-style-type: none"> <li>1. Hand injury requiring bone fixation, tendon repair or nail bed repair</li> <li>2. Nerve repair</li> <li>3. Removal of foreign body</li> <li>4. Flap coverage for post myelomeningocele repair</li> </ol>

<b>EMERGENCY SURGERY</b>	
	<ol style="list-style-type: none"> <li>5. Tangential excision of burn wounds</li> <li>6. Revision of arteriovenous fistulas</li> <li>7. Removal of infected implants</li> </ol>
<b>Semi-urgent</b>	<ol style="list-style-type: none"> <li>1. Craniomaxillofacial fracture fixation</li> <li>2. Wound of any cause requiring serial debridement</li> <li>3. Skin grafting procedure</li> <li>4. Wound/ graft inspection under anaesthesia</li> <li>5. Change of dressing under anaesthesia</li> </ol>

<b>ELECTIVE SURGERY</b>	
<b>Category 1</b>	<ol style="list-style-type: none"> <li>1. Squamous cell carcinoma involving any parts of the body</li> <li>2. Basal cell carcinoma involving any parts of the body</li> <li>3. Sarcoma involving any parts of the body</li> <li>4. Lymph node dissection</li> <li>5. Bowen's disease involving any part of the body</li> <li>6. Amputation/ terminalisation of digit</li> <li>7. Salivary gland tumour</li> <li>8. Malignant Melanoma involving any part of the body</li> <li>9. Craniomaxillofacial tumours</li> </ol>
<b>Category 2</b>	<ol style="list-style-type: none"> <li>1. Ectropion with risk of exposure keratitis and corneal ulcer</li> <li>2. Skin graft or flap following tumour resection</li> <li>3. Skin graft or flap for chronic wound</li> <li>4. Resection of arteriovenous malformation with or without interventional radiology procedure</li> <li>5. Arteriovenous fistulas creation/ vascular access surgery</li> <li>6. Removal of tissue expander</li> </ol>

## ELECTIVE SURGERY

### Category 3

#### A. CONGENITAL

1. Cleft lip repair
2. Cleft palate repair
3. Alveolar bone grafting
4. Repair of Cranial synostosis
5. Repair of fronto-ethmoidal encephalocele
6. Repair of facial clefts
7. Correction of ptosis

#### B. FUNCTIONAL/ QUALITY OF LIFE

1. Excision of benign skin and soft tissue lesions
2. Release of amniotic band
3. Debulking procedure for lymphoedema
4. Release of scar contracture of any parts of the body
5. Apronectomy
6. Excision of lymphovenous malformation
7. Release of syndactyly

#### C. CORRECTIVE

1. Scar revision with excision/ subcision/ 'z' plasties/ 'w' plasties/ dermofat graft/ fat graft
2. Breast reconstruction with autologous tissue/ implant
3. Abdominoplasty
4. Brachioplasty
5. Thigh reduction
6. Tissue expansion
7. Removal of tattoo
8. Rhinoplasty
9. Maxillo-facial osteotomies
10. Ear reconstruction
11. Lift: Face/ Neck/ Brow
12. Blepharoplasty
13. Liposuction
14. Removal of implants

### 3.14 BURNS & TRAUMA SURGERY

#### 3.14.1 Trauma Surgery

EMERGENCY SURGERY	
<b>Acute Emergency</b>	<ol style="list-style-type: none"> <li>1. Laparotomy: for intra-abdominal and/ or retroperitoneal injuries with hemodynamic instability and/ or exsanguination</li> <li>2. Thoracotomy/ sternotomy: for exsanguinating chest injuries</li> <li>3. Thoracotomies: for massive air leak with ventilatory compromise</li> <li>4. Exploration of any body part: due to exsanguination and hemodynamic instability</li> <li>5. Craniotomy: for traumatic brain injury causing significant pressure effects</li> <li>6. Extra-peritoneal pelvic exploration: for exsanguinating pelvic injury causing hemodynamic instability</li> <li>7. Any reoperation for re-bleeding following initial hemostatic surgery</li> <li>8. Any exploration of any body cavities or compartments or potential spaces due to latent exsanguination following a failed conservative management</li> <li>9. Tracheostomy: for any airway compromise not amenable to endotracheal intubation</li> <li>10. Exploration or re-exploration of the neck: for any cause resulting in airway compromise</li> </ol>
<b>Emergency</b>	<p><b>A. Trauma (&lt; 6 Hours)</b></p> <ol style="list-style-type: none"> <li>1. Laparotomy: for intra-abdominal injuries with peritoneal signs without hemodynamic instability</li> <li>2. Laparotomy and laparostomy: for abdominal compartment syndrome (sustained IAP <math>\geq</math> 20 mmHg with new organ/ system dysfunction/ failure)</li> <li>3. Neck exploration: for any suspected injuries <b>other</b> than exsanguination</li> </ol>

