INKOSI ALBERT LUTHULI CENTRAL HOSPITAL

SCOPE OF PRACTICE

AND

ENTRY & EXIT CRITERIA

PHASE 3

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EXECUTIVE SUMMARY

REFERRAL OF PATIENTS TO IALCH

This is an updated version of the Entry and Exit Criteria, done by the Clinical Heads of Department in June/July 2006.

Dr Maureen E.L.Joshua Medical Manager Inkosi Albert Luthuli Central Hospital July 2006

This document has been updated in November 2014 Dr letebele Medical Manager IALCh November 2014

TABLE OF CONTENTS

EXEC	UTIVE SUMMARY	
OBST	ETRICS & GYNAECOLOGY	5
1.1	Scope of Practice	5
1.1.1	1. Maternal and Fetal Medicine	5
1.1.2	2. Reproductive medicine	5
1.1.3	3. Urogynaecology/Pelvic floor dysfunction/Endoscopy	5
1.1.4	4. Gynaecological Oncology	5
1.2	Maternal & Fetal MedicineError! Bookmark not def	ined. <mark>5</mark>
1.	2.1. Maternal medicine.	5
1.	2.1.1. Scope of Practice.	6
1.	2.1.2. Entry Criteria.	6
	2.1.3. Exit Criteria.	6
1.	2.2. Board Mothers	7
1.	2.2.1. Entry Criteria.	7
1.	2.2.2 Exit Criteria.	7
1.	2.3. Fetal Medicine.	7
1.	2.3.1. Scope of Practice	7
1.	2.3.2. Entry Criteria.	7,8
1.	2.3.3. Exit Criteria	
1.	3. Reproductive Medicine	9
1.	3.1.1. Scope of Practice	9
1.	3.1.2. Entry & Exit Criteria.	
1.	3.2. Gynae Endocrinology	10
1.	3.2.1. Entry Criteria	10
1.	3.2.2. Exit Criteria.	10
1.	4. Urogynaecology and Pelvic Reconstructive Unit	11
1.	4.1. Entry and Exit Criteria	11
1	.5. Gynaecology-Oncology Unit	11
1	.5.1. Scope of Practise	11
1	.5.2. Entry Criteria for clinics	11
1	.5.3. Entry Criteria for the wards	12
1	.5.4. Exit Criteria.	12
2.	NEONATOLOGY.	14
2.1.	Scope of practice	14
2.2.	Neonatal ICU	14
2.2.1.	Entry Criteria	14
2.2.2.	Exit Criteria.	14
2.3.	Neonatal Clinic	14
2.3.1.	Entry Criteria	14
2.3.2.	Exit Criteria.	14
3.	TRAUMA 16	
3.1.	Entry Criteria for Trauma Unit	16
3.2.	ENTRY CRITERIA FOR TRAUMA ICU AND HIGH DEPENDENCE.	17
3.3.	Exit Criteria.	18
4.	SPECIALISED SURGICAL SERVCES 19	
4.1.	Scope of Practice	20
4.2.	Entry Criteria	20,21
	-	-

4.3.	Exit criteria.	21
5.	MAXILLO FACIAL23	
5.1.	Scope of practice	23
5.2	Entry and Exit criteria	
5.2.1.	Dentofacial	23,24
5.2.2.	Odontogenic Tumor	24,25
5.2.3.	Odontogenic and Non-Odontogenic Cysts	25
5.2.4.	Reconstructive Surgery	25,26
5.2.5.	Residual Surgical Deformitiies	26
5.2.6.	Atrophic Maxilla and Mandible	26
6.	GI (SURGICAL), TPN & OESPHAGEAL 28	
6.1.	Scope of Practice	
6.2	Entry Criteria	
6.3.	Exit Criteria	
7.	BURNS 30	
7.1.	Entry and Exit Criteria	30
8.	TRANSPLANT 32	
8.1.	Scope of Practice	
8.2.	Entry Criteria	32
8.3.	Exit Criteria	
9.	ENT 35	
9.1	Scope of Practice	
9.2	Entry & Exit Criteria - Otology	
9.3	Entry & Exit Criteria - Head and Neck Surgery	
9.4	Entry & Exit Criteria – Nose and Paranasal Sinuses	
10.	ICU46	
10.1	Entry & Exit Criteria - Adult ICU	47
	10.1.1Adult Multidisciplinary ICU	47,48
	10.1.2 Exclusion Criteria	
	10.1.3 Admission Criteria for High Care	48,49
10.2.1.	Entry and Exit Criteria for Cardiac Surgical patients to the ICU	50
10.2.2.	Entry and Exit Criteria for Cardiac Surgical patients to the High Care wards	50
10.2.3.	Entry and Exit Criteria for Thoracic Surgical patients to the High Care wards	51
10.2.4.	Entry and Exit Criteria for Paediatric ICU	52,55
11. Ge	riatrics 56	

OBSTETRICS & GYNAECOLOGY

1. OBSTETRICS & GYNAECOLOGY

1.1 Scope of Practice

The Department of Obstetrics and Gynaecology will only be seeing patients who fulfill the criteria for tertiary or quaternary care. Such patients would be referred by hospitals from KwaZulu-Natal and part of the Eastern Cape bordering KwaZulu-Natal. The scope of practice will involve the following sub-specialities:

1.1.1 Maternal and Fetal Medicine

This subspeciality includes high risk and critical care obstetrics, as well as at risk fetuses.

1.1.2 Reproductive medicine

This sub-speciality encompasses assisted reproduction and unexplained infertility.

1.1.3 Urogynaecology / Pelvic Floor dysfunction / Endoscopy

This encompasses all patients with complicated pelvic floor dysfunction. **Pelvic floor** : grade 3 and 4 prolapse, vault prolapse, previous failed surgery, prolapse with co-morbid medical pathologies, prolapse with associated urinary or faecal incontinence

Urogynaecology : stress urinary incontinence failed conservative surgery, mixed urinary incontinence, urogenital fistula, overactive bladder failed conservative treatment, prolapse with urinary incontinence, urodynamics

Outpatient hysteroscopy : postmenopausal bleeding, unscheduled bleeding in the perimenopause or premenopause that failed conservative treatment and requires endometrial visualization, lost IUCD's, dysfunctional bleeding

Endoscopy : advanced endometriosis, laparoscopic myomectomies, advanced hysteroscopic surgery, surgery in pregnancy, abnormality of urogenital tract, reconstructive pelvic surgery

1.1.4 Gynaecological oncology

This would include all patients requiring major gynecological oncology surgery, patients with gynaecological malignancies for initial assessment and those gynaecological malignancies required to be seen at a combined clinic together with the Department of Oncology.

1.2 Maternal & Fetal Medicine

1.2.1 Maternal Medicine

1.2.1.1 Scope of Practice

This discipline includes women with severe and complicated medical and surgical disorders during pregnancy, labour and puerperium.

These women, even if present unbooked, *must have their basic workup, including baseline investigations done at the local hospital*.

Depending on individual cases, women may be seen either at high-risk antenatal clinics or admitted to antenatal ward, high care or labour ward.

Referrals requiring *ICU management must be made directly with the ICU team* and *Obstetric team must be informed*. The Obstetric team will accept responsibility for the transfer of such patients and confirm that ICU bed is available.

1.2.1.2 Entry Criteria

- Complicated cardiac disease : cardiomyopathy / cardiac valve prosthesis / cardiac failure during pregnancy/ congenital heart disease.(uncorrected)/stenotic valves or outlet obstruction
- > <u>Complicated Diabetes</u>: end organ damage/difficulty with control/fetal affectation
- > <u>Complicated Eclampsia</u> : requiring ICU(if bed available)
- Hypertension : complicated chronic hypertension with end organ affectation/early onset pre- eclampsia with complications : fetal affectation/HELLP syndrome/TTP
- Recurrent pregnancy losses : late second and third trimester losses
- Critical care obstetrics: complicated APH/PPH, hypertensive crisis, obstetric shock, severe sepsis, and postpartum collapse.
- > <u>CNS disorders:</u> uncontrollable seizures, myasthsia gravis, Multiple sclerosis.
- Skeletal disorders : severe kyphoscoliosis, poliomyelitis, hip / pelvic trauma or surgery.
- Endocrine disorders : complicated thyroid disease(esp hyperthyroid/ thyroid tumour) Adrenal disease, Prolactinoma.
- > <u>Collagen vascular disease</u> : SLE, Rheumatoid arthritis, systemic sclerosis.
- <u>Complex haematological disorders</u> : Leukaemia, Aplastic anaemia, Thallasaemia, major Sickle cell anaemia, cytopenias
- > Recurrent thromboembolic disease, thrombophilia in pregnancy.
- > <u>Complicated renal disease</u> :renal transplants, requiring dialysis, renal failure.
- **<u>Complicated liver disease</u>**: *jaundice, hepatitis, fatty liver and cholestasis*.

- Respiratory complications : uncontrolled asthma, recurrent pneumonia acute respiratory distress and severe chest deformities.
- Major degree placenta praevia: with recurrent bleeds and prematurity / suspected morbid adherence.
- Advanced extra uterine pregnancy / acute abdomen in late pregnancy (ie: >26 weeks gestation)
- > Ovarian cysts in pregnancy (<26 weeks gestation) requiring surgery
- > Associated tumors in pregnancy : Breast, cervix.
- Severe morbid obesity (BMI > 50 or Wt. > 150kg)

1.2.1.3 Exit criteria

- Referral diagnosis has been excluded in otherwise stable patient eg suspected cardiac disease, *morbid adherence placenta praevia*, etc.
- Referral for acute problems eg ICU ventilation/ renal dialysis- transferred back to local hospital once stabilized.
- Patients that do not require further specialized / tertiary care. Such patients will be advised on further management and follow up at local hospital.
- Medical / surgical complications not requiring obstetric management will be referred to appropriate clinic / local hospital follow up.

1.2.2 Boarder Mothers

1.2.2.1 Entry criteria

- Well postnatal women whose babies require specialized care at our neonatal ICU / high care will be admitted to mothers lodge. These boarder mothers will be assigned a KZ number. Priority will be given to mothers that are breast-feeding. An Obstetric team doctor will assess all Boarder mothers on first admission. Notes must be recorded on SORIAN
- Boarder mothers < 72 hours post c/s or abdominal surgery must be admitted to postnatal ward and not mother's lodge.</p>
- Boarders mothers must come with clinical case notes from referring clinic / hospital, including an obstetric discharge summary and reason for neonatal transfer.

1.2.2.2 Exit criteria

- Boarder mothers whose babies no longer require specialized care in nursery will be discharged / transferred out with baby to local hospital.
- The health care worker in charge of Boarder Mothers must ensure that before discharge, all patients have a follow up appointment for postnatal visit at appropriate clinic/hospital. (Most may already have one).
- Boarder mothers that had taken ill in mother's lodge must have new obstetric discharge summary done by attending doctor.

1.2.3 <u>Fetal Medicine</u>

1.2.3.1 Scope of Practise

Woman requiring level 3 scans will be seen at the Fetal Medicine Unit. This includes referrals from the peripheral clinics, provincial and private sectors in KwaZulu-Natal. The

intention of the unit is to provide the highest standard of fetal care in a modern day-care environment with special emphasis on counseling and informed patient choice. A range of invasive prenatal diagnostic procedures e.g. genetic amniocentesis, fetal blood sampling and chorionic villus sampling and therapeutic procedures e.g. amniodrainage, cephalocentesis, selective feticide, intravascular transfusions, etc will be offered.

1.2.3.2. Entry Criteria

The following are guidelines for referral to Fetal MedicineUnit

- > Fetal structural abnormalities where the diagnosis and / or prognosis is uncertain.
- ▶ Women \geq 40 years of age, for Genetic Counselling and anomaly scan
- Detailed 2nd trimester anomaly scans for high-risk pregnancies eg: Diabetes, AMA, and abnormal nuchal scan with normal karyotype.
- Fetal cardiac dysrythmias including structural abnormalities (Thursday Clinic)
- Fetal surgical abnormalities eg abdominal wall defects, renal obstruction defects, CDH, craniospinal abnormalities (Tuesday Clinic)
- Polyhydramnios (AFI >30cm)
- Oligohydramnios (AFI<5cm) exclude rupture of membranes</p>
- Multiple pregnancy (discordant growth / discordant for any anomaly / all MC twins and higher order pregnancies)
- Abnormal maternal serum screening (above or below the MoM value) –hard copy of Lab results required.
- Fetal growth impairment (early onset IUGR / symmetrical IUGR)
- Maternal cardiac disease on Warfarin therapy
- Rhesus disease (maternal antibody level >1:16 / previously affected pregnancy / other abnormal antibodies e.g. anti-Kell). Hard copy of Lab results required.
- Patients requiring antenatal invasive procedures mentioned above (Genetic amniocentesis may be done at local hospital).
- Other e.g. recent maternal viral infections exposure e.g. TORCH, Parvovirus / teratogenic drug ingestion in early pregnancy, radiation exposure, etc
- First trimester anomaly scan for all patients from the Assisted Conception Unit and ANC
- > NT Scans (11⁺⁰ 13⁺⁶ weeks) *advanced maternal age/medical disorders*
- Uncertain placental abnormalities
- Family History of genetic diseases / disorders
- > Fetal Hydrops / Hydrocephalus (maternal TORCH / Parvovirus results required)
- Partial Molar pregnancy

(Full clinical details, including scan reports and results of relevant investigations (including Rh, RPR, SGTT and HIV) must be included with referral letter – this will be scanned into patient records. Patients to come with ANC record card/ book. Name of the referring doctor and institution must be clearly printed.)

1.2.3.3 Exit Criteria

Depending on individual cases, patients will be referred back to their centre or their management will be continued at IALCH.

- The following are guidelines:
- Patients not requiring further follow up at the Fetal Medicine Unit, will be referred back to their centre.
- Referred for suspected fetal abnormalities but level 3 scan suggests normal fetus will be referred back.

- Post feticide cases will be sent back to local hospital for delivery except for high risk pregnancy
- Fetuses that require postnatal surgery e.g. diaphragmatic hernia, duodenal atresia, gastroschisis, bladder outlet obstruction, etc will be managed at this unit in conjunction with Paediatric Surgeons
- Fetuses with other congenital / chromosomal abnormalities e.g. cardiac dysrythmias, Down syndrome, clubbed foot; fetal hydrops, etc will be managed here in conjunction with the neonatologists.
- Patients having certain invasive therapeutic procedure e.g. intrauterine transfusions may be admitted overnight.

1.3 Reproductive Medicine

1.3.1 Assisted Conception Unit

1.3.1.1 Scope of Practice

- Evaluation of male and female partner (semen tests)
- Reproductive hormone testing (full range of tests)
- > Tubal and uterine assessment using hysterosalpingogram and laparoscopy and hysteroscopy
- Andrology laboratory for semen analysis and sperm preparation for intrauterine insemination (IUI), IVF and GIFT
- Use of ovulation induction agents; clomiphene citrate, human chorionic gonadotrophin, Gonadotrophin releasing hormone agonists and antagonists
- > Use of hCG and progesterone pessaries for pregnancy maintenance
- Use of ultrasound including transvaginal and 3 dimensional ultrasound to evaluate treatment cycles
- Counselling services provided by resident counsellor for introduction to cycle program, success rate of treatment, counselling of women having failed cycles and counsel regarding gamete donations and surrogacy
- IVF/ICSI laboratory providing the facility for gamete fertilization, embryo transfer and cyropreservation of sperm and embryos
- Dedicated operating theatre providing the facility for egg retrieval, embryo transfer, GIFT, testicular and epidiymal sperm extraction, and laparscopic treatment of endometriosis and PCOS, tubal potency test; transvaginal ultrasound assisted cyst aspiration and hysterscopic assessment and treatment of intrauterine pathology.
- GIFT, testicular and epidiymal sperm extraction, and laparscopic treatment of endometriosis and PCOS, tubal potency test, transvaginal ultrasound assisted cyst aspiration and hysteroscopic assessment and treatment of intrauterine pathology.

1.3.1.2 Entry Criteria

Couples with infertility of ≥ 1 year duration; BMI <30; age 40 years (however individualization will occur)

- ➤ Male factor low sperm count
- Tubal blockage
- > Anovulation
- Endometriosis
- Unexplained infertility

1.3.1.3 Exit Criteria

If pregnancy confirmed at 6/52 gestation, patients will be referred appropriately. An appointment for NT scan at 12 weeks and fetal anomaly seen at 20 weeks will be made with the Fetal Unit.

1.3.2 Gynae Endocrinology

- Evaluation of hormones of the reproductive axis including dynamic pituitary function tests.
- Radiological imaging including CT scan and MRI to detect hormone-producing tumours.
- > Ultrasound evaluation of the uterus and ovaries.
- Surgery for vaginal agenesis and intersexuality
- Medical therapy including, human menopausal gonadotrophins, gonadotrophin releasing hormone agonists, hormone replacement therapy, adrogen replacement therapy, bromocriptine, carbegoline, anti-androgen therapy cyptoterone acetate, antiandrogenic therapy cypoterone acetate, anti-androgenic combined pills, Diane 35
- Hormone replacement therapy oral, implant, gel, patches and vaginal preparation
- Provision of initial SERMS Raloxifene, Tibalone and Calcium
- Medication for osteoporosis Alendronate
- Hysteroscopic surgery for endometrial evaluation and insertion Mirena Intra uterine system (IUS)

1.3.2.1 Entry Criteria

- Primary Amenorrhoea
- Secondary Amenhorrhoea
- Premature menopause
- ➢ Intersexuality
- ➢ Hyperprolactinaemia
- ➢ Hirsutism
- Polycystic Ovarian Syndrome
- Menopause Complications
- Steoporosis
- > Dysfunctional uterine bleeding not responding to treatment.