<b>EMERGENCY SURGERY</b>	
	<ol style="list-style-type: none"> <li>4. Definitive operations following damage control surgery including resectional debridement of any solid organ found to be non-viable after damage control surgery</li> <li>5. Diagnostic laparoscopy: for anterior abdominal penetrating wounds in hemodynamically stable patients without peritoneal signs</li> <li>6. Fasciotomy: for limb compartment syndrome</li> <li>7. Revascularization of non-exsanguinating limb vascular injuries</li> <li>8. Repair of wound dehiscence of body cavities following definitive surgery</li> </ol>
<b>Urgent</b>	<ol style="list-style-type: none"> <li>1. Removal of packing of any body cavity</li> <li>2. Laparotomy: for intra-abdominal injuries with retained hematomas or collections requiring evacuation and drainage</li> <li>3. Thoracotomy: for retained hematomas or collections requiring drainage</li> <li>4. Wound debridement of infected surface wounds</li> <li>5. Irrigation and repair of fresh surface wounds in stable patients</li> <li>6. Thoracotomy: for air leaks with failure of resolution after initial non-operative management</li> </ol>
<b>Semi-urgent</b>	<ol style="list-style-type: none"> <li>1. Tracheostomy: for intentions <b>other</b> than neck trauma</li> <li>2. Secondary suturing of surface wounds</li> <li>3. Abdominal wall reconstruction for defects arising after completion of damage control and definitive surgery phase</li> <li>4. Soft tissue coverage of clean wounds (flaps/ skin grafts)</li> <li>5. Removal of foreign bodies and projectiles in stable patients</li> </ol>

### 3.14.2 Burns Surgery

<b>EMERGENCY SURGERY</b>	
<b>Acute Emergency</b>	
<b>Emergency</b>	<b>A. Trauma (&lt;6 Hours)</b> 1. Wound debridement and split skin grafting (SSG) 2. Escharotomy 3. Tracheostomy in burn injuries
<b>Urgent</b>	
<b>Semi-urgent</b>	Release of contracture and skin grafting

### 3.15 OTORHYNOLARYNGOLOGY

<b>EMERGENCY SURGERY</b>	
<b>Acute Emergency</b>	<ol style="list-style-type: none"> <li>1. Surgery for acute upper airway obstruction (e.g. bronchoscopy, tracheostomy)</li> <li>2. Uncontrolled head and neck bleeding (e.g. trauma, tumour, post-surgery)</li> </ol>
<b>Emergency</b>	<p><b>A. Trauma (&lt;6 Hours)</b> Head and neck trauma with impending upper airway obstruction</p> <p><b>B. Non-trauma (&lt;8 Hours)</b></p> <ol style="list-style-type: none"> <li>1. Corrosive head and neck foreign body</li> <li>2. Foreign body airway (not in acute obstruction e.g. main bronchus)</li> <li>3. Migratory upper aerodigestive foreign body</li> <li>4. Head and neck infection with impending upper airway obstruction.</li> </ol>
<b>Urgent</b>	<ol style="list-style-type: none"> <li>1. Non-corrosive foreign body nose</li> <li>2. Rhinosinusitis with orbital complication</li> <li>3. Head and neck abscess (not in airway compromised)</li> <li>4. Cholesteatoma with complication</li> <li>5. Wound exploration/ toilet and suturing of head and neck wound</li> </ol>
<b>Semi-urgent</b>	<ol style="list-style-type: none"> <li>1. Nasal bone fracture</li> <li>2. Head and neck biopsy</li> <li>3. Inanimate/ non-corrosive ear foreign body</li> <li>3. Traumatic facial nerve injury</li> <li>4. Bilateral choanal atresia (airway stabilized)</li> <li>5. Secondary suturing with/ without grafting</li> </ol>