1.3.2.2 Exit Criteria

Once diagnosis is made and patient is able to receive therapy at outlying hospital.

1.4 Urogynaecology, Pelvic Floor Dysfunction and Endoscopy

Patients must be discussed with the Subspecialty unit before making a booking.

1.4.1 Entry Criteria

- All patients with stress urinary incontinence
- Patients with OAB not responding to conventional treatment (OAB = overactive

bladder)

- Patients with complex prolapse
- Patients with anorectal dysfunction
- Patients with VVF and RVF (vescio-vaginal fistulae; recto-vaginal fistulae)

1.4.2 Exit Criteria

Patients will be referred back to referral sites once investigations done and follow-up following any operative interventions.

1.5 Gynaecology – Oncology Unit

1.5.1 Scope of Practise

All patients will be referred by appointment to the respective clinics.

Colposcopy referrals will include: patients with high-grade cervical lesions; pregnant patients with high-grade abnormal pap smears; patients from other centers for colposcopy for an opinion.

1.5.2 Entry Criteria for the Clinics

All patients will be referred by appointment to the respective clinics.

1.5.2.1 <u>Colposcopy referrals</u> will include

- Patients with high grade cervical lesions
- Pregnant patients with high grade abnormal pap smears
- > Patients from other centers for colposcopy for an opinion

1.5.2.2 Oncology referrals

These patients will be referred by other centers for opinion and further management by the new hospital team

- > Patients will malignancies requiring specialized management / surgery
- Post operative patients from other centers with malignancies requiring further treatment / opinion
- Basic investigations will be done by the referring hospital Patients with confirmed VIN/VaIN lesions for specialized management

 \triangleright

1.5.2.3 <u>Combined gynaecology – oncology clinics</u>

Patients will be referred by appointment. These will include

- > Patients with gestational trophoblastic disease requiring chemotherapy
- All malignancies requiring chemotherapy or radiotherapy or both
- Patients referred with malignancies prior to surgery requiring chemotherapy prior to surgery
- Patients seen previously at this clinic needing follow-up and who require follow-up by this clinic.

1.5.3 Entry Criteria for the Ward

- Only patients seen at the clinics at IALCH requiring treatment / surgery will be admitted to the hospital.
- Diabetic Patients only uncontrollable diabetic pregnant patients should be admitted into IALCH, or those with bad obstetric history.
- Patients with cardiac disease Grade III or higher and/or those with valve replacements.

1.5.4 Exit Criteria

- All patients seen at the clinics will be referred to their local clinic / hospital once treatment is complete.
- Patients who have had colposcopy will be referred to their local clinic / hospital if their 3 – month post – treatment pap smear is negative.
- Patients with malignancies will either be admitted to IALCH to receive treatment or be sent to their referring hospital to receive treatment prescribed at the combined gynaecology – oncology clinic.
- If patients are admitted to IALCH they will be referred back to their referring hospital once treatment is complete.
- Patients who have specialized surgery at IALCH will either be follow-ed up at the clinic at IALCH and then referred to their referring hospital once treatment is complete or be referred directly to their referring hospital at an acceptable time post-surgery.

NEONATOLOGY

2. NEONATOLOGY

DEFINITIONS:

NEONATE : from birth to 28 days of life INBORN : Neonate delivered at IALCH OUTBORN : Neonate delivered at another facility

2.1 Scope of Practice

To provide critical care to all babies in the province <u>provided</u> intensive care facilities are available

2.2 Neonatal ICU

2.2.1 Entry Criteria

• All neonates (inborn and outborn) requiring critical and intensive care

2.2.2 Exit Criteria

- Babies will be moved from NICU to the HC when intensive care is no longer necessary
- Stable babies in HC will be referred to Level 2 healthcare facilities for ongoing care

2.3 Neonatal Clinic

2.3.1 Entry Criteria

- All babies admitted to NICU
- All babies with complicated clinical problems on discharge e.g. retinopathy of prematurity, periventricular leukomalacia, anticipated developmental problems

2.3.2 Exit Criteria

• After complete clinical assessment of the baby together with special investigations and a management strategy the baby will continue follow-up at the referring hospital

Written and updated by Dr. H. Mackanjee

TRAUMA

3. TRAUMA

ENTRY AND EXIT CRITERA FOR LEVEL I TRAUMA UNIT

DEFINITION

A Level I Trauma Unit manages those patients with immediate life-threatening injuries, the majority of whom will require admission to an Intensive Care Unit either directly or following surgical intervention depending on the nature of the injuries.

3.1. ENTRY CRITERIA FOR TRAUMA UNIT

Patients will be admitted from 2 sources, directly from scene within the Durban Functional Region and inter-hospital transfer from within the Province of KwaZulu-Natal. All referrals must be discussed with the duty consultant. Those patients whose injury falls under a sub-speciality (vascular, plastic, paediatric, cardiothoracic, neurosurgery) will only be admitted following consultation with that sub-speciality and the duty consultant for the Trauma Unit.

Directly from Scene (Field Triage)

Determining which patient will require admission to a Level I facility can be extremely problematic at scene. In general there should be an over triage rate of between 10 - 15% which consists of patients who ultimately do not require such a high level of trauma care. This ensures that those who merit admission to a Level I Unit will not be overlooked.

Field triage is undertaken using 4 areas of assessment. In order of priority these are physiological derangement, anatomical deformity, mechanism of injury, and co-morbid disease. In the first two steps the physical criteria are absolute whereas in the last two steps there may be an element of subjectivity. If doubt exists it is prudent to assume serious injury until proved otherwise.

1. Physiological Derangement

The Revised Trauma Score (RTS) consists of three components, the systolic blood pressure, the respiratory rate, and the Glasgow Coma Scale. Each component is divided into 5 levels depending on the recorded value for the purpose of scoring (Appendix 1). A final score is obtained by adding the value of each component. The maximum value is 12 (normality) and the lowest zero. Patients with a score of 10 or less should be considered candidates for transportation to a Level I Trauma Unit although this must be assessed in conjunction with the other steps of triage.

2. Anatomical Deformity

This must be viewed in conjunction with physiological derangement. In general, the more central the injury and the more body cavities involved the greater is the potential threat to life. Head injury remains the commonest cause of death from trauma. Patients who have sustained isolated head injury will only be admitted following consultation with the neurosurgical department. Those in whom head injury is part of polytrauma will be admitted at the discretion of the Trauma Unit.

Excluding head trauma, injury to the torso involving either the thorax, abdomen or a combination of the two is the commonest reason for admission to a Level I Unit. Blunt injury to the thorax resulting in multiple rib fractures with or without a flail chest are candidates for admission as are those with mediastinal vascular or airway injury. Penetrating wounds of the precordium in association with physiological derangement should be admitted to a Level I facility. Penetrating or blunt injury to the abdomen in association with abnormal physiological parameters on scene merit assessment at a Level I Trauma Unit.

Pelvic and long bone fractures in association with a vascular injury, hypotension, or other body cavity injury should be assessed at a Level I Unit.

3. Mechanism of Injury

The following are indications for transfer to a Level I facility:

Ejection from a vehicle Death in the same passenger compartment Prolonged extrication time Rollover of the vehicle Major vehicle deformity and intrusion into passenger compartment Pedestrian thrown or run over Separation of rider form motorcycle Falls from greater than 6 metres

4. Age and Co-existent disease

Age <5 and >55 years Cardiac or respiratory disease Insulin dependent diabetes Pregnancy Morbid obesity

It must be emphasized that no triage system is infallible. The above are guidelines and the final decision rests with the consultant staff in the Trauma Unit.

3.2. ENTRY CRITERIA FOR TRAUMA ICU AND HIGH DEPENDENCY

The Trauma ICU will function as a closed unit whereby all admissions and the management thereof will be at the discretion of the critical care specialists in charge of the unit.

3.3. EXIT CRITERIA

Death

A average mortality rate of approximately 30% is anticipated. All patients who die will by law undergo a medico-legal postmortem.

Discharge

Patients who have undergone successful management in the Trauma Intensive Care Unit will be discharged initially to the Trauma High Dependency Unit. Once fit for discharge from the High Dependency unit patients will be repatriated to either the referring hospital or, if admitted initially directly from the scene of injury, to the hospital responsible for that catchment area. This will necessitate communication with that hospital on the day of admission from scene. Unless circumstances dictate otherwise, patients will not require management in a normal surgical ward in IALCH.