<b>ELECTIVE SURGERY</b>	
<b>Category 1</b>	<ol style="list-style-type: none"> <li>1. Endoscopic Nasal Surgery for malignancy</li> <li>2. Oral and oropharyngeal surgery for malignancy</li> <li>3. Salivary gland surgery for malignancy</li> <li>4. Thyroid and parathyroid surgery for malignancy</li> <li>5. Neck surgery TRO malignancy</li> <li>6. Head and neck oncology surgery</li> <li>7. Malignancy ear and temporal bone</li> </ol>
<b>Category 2</b>	<ol style="list-style-type: none"> <li>1. Sinonasal vascular tumour</li> <li>2. Recurrent respiratory papillomatosis</li> <li>3. Cholesteatoma (uncomplicated)</li> <li>4. Benign laryngeal lesion</li> <li>5. Congenital laryngeal lesion</li> <li>6. Obstructive sleep apnea surgery</li> <li>7. Branchial arch fistula with recurrent abscess</li> </ol>
<b>Category 3</b>	<p><b>A. Congenital</b></p> <ol style="list-style-type: none"> <li>1. Congenital Nasal Surgery (in stable airway e.g dermoid, cyst, unilateral anterior aperture or posterior choanal stenosis)</li> <li>2. Tongue tie</li> <li>3. Thyroglossal duct cyst</li> <li>4. Ranula</li> <li>5. Congenital branchial arch anomaly</li> </ol> <p><b>B. Functional/ Quality of Life</b></p> <ol style="list-style-type: none"> <li>1. Adenotonsillectomy</li> <li>2. Cochlear implant or implantable hearing aid</li> <li>3. Myringoplasty</li> <li>4. Septoturbinoplasty</li> <li>5. Functional endoscopic sinus surgery for non-malignancy, uncomplicated rhinosinusitis</li> <li>6. Benign salivary gland tumour</li> </ol>

## ELECTIVE SURGERY

7. Endoscopic dacryocystorhinostomy
8. Stapedotomy/ ossiculoplasty
9. External Nasal Surgery for non-malignancy
10. Oral and oropharyngeal surgery for non-malignancy
11. Phonosurgery for non-malignancy
12. neck surgery for non-malignancy
13. thyroid and parathyroid surgery for non-malignancy
14. Sleep surgery (in patient stabilized with CPAP)
15. Inner ear surgery

### **C. Corrective**

1. Rhinoplasty
2. Canalplasty
3. Vocal cord medialization
4. Posterior cordectomy
5. Pinna Reconstruction

### 3.16 OPHTHALMOLOGY

<b>EMERGENCY SURGERY</b>	
<b>Acute Emergency</b>	Acute Orbital Compartment Syndrome
<b>Emergency</b>	<p><b>A. Trauma (&lt;6 Hours)</b></p> <ol style="list-style-type: none"> <li>1. Globe Laceration / Perforation</li> <li>2. Orbital Haemorrhage</li> <li>3. Corneal laceration</li> <li>4. Scleral laceration</li> <li>5. Intraocular foreign-body with Endophthalmitis</li> <li>6. Penetrating injury with vitreous prolapsed</li> <li>7. Chemical burns requiring exploration/ irrigation/ debridement (for cases for cases not suitable for LA)</li> </ol> <p><b>B. Non-trauma (&lt; 8 Hours)</b></p> <ol style="list-style-type: none"> <li>1. Endophthalmitis (Post-operative or Endogenous)</li> <li>2. Orbital Cellulitis /Orbital Abscess</li> <li>3. Repair of penetrating globe injury</li> <li>4. Repair of eyelid laceration</li> <li>5. Macula-on Rhematogenous Retinal Detachment (RRD)</li> </ol>
<b>Urgent</b>	<ol style="list-style-type: none"> <li>1. Vitreous Haemorrhage of any cause</li> <li>2. Optic disc swelling</li> <li>3. Severe sight-threatening uveitis</li> <li>4. Trap Door Blow Out Fracture</li> <li>5. Canalicular Laceration /Injury</li> <li>6. Surgical Peripheral Iridectomy (PI) for intractable acute angle closure glaucoma.</li> <li>7. Anterior Chamber reformation for flat AC (post glaucoma surgery/ intraocular surgery)</li> <li>8. AC Washout for severe hyphaema with intractable high IOP (e.g. eight ball hyphaema ect)</li> <li>9. Trabeculectomy for acute persistent/ intractable high IOP</li> </ol>