Written by Prof D Muckart

SPECIALISED SURGICAL

SERVICES

4.1. SCOPE OF PRACTICE

- Elective Surgery: 3 All-day theatres.
- Emergency Surgery: This refers to complications requiring operative management in patients who have had *elective surgery by the Department of Specialised Surgery at the IALCH*.
- Outpatients' Clinics: 3 clinics per week (08H00 to 12H00):
 - 1. Tuesdays.
 - 2. Thursdays (2 Clinics).
 - 3. Friday

Patients must be discussed with the consultant on call, prior to referral.

- Ward rounds: Conducted daily.
- Consultative Specialised Surgical service to other disciplines at IALCH.
- Provision of a Specialised Surgical Service (see entry criteria below).
- Clinical supervision and training of under- and postgraduate doctors.
- Upper gastrointestinal (GI) endoscopy (diagnostic and therapeutic).
- Colonoscopy (diagnostic and therapeutic).
- Endoscopic retrograde cholangio-pancreatography (ERCP).
- Training of subspecialists in upper GI and lower GI endoscopies, ERCP and EUS.
- Training of subspecialists in the sub-discipline of Surgical Gastroenterology.
- Multidisciplinary Clinics
 - Weekly Breast: Thursday
 - First Friday of the month: Thyroid
 - Third Monday of the month: Oncoplastic sarcoma
 - Wednesday: MDT gastrointestinal oncology
 - Thursday: Upper GI surgical outpatients
 - Thursday: Banding and chronic liver disease
 - Friday: Colorectal OP

4.2. ENTRY CRITERIA

These include the following <u>elective</u> conditions:

- 1. Gastrointestinal Surgery:
 - Total oesophagectomies with interposition grafts.
 - Total gastrectomies.
 - Revision gastric surgery.
 - Morbid obesity (bariatric) surgery.
 - Pancreatic resections.
 - Pancreaticoduodenectomies.
 - Liver resections.
 - Revision bile duct surgery.
 - Intrahepatic ductal stone disease.
 - Cholangiocarcinoma.
 - Choledochal cysts.
 - Large bowel pouch construction.
 - Total mesorectal excision (TME) for rectal cancer.
 - Complex perianal surgery.

- 2. Endocrine Surgery:
 - Parathyroid.
 - Thyroid.
 - Adrenal.
 - Endocrine tumours of the pancreas.
- 3. Portal Hypertension:
 - All forms of shunt surgery.
 - Rubber band ligation/injection sclerotherapy for oesophageal varices.
- 4. Breast Surgery:

All symptomatic patients that fall within the ambit of Breast Healthcare, from congenital anomalies to disorders of ANDI and concerns about BRCA gene mutations

- Requiring multidisciplinary management.
- Complex reconstructive breast surgery.
- 5. Surgical Oncology:
 - Procedures that require intra-operative radiotherapy and other sophisticated equipment, e.g., for sentinel node biopsy.
- 6. Haematological Surgery:
 - Laparoscopic splenectomy.
- 7. Soft Tissue Tumours:
 - Requiring multi-disciplinary management.
- 8 Laparoscopic Surgery:
 - As it pertains to the relevant conditions listed above.
- 9. Surgery in high-risk patients requiring multi-disciplinary care.
- 10. Radical lymphadenectomy.
- 11. Total parenteral nutrition with complex GI fistulae

Referral to IALCH will only be by discussion and appointment. All queries will be directed to the consultant on call.

4.3. EXIT CRITERIA

Completion of treatment as dictated by appropriate clinical and laboratory criteria. Review treatment will be at the index hospital. Only if indicated, selected patients will be reviewed at the outpatients' clinics at the IALCH. These include gene mutation carriers and other high risk patients

Updated by MR .F Anderson and Dr I. Buccamazza

MAXILLO FACIAL

5.MAXILLO FACIAL

MAXILLOFACIAL AND ORAL SURGERY

5.1.SCOPE OF PRACTICE

It should be noted that the maxillofacial and oral surgery department services not only the Durban Functional Region but also the entire province of Kwa Zulu Natal.

Tertiary maxillofacial and oral conditions should be seen and treated only according to the entrance and exit criteria. These criteria may have to be reviewed depending upon the referral patterns.

Bookings are to be made through the Maxillofacial and Oral Surgery clinic at Inkosi Albert Luthuli Central Hospital on appropriate days by referring hospitals, King Edward VIII, Addington, RK Khan and other provincial hospitals. The patients will first require preoperative assessments by consultants through a "Special Clinic" appointment. All patients to be fully "investigated" prior to booking at 'special clinics'. Participating consultants to book patients for surgery on their own surgery days, until more theatre time becomes available and the number of cases can be more accurately assessed. Participating consultants may book patients who have been fully investigated preoperatively at another hospital directly on their own surgery days via the IALCH Clinic. ICU facilities to be available when required.

Investigations to be carried out prior to consultation at a 'Special Clinic' include:

- Preoperative assessments
- Radiological assessments
- Relevant Blood Tests
- Clinical Photographs
- Study Models

5.2 ENTRY AND EXIT CRITERIA

5.2.1 DENTOFACIAL ANOMALIES

Entrance Criteria

Patients will be admitted to clinics at IALCH according to scope of practice criteria. Consultation with an orthodontist is mandatory. Selected patients will be admitted to the ward for surgery and / or further investigations.

Class III Dentofacial Deformities

- Mandibular prognathism
- Maxillary Deficiency

- Class III deformity with open bite
- o Midfacial dentofacial deformity

Class II Dentofacial Deformities

- o Class II Div I with normal over bite
- Class II Div I with deep bite
- Vertical Maxillary Excess
- o Class II deformity with open bite.

Class I Dentofacial Deformities

- Bimaxillary protrusion with or without open bite.
- Class I vertical maxillary excess with or without open bite.
- Transverse maxillary deficiency.

Asymmetric Dentofacial Deformities

- Asymmetric Class II dentofacial deformity
- o Asymmetric Class III dentofacial deformity
- Unilateral hyperplastic conditions of the mandibular condyle
- Hemifacial microsomia
- Agenesis syndromes

Chin Deformities

- Vertical excess
- o Vertical deficiency
- o Prognathism
- Retrognathism
- o Asymmetry

Nasal Deformities

Cleft Lip – Palate Dentofacial Deformity

<u>NOTE</u>: The services of an orthodontist and a speech therapist are essential in the management of these patients.

Exit Criteria

Patients will be discharged from the clinic or ward as soon as management may be continued by the referring hospital or consultant.

When the surgical wound healing is well established and there is no postoperative infection.

This will usually be by the third or fourth postoperative day.

5.2.2 ODONTOGENIC TUMORS

Entrance Criteria

All conditions that present a diagnostic or management problem.

Patients will be admitted to clinics at IALCH according to scope of practice criteria. Selected patients will be admitted to the ward for surgery and or further investigations.

- o Ameloblastomas
- o Giant Cell Lesions
- o Myxomas
- o Fibromas
- Haemangioma
- Fibrous Dysplasia
- o Cementoma
- \circ Odontomes

Exit Criteria

Patients will be discharged from the clinic or ward as soon as management may be continued by the referring hospital or consultant.

When the surgical wound healing is well established and there is no postoperative infection.

This will usually be by the third or fourth postoperative day.

5.2.3 ODONTOGENIC AND NON- ODONTOGENIC CYSTS

Entrance Criteria

All conditions that present a diagnostic or management problem. Patients will be admitted to clinics at IALCH according to scope of practice criteria. Selected patients will be admitted to the ward for surgery and or further investigations.

- Odontogenic Keratocysts
- o Dentigerous Cysts
- Calcifying Odontogenic cysts
- Nasopalatine Duct Cysts
- o Multiple Jaw Cysts

Exit Criteria

Patients will be discharged from the clinic or ward as soon as management may be continued by the referring hospital or consultant.

When the surgical wound healing is well established and there is no postoperative infection.

This will usually be by the second or third postoperative day.

5.2.4 **RECONSTRUCTIVE SURGERY**

Entrance Criteria

Patients will be admitted to clinics at IALCH according to scope of practice criteria. Selected patients will be admitted to the ward for surgery and or further investigations.

Residual Post-traumatic Deformities

- Nasal Deformities
- Naso-Orbital Deformities
- Naso-Frontal Deformities
- Naso-Fronto Ethmoidal Deformities
- o Zygomatic Complex Deformities
- Maxillary Deformities
- o Mandibular Deformities
- Temporomandibular Joint Ankylosis
- o Orbital Deformities
- o Oronasal Fistulae
- o Oroantral Fistulae

5.2.5 Residual Surgical Deformities

• Following resection of odontogenic tumours and / or cysts.