<b>EMERGENCY SURGERY</b>	
	<p>not responding to medical treatments/ Laser treatment.</p> <p>10. Pars plana vitrectomy with Anterior hyloidectomy with Zonulectomy and Surgical PI for malignant glaucoma</p> <p>11. Large Corneal Perforation/ Descemetocoele – pending availability of donor corneal tissue</p>
<b>Semi-urgent</b>	<ol style="list-style-type: none"> <li>1. Laser/ treatment for Retinopathy of Prematurity)</li> <li>2. Drainage of abscess (lid abscess, chalazion)</li> <li>3. Blow Out Fracture</li> <li>4. Eyelid Laceration/ Injury</li> <li>5. Transscleral Cyclophotocoagulation (TSCPC) for symptomatic eye with high IOP with poor/ guarded visual potential (e.g. painful blind eye with intractable high IOP</li> <li>6. Resuturing of persistent early post-trabeculectomy conjunctival wound leak (especially when associated with shallow AC and/ or hypotony maculopathy)</li> <li>7. Revision of significant over draining trabeculectomy (e.g. with shallow AC or hypotony maculopathy)</li> <li>8. Revision of over draining Glaucoma Drainage Device (GDD)</li> <li>9. Lens subluxation with pupillary blocked glaucoma</li> <li>10. Anterior lens subluxation with corneal endothelial touch</li> <li>11. Traumatic cataract with breached anterior capsule</li> <li>12. Phacolytic glaucoma</li> <li>13. Phacomorphic glaucoma</li> <li>14. Intumescent cataract</li> <li>15. Corneal Perforation/Descemetocoele – pending availability of donor corneal tissue</li> <li>16. Infective keratitis not responding to medical therapy – pending availability of donor corneal tissue</li> <li>17. Peripheral ulcerative keratitis with impending or perforation of cornea – pending availability of donor corneal tissue</li> </ol>

### 3.17 THORACIC SURGERY

EMERGENCY SURGERY	
<b>Acute Emergency</b>	<ol style="list-style-type: none"> <li>1. Open chest wound</li> <li>2. Penetrating chest wound</li> <li>3. Tracheobronchial injury</li> <li>4. Bronchopleural fistula in distress</li> <li>5. Profuse haemothorax</li> </ol>
<b>Emergency</b>	<p><b>A. Trauma (&lt;6 Hours)</b></p> <ol style="list-style-type: none"> <li>1. Diaphragmatic hernia</li> <li>2. Ruptured lung</li> <li>3. Perforated oesophagus</li> </ol> <p><b>B. Non-trauma (&lt;8 Hours)</b></p> <ol style="list-style-type: none"> <li>1. Perforated bullae</li> <li>2. Profuse haemoptysis</li> </ol>
<b>Urgent</b>	<ol style="list-style-type: none"> <li>1. Spontaneous pneumothorax</li> <li>2. Persistent pneumothorax</li> <li>3. Necrotising pneumonia</li> <li>4. Tracheobronchial stenosis</li> </ol>
<b>Semi-urgent</b>	<ol style="list-style-type: none"> <li>1. Tracheoesophageal fistula</li> <li>2. Empyema thoracis</li> <li>3. Lung abscess</li> </ol>

<b>ELECTIVE SURGERY</b>	
<b>Category 1</b>	<ul style="list-style-type: none"> <li>1. Lung cancer</li> <li>2. Thymoma</li> <li>3. Chest wall tumor</li> <li>4. Tracheo-bronchial cancer</li> <li>5. Esophageal cancer</li> </ul>
<b>Category 2</b>	<ul style="list-style-type: none"> <li>1. Lung aspergilloma</li> <li>2. Lung bullae</li> <li>3. Myasthenia gravis (Thymectomy)</li> <li>4. Sequestered lung</li> </ul>
<b>Category 3</b>	<p><b>A. Congenital</b></p> <ul style="list-style-type: none"> <li>1. Bronchogenic cyst</li> <li>2. Aplastic lung</li> <li>3. Cystic disease of lung</li> </ul> <p><b>B. Functional/ Quality of Life</b></p> <ul style="list-style-type: none"> <li>1. Hyperhidrosis</li> <li>2. Diaphragmatic evanteration</li> </ul> <p><b>C. Corrective</b></p> <ul style="list-style-type: none"> <li>Cervical rib</li> </ul>

#### 4. REFERENCES

1. Guidelines on the Prioritisation of Cases for Elective and Emergency Surgery. Ref: (11) dlm. KKM 87 (454/19), Bhg. 5 bertarikh 12 Ogos 1996.
2. Emergency Surgery Access Guideline. Clinical Excellence Division Healthcare Improvement Unit. 2017
3. National definitions for elective surgery urgency categories. Australian Institute of Health and Welfare and, the Royal Australasian College of Surgeons. 2012
4. C. Russell et al.: Clinical Categorization For Elective Surgery In Victoria ANZ J. Surg.2003; 73: 839–842
5. Kluger et al.: World society of emergency surgery study group initiative on Timing of Acute Care Surgery classification (TACS). World Journal of Emergency Surgery 2013; 8:17
6. Osnat LK et al.: For urgent and emergent cases, which one goes to the OR first? OR Manager, Vol. 26 No. 7, July 2010; 1-4
7. Diwakar Gupta and Brian Denton: Appointment scheduling in health care: Challenges and opportunities. IIE Transactions 2008; 40: 800–819
8. Emergency Surgery Guidelines Department of Health, NSW. 2009
9. Roberto Valente et al.: A model to prioritize access to elective surgery on the basis of clinical urgency and waiting time. BMC Health Services Research 2009, 9:1
10. Wanis et al.: Impact of an Acute Care Surgery Service on timeliness of care and surgeon satisfaction at a Canadian Academic Hospital: A retrospective study. World Journal of Emergency Surgery 2014; 9:4.