5.2.6 Atrophic Maxilla and Mandible

Written by Dr. V. Amaidas- updated by Mr Rughubar

GI (SURGICAL), TPN & OESPHAGEAL

6. GI (SURGICAL), TPN & OESPHAGEAL

6.1. Scope of Practice

8. TOTAL PARENTERAL NUTRITION UNIT (TPN) IALCH HOSPITAL

The above unit will accept referrals for patients needing Nutritional Support (complex enteral and total parenteral nutrition problems) provided each case is discussed with the resident consultant and a bed is available. The TPN unit will start being functional once the general surgery beds at IALCH are commissioned.

6.2. ENTRY CRITERIA

- 1. Patients with high-output enterocutaneous fistulae
- 2. Short-bowel syndrome problems
- 3. Complex pancreatic disease (acute and chronic) eg internal pancreatic fistula (Pancreatic ascites), acute fulminant pancreatitis.
- 4. Severe trauma patients requiring post-operative total parenteral nutrition.
- 5. Malnourished patients requiring pre-operative nutritional support (short term ie 7-10 days)
- 6. Corrosive strictures of oesophagus and stomach. (immediate period)
- 7. Radiation enteritis
- 8. Post-operative gastric atomy
- 9. Post-operative patients without enteral access and needing TPN.

6.3. EXIT CRITERIA

- 1. Patients fit for discharge from the TPN unit will be referred back to the referral hospital for further management.
- 2. Patients in the TPN unit needing surgery will be managed at IALCH with the help of the referring surgeons. The general surgical slate will be used for elective surgery.
- 3. Cold admissions will be via the SOPD Clinic.

FOLLOWUP

Follow up, when necessary, will be done at the General Surgery SOPD Clinic.

Updated by Mr F. Anderson Head Clinical Unit

BURNS

7. BURNS

7.1 ENTRANCE AND EXIT CRITERIA

Entry Criteria for Admission to IALCH burn center

Severe burns are defined as:

- All burns over 30% TBSA in adults and over 20% in children
- Inhalational burns and other burns requiring ICU care (pending opening up of burns ICU).
- Deep partial to full thickness burns to the hands, face, feet or perineum
- Children under the age of 1 year with full thickness burns
- Children under the age of 10 with full thickness burns of over 5% TBSA
- Lack of facilities to treat children along the referral chain

Patients with severe burns should be managed in the Provincial Burn Center at Inkosi Albert Luthuli Central Hospital.

Burns over 60% TBSA in adults and over 80% in children have a dismal prognosis. They should be discussed with the burns consultant/SMO-on-call, who will determine whether the patient will benefit from admission to the burns unit at IALCH.

As the modern treatment of burns – early excision and grafting – is only possible if patients are referred early, all patients requiring admission to the burns unit should be referred within 48 hours of their arrival in hospital. Patients referred later rarely benefit from admission to our unit and will only be accepted under exceptional circumstances. They may be discussed with the burns consultant/SMO who will decide whether the patient will benefit from admission to the burns unit.

Exit criteria:

- Tertiary inpatient services no longer required
- Full wound cover after burn injury
- Contra-indication to treatment at IALCH burn unit (e.g. contraindication to general
- anesthesia, HIV-positive with low CD-4 count)
- Patient refusal to undergo tertiary level care

Written and updated by Mr D. Hollander

TRANSPLANT

8. TRANSPLANT

8.1 Scope of Practice

- Transplant workup of recipient and donor done on an outpatient basis in renal clinic.
- Donor and recipient to attend pre-anaesthetic clinic (outpatient basis) and to be seen by designated anaesthetic consultant before surgery.
- Recipient admitted 2 days before to ICU 1.
- Donor admitted day before to ICU 1
- Transplant Surgery:
 - Recipient done on renal theatre list in
 - Donor done concurrently in another allocated theatre
- Post-operative Care
 - Donor and Recipient in transplant unit (ICU 1)
- Hospital Stay
 - Recipient 7 10 days
 - Donor 5 7 days
- ➢ Follow up
 - Renal clinic (nephrologist and surgical). Recipient 2x week for first month , then weekly to 3 months
- Potential cadaver renal harvests emergency basis
 - Need facilities to harvest at IALCH on emergency basis
 - Need resources to make transplant team mobile for procurement at district or regional hospitals if outside the DFR or if donor not stable for transfer.
- Transplant Co-ordinators
 - Procurement according to call roster
 - Recipient workup centralized to IALCH
 - 6 full-time posts on establishment (including those at Grey's hospital and Ngwelezana Hospital).
 - Private public co-operation for cadaveric donors exists with co-ordinators expected to attend donor retrievals in private sector when required.

8.2 Entry Criteria / Exit Criteria to transplant unit (currently 4 beds commissioned)

- Must meet criteria for transplantability :
 - Patients must be accepted onto chronic renal programme (see guidelines)
 - Must have proven compliance (especially substance abuse)
 - Absence of any active infection
 - Absence of incurable malignancy
 - Absence of any irreversible organ failure / disease process
 - Must be psychologically stable.

- Must have adequate social circumstances to avoid infections posttransplant
- > Admission Criteria for transplant Unit
 - New transplant patients donor and recipient according to date specified
 - Post-transplant patients with surgical complications to allow work-up and appropriate surgery
 - Post-transplant rejection diagnosis and treatment
 - Post-transplant medical complications (if warrant isolation or high-care)
 - New transplant patients given priority if bed shortages exist

Written by Mr S Moodley

E.N.T

9. ENT

9.1. Scope of Practice

- > Patients whose illness require tertiary and quaternary care
- Patients will be screened at the various specialist clinics and booked for appropriate surgery
- > All patients attending the clinic will be booked and given appointments
- > The maximum number of patients per clinic will be 20
- Patients will be referred from the ENT clinics of various state hospitals and private ENT specialists.

9.2 Entry & Exit Criteria - Otology

- 9.2.1 Congenital anomalies of the ear <u>Entry Criteria</u> Reconstruction and corrective surgery <u>Exit Criteria</u> Fully recovered and no complications
- 9.2.2 Diabetes Otitis Externa Entry Criteria Otalgia
 > Diabetes otitis externa
 > Severe otitis externa Exit Criteria Negative gallium bone scan
- 9.2.3 Tumor of EAC <u>Entry Criteria</u> Excision biopsy <u>Exit Criteria</u> Post excision and no complication
- 9.2.4 Tympanic membrane perforation <u>Entry Criteria</u> Mastoidectomy, tympanoplasty, ossiculoplasty <u>Exit Criteria</u> Repair and no complication
- 9.2.5 Chronic otitis media Entry Criteria
 - Complication postauricular abscess
 - Labyrinthine
 - V11 Nerve palsy
 Exit Criteria

Repair

- 9.2.6 Cholesteatoma <u>Entry Criteria</u> Cholesteatoma, bezold abscess, Petrus opacity, lateral sinus thrombosis <u>Exit Criteria</u> Mastoidectomy and no complication
- 9.2.7 *Keratosis obturans* <u>Entry Criteria</u> Otaligia and otorrhoea <u>Exit Criteria</u> After complete excision
- 9.2.8 Meniere's disease Entry Criteria Acute attack with vertigo, nausea and vomiting Labyrinthectomy Saccus decompression Exit Criteria After symptoms have subsided After labyrinthectomy Following saccus decompression
- 9.2.9 Layrinthitis <u>Entry Criteria</u> Dizziness with nausea and vomiting <u>Exit Criteria</u> Dizziness subsided
- 9.2.10 Labyrinthine fistula Entry Criteria Vertigo and dizziness Exit Criteria Dizziness subsided
- 9.2.11 Perilymph fistula <u>Entry Criteria</u> Hearing loss and dizziness <u>Exit Criteria</u> Hearing stable / after surgical repair
- 9.2.12 CSF clear / otorrhoea <u>Entry Criteria</u> CSF, Leak <u>Exit Criteria</u> CSF otorrhoea subsided / after repair

- 9.2.13 Facial palsy <u>Entry Criteria</u> Traumatic / inflammatory / neoplastic, lower motor neuro facial palsy <u>Exit Criteria</u> Re-exploration and repair following treatment.
- 9.2.14 Sudden sensorineural deafness <u>Entry Criteria</u> Less than 1-week duration <u>Exit Criteria</u> Hearing stable or improved
- 9.2.15 Otosclerosis <u>Entry Criteria</u> Conductive hearing loss greater than 30dB <u>Exit Criteria</u> No complication following stapedectomy
- 9.2.16 Vestibular Schwannoma Entry Criteria Surgical excision Exit Criteria Vertigo subsided
- 9.2.17 Glomus tumour <u>Entry Criteria</u> Surgical excision <u>Exit Criteria</u> After excision and patient able to take
- 9.2.18 Middle ear / temporal bone tumors or masses <u>Entry Criteria</u> Excision / incision biopsy <u>Exit Criteria</u> After surgery
- 9.2.19 Drooling patient <u>Entry Criteria</u> Tympanic neurectomy <u>Exit Criteria</u> No complication following surgery