## 5. Appendix 1

### NATIONAL POMR COMMITTEE (2018-2020)

Chairman : YBhg. Dato' Dr. Wan Khamizar bin Wan Khazim  
Pakar Perunding Pembedahan  
Hospital Sultanah Bahiyah, Alor Setar

Deputy Chairman 1 : YBhg. Dato' Dr. Mohamed Yusof Hj. Abdul Wahab  
Ketua Jabatan & Pakar Perunding Kanan  
Pembedahan  
Hospital Tengku Ampuan Rahimah, Klang

Deputy Chairman 2 : YBhg. Dato' Dr. Hjh Jahizah Hj. Hassan  
Ketua Jabatan & Pakar Perunding Kanan  
Anestesiologi  
Hospital Pulau Pinang

Member/ Assessor :

YBhg. Dato' Dr. Aisai Abdul Rahaman  
Ketua Jabatan & Pakar Perunding Kanan Anestesiologi  
Hospital Sultanah Nur Zahirah, Kuala Terengganu

YBhg. Dato' Dr. Fitjerald Henry  
Ketua Jabatan & Pakar Perunding Pembedahan  
Hospital Selayang, Selangor

YBhg. Dato' Dr. Ghazali Ismail  
Ketua Jabatan & Pakar Perunding Kanan Obstetrik & Ginekologi  
Hospital Sultan Ismail, Johor Bahru

YBhg. Dato' Dr. Jamil Abdullah  
Pakar Perunding Kanan Pembedahan  
Hospital Sultanah Nur Zahirah, Kuala Terengganu



*YBhg. Dato' Dr. Jiffre Din  
Ketua Jabatan & Pakar Perunding Bedah Kanan Pembedahan  
Hospital Tengku Ampuan Afzan, Kuantan*

*YBhg. Dato' Dr. Mortadza Bin Ramli  
Pakar Perunding Anestesiologi  
Hospital Sultanah Bahiyah, Alor Setar*

*YBhg. Dato' Dr. Norly Ismail  
Pakar Perunding Kanan Anestesiologi Kardiothoraxik & Perfusi  
Hospital Serdang, Selangor*

*YBhg. Datuk Dr. Soon Ruey  
Ketua Jabatan & Pakar Perunding Kanan Obstetrik dan Ginekologi  
Hospital Wanita dan Kanak-kanak Likas, Sabah*

*YBhg. Dato' Dr. Yong Chow Yen  
Pakar Perunding Kanan Anestesiologi  
Hospital Pulau Pinang*

*YBhg. Dato' Dr. Ismail bin Ahmad  
Ketua Jabatan & Pakar Perunding Kanan Anestesiologi  
Hospital Tuanku Fauziah, Perlis*

*YBhg. Datuk Dr. Johari Serigar Adnan  
Ketua Jabatan & Pakar Perunding Neurosurgeri  
Hospital Kuala Lumpur*

*YBhg. Dato' Dr. Kantha Rasalingam  
Pakar Perunding Neurosurgeri  
Hospital Kuala Lumpur*

*YBhg. Dato' Dr. Mohammad Anwar Hau Abdullah  
Pakar Perunding Ortopedik  
Hospital Raja Perempuan Zainab II, Kota Bharu*

*YBhg. Dato' Dr. Mohd Hamzah Dato' Kamarulzaman  
Ketua Jabatan & Pakar Perunding Kanan Pembedahan Kardiothorasik  
Hospital Serdang, Selangor*

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*YBrs. Dr. Chuah Jitt Aun  
Ketua Jabatan & Pakar Perunding Pembedahan Am  
Hospital Queen Elizabeth, Kota Kinabalu*

*YBrs. Dr. Clement Edward a/l Thaumanavar  
Ketua Jabatan & Pakar Perunding Pembedahan Am  
Hospital Tuanku Fauziah, Perlis*

*YBrs. Dr. Esa Ab Aris  
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*YBrs. Dr. Hamidah Ismail  
Pakar Perunding Anestesiologi  
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*YBrs. Dr. Hasmizy Muhammad  
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