9.3 Entry & Exit Criteria - Head and Neck Surgery

9.3.1 Oral cavity cancer <u>Entry Criteria</u> For excision / Commando / reconstruction <u>Exit Criteria</u> Wound has healed and patient taking orally

- 9.3.2 Drooling <u>Entry Criteria</u> Retraction of submandibular duct <u>Exit Criteria</u> Wound has healed
- 9..3.3 Salivary Gland Tumors <u>Entry Criteria</u> Incision / Excision biopsy <u>Exit Criteria</u> Wound has healed and patient taking orally
- 9.3.4 *Mandibular / maxillary tumors* <u>Entry Criteria</u> Incision / Excision biopsy <u>Exit Criteria</u> Wound has healed
- 9.3.5 Ranula Entry Criteria Surgical excision Exit Criteria Wound has healed and patient taking orally
- 9.3.6 Lymphangioma / haemangioma Entry Criteria Excision Exit Criteria Wound has healed
- 9.3.7 Oro-antral / fistula <u>Entry Criteria</u> Surgical repair <u>Exit Criteria</u> Wound has healed and patient taking orally
- 9.3.8 Obstructive sleep apnoea Entry Criteria Tracheostomy Laser uvulopalatapharyngoplasty Polysomnography UPPP Mandibular / maxillary advancement Exit Criteria Wound has healed and patient taking orally
- 9.3.8 Tumor of the lip Entry Criteria Excision and reconstruction

Exit Criteria Wound has healed

- 9.3.9 Lingual mass <u>Entry Criteria</u> Excision / incision biopsy <u>Exit Criteria</u> Wound has healed and patient taking orally
- 9.3.10 Cleft lip or palate <u>Entry Criteria</u> Corrective surgery <u>Exit Criteria</u> Wound healed following repair
- 9.3.11 Salivary gland fistula Entry Criteria Tympanic neurectomy Exit Criteria Fistula has healed
- 9.3.12 Sialithiasis <u>Entry Criteria</u> Marsuplization of duct and excision of gland <u>Exit Criteria</u> Wound has healed and patient taking orally
- 9.3.13 Retropharyngeal abscess Entry Criteria Drooling in odynophagia Exit Criteria Patient taking orally
- 9.3.14 Parapharyngeal abscess <u>Entry Criteria</u> Pyrexia and odynophagia <u>Exit Criteria</u> Wound has healed and patient taking orally
- 9.3.15 Nasopharyngeal mass / tumor Entry Criteria Excision / incision biopsy Exit Criteria Wound has healed
- 9.3.16 Hypoharynx mass / tumor <u>Entry Criteria</u> For EUA / biopsy / tracheostomy / excision / reconstruction / pharyngolaryngoesophyectomy

Exit Criteria Wound has healed and patient taking orally

- 9.3.17 Infratemporal mass / tumor Entry Criteria Excision / incision Exit Criteria Wound has healed
- 9.3.18 Laryngeal tumor <u>Entry Criteria</u> For EUA / biopsy / tracheostomy / laryngectomy <u>Exit Criteria</u> Wound has healed and patient taking orally
- 9.3.19 Eagle's syndrome

Entry Criteria Glossopharyngeal neurectomy Exit Criteria Wound has healed

- 9.3.20 Trigeminal neurologic <u>Entry Criteria</u> Nerve block <u>Exit Criteria</u> After nerve block wound has healed
- 9.3.21 Thyroid gland mass / tumors + parathyroid gland <u>Entry Criteria</u> For total and subtotal thyrodectomy <u>Exit Criteria</u>
- 9.3.22 Neck nodes / masses <u>Entry Criteria</u> EUA / biopsy / neck dissection and or reconstruction <u>Exit Criteria</u> Post surgery with no complications
- 9.3.23 Carotid body and glomous tumors <u>Entry Criteria</u> Excision <u>Exit Criteria</u> Wound has healed
- 9.3.24 Tonsillectomy, adenoidectomy, laryngeal / tracheal stenosis, laryngeal / tracheal injury <u>Entry Criteria</u> Obstructive sleep apnoea

Exit Criteria Patient taking orally after surgery

- 9.3.25 Parapharyngeal Schwannomas Entry Criteria Excision Exit Criteria Wound has healed
- 9.3.26 Aesthesioneuroblastoma <u>Entry Criteria</u> Incision / Excision biopsy <u>Exit Criteria</u> Wound has healed
- 9.3.27 Oesophageal / cricopharynx stricture Entry Criteria EUA / dilatation / biopsy / reconstruction Exit Criteria Patients taking orally and no fistula
- 9.3.28 Stridor <u>Entry Criteria</u> Tracheostomy <u>Exit Criteria</u> Wound has healed
- 9.3.29 Dysphagia

Entry Criteria Tumor of hypophyarynx and larynx for panendoscopy, biopsy, definitive surgery Excision of pharyngeal pouch Exit Criteria Wound has healed after surgery

- 9.3.30 Laryngeal / subglottic or tracheal stenosis <u>Entry Criteria</u> For laryngotracheoplasty and reconstruction <u>Exit Criteria</u> Wound has healed
- 9.3.31 Voice disorders <u>Entry Criteria</u> Phonosurgery / stroboscopy <u>Exit Criteria</u> Post surgery with no CX's
- 9.3.32 Laryngeal papilloma Entry Criteria Removal / ablation

<u>Exit Criteria</u> Post surgery with no CX's

- 9.3.33 Post laryngectomy voice disorder / provision <u>Entry Criteria</u> Fashion / insertion of voice prosthesis <u>Exit Criteria</u> Post surgery with no CX's
- 9.3.34 Neck Swelling

Entry Criteria Excision of:

- ➤ Thyroglossal cyst
- Laryngocoele
- Branchial cyst / fistula
- Salivary gland cyst
- Cystic hygroma

Exit Criteria Wound has healed after surgery

- 9.3.35 Congenital craniofacial Abn's <u>Entry Criteria</u> Investigation and / or corrective surgery <u>Exit Criteria</u> Post surgery with no CX's
- 9.3.36 Foreign body upper aerodigestive tract <u>Entry Criteria</u> For removal / failed removal with complications <u>Exit Criteria</u> Wound has healed
- 9.3.37 Trauma oro / pharyngo / laryngeal and tracheal <u>Entry Criteria</u> For repair / reconstruction <u>Exit Criteria</u> Wound has healed

9.4 Entry & Exit Criteria – Nose and Paranasal Sinuses

- 9.4.1 Nasal deformity <u>Entry Criteria</u> Rhinoplasty <u>Exit Criteria</u> Wound has healed
- 9.4.2 Septal deformity Entry Criteria Septoplasty Exit Criteria

Wound has healed

- 9.4.3 Septal perforation Entry Criteria Repair and reconstruction Exit Criteria Wound has healed
- 9.4.4 Chronic sinusitis Entry Criteria FESS Exit Criteria Wound has healed
- 9.4.5 Acute sinusitis with complication <u>Entry Criteria</u> Frontoethmoidectomy <u>Exit Criteria</u> Wound has healed
- 9.4.6 Polyp / fistula / orbit fracture / foreign body / biopsy access for maxillary sinus <u>Entry Criteria</u> Caldwell Luc <u>Exit Criteria</u> Wound has healed
- 9.4.7 CSF rhinorrhoea Entry Criteria Repair to CSF leak Exit Criteria Wound has healed
- 9.4.8 Frontal sinusitis Entry Criteria Frontal trephination Exit Criteria Wound has healed
- 9.4.9 Mucocoele Entry Criteria Frontal sinus obliteration Exit Criteria Wound has healed
- 9.4.10 Tumour of maxilla (fibrous displasia, ossifying fibroma, CA, inverting papilloma) <u>Entry Criteria</u> Lateral rhinotomy and maxillectomy <u>Exit Criteria</u> Wound has healed

- 9.4.11 Epitaxis Entry Criteria Maxillary artery ligation Exit Criteria Wound has healed
- 9.4.12 Fractured nasal bones <u>Entry Criteria</u> Manipulation ulcer anaesthesia <u>Exit Criteria</u> Wound has healed
- 9.4.13 Orbital / eyelid tumor <u>Entry Criteria</u> Excision / reconstruction <u>Exit Criteria</u> Wound has healed
- 9.4.14 Orbital fracture Entry Criteria For reduction Exit Criteria Wound has healed
- 9.4.15 Pit tumor <u>Entry Criteria</u> Transphenoidal hypophysectomy <u>Exit Criteria</u> Wound has healed
- 9.4.16 Allergic rhinitis <u>Entry Criteria</u> Turbinectomy / Vidian neurectomy <u>Exit Criteria</u> Wound has healed
- 9.4.17 Pott's puffy tumor <u>Entry Criteria</u> Frontoethnoidectomy <u>Exit Criteria</u> Wound has healed
- 9.4.18 Sinus mucocoeles and Pyocoeles <u>Entry Criteria</u> Excision via frontoethnoidectomy <u>Exit Criteria</u> Wound has healed
- 9.4.19 Oroantral fistula

Entry Criteria Reconstruction Exit Criteria Wound has healed

- 9.4.20 Proptosis Entry Criteria Orbital decompression Exit Criteria Wound has healed
- 9.4.21 Dacryocyslitis <u>Entry Criteria</u> Ebdoscopic dacryocystectomy <u>Exit Criteria</u> Wound has healed
- 9.4.22 Choanal atresia Entry Criteria Repair of choanal atresia Exit Criteria Wound has healed

Written by Dr A Padayachee update by Dr Basant

I.C.U

10. Entry & Exit Criteria – ICU\

10.1 Adult Multidisciplinary ICU

10.1.1 ADMISSION CRITERIA FOR ICU

Early referral is very important. If referral is delayed until the patient's life is clearly at risk, the chances of a full recovery are jeopardized. These criteria are guidelines only and each child considered for Critical Care must be individually assessed.

1. Multiorgan Failure

Patients requiring support of two or more organ systems should be managed in the critical care unit.

2. Advanced Respiratory, Circulatory, Neurological or Renal Monitoring and Support

- I <u>Respiratory Monitoring and Support</u>
- Children requiring mechanical ventilatory support
- Children with the potential of sudden deterioration in respiratory function requiring immediate intubabation and mechanical ventilation
- Airway Intubation for airway patency or protection
- Children requiring NPCPAP or CIPP or Mask CPAP
- Severe Upper Airway Obstruction for example a grade 3 croup or a child with oropharyngeal obstruction and onstructive sleep apnoea
- Severe Lower Airways Obstruction for example a child with severe asthma
- Severe respiratory distress that requires high concentrations of oxygen (> 50%
 for practical purposes head box oxygen) and/ or the development of a respiratory acidosis.
- Intensive Physiotherapy

II <u>Circulatory Monitoring and Support</u>

- Haemodynamic Instability requiring intensive support and monitoring (Inotropes, CVP's, Arterial Lines)
- Hypovolaemia due to any cause that has not responded to modest volume replacement
- Pericardial Effusions
- Severe Hypertension
- Severe Cardiac Failure
- Cardiac Dysrhymias
- III <u>Neurological Monitoring and Support</u>
- CNS depression from any cause sufficient to prejudice the airway and the protective reflexes
- Invasive neurological monitoring

- Status Epilepticus
- Need for frequent neuro obs \setminus
- IV Renal Monitoring and Support
- Acute Renal Failure requiring frequent assessment of renal output
- Severe Hypertension
- Renal replacement therapy e.g. Peritoneal Dialysis

3. Invasive Management Procedures

- Peritoneal Dialysis
- ICD in small or sick children
- Following invasive procedures such as liver biopsy
- TPN

4. Intensive Monitoring

■ 1 – 2 Hourly monitoring required (neuro-obs, renal output, BP, Saturations etc.)

5. Other

- Poisonings
- Septic Shock
- At the discretion of the Consultant in charge

10.1.2 EXCLUSION CRITERIA

- 1. Irreversible primary pathology, such as terminal cancer, AIDS, central nervous system pathology inc. quadriplegia requiring ventilation etc. that will cause the Patient's demise during the current hospitalization.
- 2. Patients not requiring critical care nursing i.e. less than 1 nurse to 2 patients.

10.1.3 ADMISSION CRITERIA FOR HIGH CARE

- 1. Patient does not require ventilation
- 2. Titration of vaso-active drugs which require invasive monitoring with either intraarterial blood pressure measurement or flow directed pulmonary artery catheter. Inotropes

Antihypertensives

Heavy sedation to the point of apnoea (an exception is sedation prescribed for palliative care).

- 3. Certain techniques of pain management epidural opiates and local anaesthetic
- 4. Treatment of shock

Early admission is advisable based on:

- Lack of response to fluid resuscitation
- Urine output < 0.5 1,0 ml/kg/hr
- Inability to maintain systolic blood pressure in the region of 80 90 mmHg (in adults)
- Impaired cerebral function
- 5. Haemodynamic evaluation requiring the use of specialised ICU monitoring, inter alia
 - Pulmonary artery flow directed catheter
 - Intracranial pressure monitoring

Basic tenets for discharge

The Brain Dead patient. This patient is dead. No other option should be given to the relatives as there is no other option and to offer them anything else is to give them an option where none exists i.e. an ethical fraud.

Patients with care limitations that preclude survival and which will necessitate withdrawal of support.

Patient no longer requires Intensive Care and meets appropriate criteria for safe discharge to a general ward. If a step down unit is available the criteria will obviously be less stringent. Such criteria include the following: -

- 1. Patient is breathing spontaneously
 - a. Airway is not compromised
 - b. cough is intact
 - c. no paradoxical ventilation
 - d. no use of accessory muscles of respiration
 - e. no tracheal tug
 - f. Respiratory rate <30/min
- 2. No longer receiving titratable drugs
- 3. No longer requires invasive monitoring other than a central venous line.
- 4. Support such as dialysis is no longer required

A triage situation exists when choices have to be made between patients who would otherwise be acceptable for admission to the unit or a decision must be made to remove the patient from the unit when the incoming patient has a better chance of survival. Such decisions must necessarily occur outside policy and only general guidelines can be given. Attempts to transfer patient should be investigated. In any event the steps that have been taken to avoid triage should be clearly documented and when triage is applied the reasons should be clearly set down.

Written by Dr R Burrows updated by Dr Pershad

10.2.1 ENTRY AND EXIT CRITERIA FOR CARDIAC SURGICAL PATIENTS TO THE ICU

Entry Criteria

All patients undergoing Cardiac Surgery need to be cared for in an ICU environment immediately post surgery following either open or closed Cardiac Surgery.

Patients who are unstable prior to surgery, requiring ventilation need to be cared for in ICU.

Exit Criteria

Patients may be discharged to either the High Care Wards or the Cardiac Ward when;

- 1) They no longer require ventilation and are in a stable condition following surgery, so that they can be managed with regard to treatment and monitoring requirements in the High Care Wards.
- 2) Or when their medical condition is such that further stay in the ICU is deemed not to be of benefit to the patient so that they do not deprive another patient of ICU care.

Entry and Exit Criteria for Thoracic patients to the ICU

Entry Criteria

All patients undergoing Thoracic Surgery that require post-op ventilation or patients who need treatment/ monitoring that cannot be provided in a High Care Ward require admission to the ICU. This may include pre-op patients.

Exit Criteria

Patient who are stable off the ventilator and whose treatment and monitoring can be performed in the High Care Ward or Thoracic Ward may be discharged from the ICU.

Patients whose medical condition is such that further ICU stay will not be of benefit may be discharged so that they do not deprive another patient of the bed.

10.2.2 ENTRY AND EXIT CRITERIA FOR CARDIAC SURGICAL PATIENTS TO THE HIGH CARE WARDS

Entry Criteria

Patients who are in a stable condition post surgery and who require ongoing invasive or continuous non-invasive monitoring and/or post-op mobilization may be admitted to the High Care Ward..

Pre-op patients who require stabilization and need treatment and continuous monitoring that cannot be provided in the Cardiac Surgical Wards prior to surgery may be admitted to the High Care Ward.

Exit Criteria

Patients whose condition is stable and who do not require ongoing invasive or continuous non-invasive monitoring or treatment may be transferred to the Cardiac Surgical Wards.

Patients whose medical condition is such that further medical treatment is considered not to be of benefit may be discharges so that they do not deprive another patient of the bed.

10.2.3 ENTRY AND EXIT CRITERIA FOR THORACIC SURGICAL PATIENTS TO THE HIGH CARE WARDS

Entry Criteria

Patients who require pre- or post-op invasive or continuous non-invasive monitoring and treatment or who require treatment that cannot be provided in the Thoracic Surgical Wards may be admitted to the High Care Wards.

Exit Criteria

Patients whose condition is stable and who do not require ongoing invasive or continuous non-invasive monitoring may be discharged back to the Thoracic Surgical Wards.

Patients whose medical condition is such that further medical treatment is considered not to be of benefit to the patient may be discharged so that they do not deprive another patient of the bed.

Written by Dr A Reddi updated by Mr Madensen

10.2.4. Entry and exit criteria for Paediatric ICU

Critical care provides life-saving and life-sustaining medical management of patients at risk of imminent death from acute or chronic illness or injury.

Entry Criteria

The decision to admit a patient to the intensive care unit is the responsibility of the unit head and consultants. The decision is made after consultation with the referring doctor(s). Cases from private institution will only be accepted if the referral doctor consults the unit within a 48-72 hours period after presentation to that institution.

This decision is guided by the acceptance that the intensive care unit is a service for patients with potentially recoverable diseases who can benefit from more detailed observation and treatment than is generally available in the general ward or high care wards – this must be guided by the competencies of general wards, high care units and intensive care units.

Inclusion Criteria

1. Patients requiring life sustaining therapies in the form of multiple organ support:

1.1 Respiratory failure or distress – Mechanical and non-invasive ventilation

1.2. Cardiovascular dysfunction – Cardio-active and vaso-active agents requiring continuous cardiovascular monitoring.

1.3. Renal dysfunction - requiring renal replacement therapies with respiratory support

1.4. Neurological dysfunction – requiring continuous intracranial pressure or electrical activity monitoring

2. Patients requiring continuous physiological monitoring for the early detection of life-threatening or potentially life threatening events including complicated fluid and electrolyte management issues **Excluded cases**

These decisions must be guided by an appreciation of the collective impact of current physiological state of the patient, pre-morbid functional capacity of the patient, the current or underlying pathological disease with regards to prognosis and the competencies of the unit.

Patients with the following conditions are considered 'poor candidates' due to the high morbidity and mortality associated with their underlying condition

1. Cardiorespiratory arrest:

Patients post cardiorespiratory arrests with the following features are more likely associated with an increase in both morbidity and mortality

- Resuscitation of greater than 20 minutes before return of spontaneous circulation (this ALONE may not herald a poor prognosis, however any length of resuscitation with the underlying factors and lack of spontaneous breathing may indicate a poorer prognosis
- Hemodynamic and metabolic instability post arrest despite maximum cardiovascular support
- Status myoclonus post arrest
- Failure to initiate normal respiration post arrest
- Absence of brainstem function post arrest: absent pupillary response (fixed dilated pupils -exclude the use of atropine), corneal reflex, gag, motor response to pain
- Cardiorespiratory arrest without these criteria does not preclude a patient from an ICU admission. However pre – arrest factors such as poor prognostic features of an underlying disease process pre-arrest e.g. relapsed malignancy would also preclude admission to the PICU. An exception is cardiac arrest associated with drowning. All patients post cardiac arrest must be

referred intubated even if spontaneous respiration is established. Haemodynamic instability – refractory shock/acidosis not responsive to fluids, inotropes, steroids, ventilation

- 3. Multi-organ Failure: Patients with 3 or more organ failures have a high risk of mortality
- 4. Acute neurological insults
 - Complicated Meningitis: presence of massive infarctions, non-obstructive hydrocephalus, suprarefractory status epilepticus
 - TBM stage 3 (Impairment of consciousness on presentation)
 - Acute brain injury with GCS of 3 after exclusion and treatment for raised intracranial pressure
 - Patients who have brainstem death/dysfunction
 - Children diagnosed with rabies

Nb Exception neonates with asphyxia and intraventricular haemorrhages the management that requires discussion with neonatologists

- 5. Chronic neurological conditions
 - Static Encephalopathy (Cerebral Palsy) it is not an exclusion criteria for admission in ICU except the following patients will not be offered ICU care due to resource constraints

Severe disability: poor functionality wheel chair or bed ridden bound, severe contractures, intractable seizures, microcephaly with severe tone disturbance, visual and hearing impairment, severe failure to thrive (<-3SD z scores)

- Spinal muscular atrophy and severe congenital myopathy ventilator dependence is likely
- Hydraencephaly & anencephaly
- Massive infarcts (need to define massive)
- 6. Acute fulminant hepatic failure: excluding paracetamol poisoning, as an antidote is available

NB. Deranged liver function tests i.e. enzymes on their own do not reflect liver failure

- Chronic liver disease: Pre- ICU assessment of patient is deemed not a candidate for liver transplantation Patients on the transplant list or a potential candidate for a transplant will be be offered supportive care while awaiting workup or transplantation.
- 8. Chronic renal failure Pre ICU assessment of patient is deemed not a suitable candidate for long-term dialysis or for kidney transplantation
- 9. Respiratory: Patients with chronic lung pathology who are not deemed suitable for a lung transplantation or patients with extensive bilateral lung disease that not suitable candidates for to a lobectomy or a pneumonectomy
- 10. Cardiovascular patients with intractable cardiac failure on optimal anti-failure treatment that are not candidates for a heart transplant Patients with complex cardiac lesions not suitable for any surgical procedure

(corrective or palliative)

Surgical correctable cardiac lesion with multiple other life threatening Congenital lesions that are together not compatible with life after discussion by a multidisciplinary team

- Hematological Patients with poor prognostic haematological conditions Malignant and non-malignant e.g. relapse malignancy, aplastic anaemia failing conservative treatment and not candidates for bone marrow transplants
- 12. Endocrine Patients with confirmed inborn errors of metabolism where long -term prognosis has been defined to be poor
- 13. Genetic Fatal genetic disorders where life expectancy is limited e.g. Trisomy 13,18. If chromosomal studies have not confirmed the genetic disorder, the opinion of an experienced paediatrician making a clinical. diagnosis of a lethal syndrome can be used in assisting with prognostication Where doubt exist and the prognosis cannot be made and the patient may be offered intensive care support until genetic confirmation
- 13. Gastrointestinal patients with surgical conditions that are deemed Incompatible with life e.g. severe short bowel syndrome (as previously Assessed by the paediatric surgeon)
- 14. Nutritional:

Severe acute malnutrition < -3 SD Z score It is important to exclude reversible conditions for the severe failure to thrive prior to exclusion of such cases from intensive care e.g. undiagnosed severe gastro-oesaphageal reflux

- 15. HIV infection is not an exclusion criterion for admission to PICU; however patients who fail to response to 2nd line regimens without the option of an alternative regimen would be considered to have a poor prognosis.
- 16. Patients who have previously been ventilated and who have sustained organ dysfunction e.g. CLD with recurrent pneumonias or severe neurological impairment (as in 5) will not be suitable candidates for re-ventilation. However those patients that have shown good recovery would be considered for re-ventilation.
- 17. Patients with cancer and extensive metastases where the medium and long term outcome is poor.
- 17. Surgical patients presenting with co- morbid medical conditions as poor Prognostic indexes as mentioned above will not be accepted into ICU, However patients requiring palliative care procedures e.g. gastrostomy will be Offered ICU care post-surgery for a defined limited period.

Many patients will present critically ill acutely and a definite diagnosis cannot be made in this setting. Prognosis cannot be made without a confirmed definitive diagnosis. These patients' prognosis for mortality and morbidity must be made in the light of the acute physiological derangements as mentioned above. However where there is uncertainty about the prognosis the case will be given the benefit of the doubt and be admitted.

If doubt exists as to the suitability of a candidate for ICU admission, extended consults with other specialist in your hospital should be sought as well as the opinion of the ICU consult. Poor social criteria alone cannot be a justification for not offering an ICU bed to a child fulfilling the medical criteria for admission.

Exit Criteria

The decision to discharge a patient from the unit is made by the unit consultant. This is indicated when further intensive care is no longer required and it safe to transfer a patient to a high care unit or general ward. This decision is made with the referring doctor.

- 1. All cases who have recovered and do not invasive monitoring or interventional treatment
- 2. All patients in whom the continued provision of advanced life support system appears to be a fruitless exercise after consultation with a panel of experts
- 3. All cases that can be managed a lower level of intensity of care with similar outcomes.

Written by Prof P Jeena

Geriatric Services

Department of Geriatrics

Inkosi Albert Luthuli Hospital

All patients will be seen strictly by appointment after discussion with the consultant on call

Entry criteria: Patients over the age of 60 years with

- Multi system problems requiring multidisciplinary specialized investigations and management
- Memory loss requiring further investigation. Patients must have had baseline clinical assessment and biochemical investigations at base hospital
- Patients at high risk of osteoporosis and fractures and those requiring work-up for secondary causes of osteoporosis
- Recurrent falls with injury for assessment
- Balance and gait disturbances in the elderly
- Undiagnosed syncope
- Patients requiring specialized and multidisciplinary assessment of rehabilitation goals
- Urinary incontinence for assessment and management

Exit criteria

- Diagnosis and plan of management established
- Treatment and follow up can be achieved at referral or base hospital

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