

INKOSI ALBERT LUTHULI CENTRAL HOSPITAL

SCOPE OF PRACTICE AND ENTRY & EXIT CRITERIA PHASE 1

COMPILED BY : DR M JOSHUA
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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 further updated in November 2014
Dr letebele
Medical Manager
IALCH
November 2014*

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PAEDIATRIC SURGERY

1. PAEDIATRIC SURGERY

1.1 SCOPE OF PRACTICE

Tertiary Paediatric Surgery is defined as Paediatric Surgery, which includes neonatal surgery, oncology surgery, correction of major congenital anomalies outside the neonatal period, liver surgery and the management of gender ambiguity both in the neonatal period and beyond. Additional to these will be occasional patients internally referred from other disciplines.

Tertiary Paediatric Surgery is limited to 32 Beds.

1.2 ENTRY CRITERIA – B3W

Paediatric Surgery will do or attend to the following at the discretion of the surgical consultant:

- All Paediatric Surgical patients discharged from high-care
- All stable neonatal surgical patients
- All children under two years of age with paediatric surgical pathology.
- All oncological (solid organ) patients admitted for investigation and treatment
- All genito-urinary problems in children under 2 years of age requiring surgery
- All children with paediatric surgical problems outside the above criteria which cannot be catered for in a peripheral hospital, but are discussed with PS consultant staff.

1.3 EXIT CRITERIA – B3W

Post surgical patients can be transferred to recuperate in a hospital in their area, if further attention is required.

- All patients in B3W who have completed, or no longer are in need of, or require further tertiary paediatric surgical treatment.
- All patients who require more intensive monitoring and/ or ventilator support.

1.4 ENTRY CRITERIA – HIGH CARE

- All paediatric surgical patients, at the discretion of the surgical consultant, who require intensive monitoring
- Patients who require pre-operative resuscitation
- Patients who require post-operative close observation
- Patients who require post-operative epidural/ intravenous opiates
- Patients discharged from IC4. Patients discharged from NICU will be accommodated in the Nursery High Care area

1.5 EXIT CRITERIA – HIGH CARE

- Level of monitoring of patient which can be catered for in B3W
- Patients no longer requiring epidural analgesia/ intravenous opiates
- Patients no longer requiring TPN

1.6 ENTRY CRITERIA – ICU

- All children who require ventilatory support
- All children who require pre- and post –operative intensive resuscitation with or without ventilation.

1.7 EXIT CRITERIA – ICU

- Resolved ventilatory need
- Post- operative patients who are stable and able to be accommodated in either the High Care Unit or B3W.

Written and updated by Prof. G.P. Hadley

RESPIRATORY

2. RESPIRATORY

2.1 SCOPE OF PRACTICE

2.2 ENTRY CRITERIA

2.2.1 Asthma

- On discharge from High Care / ICU
- Requiring specialized tests or investigations as in patients

2.2.2 Interstitial Lung Disease

- At initial referral for work up
- Requiring intensive treatment following deterioration
- Complicated clinical course requiring further evaluation

2.2.3 Chronic Obstructive Pulmonary Disease

- Acute exacerbation
- On discharge from ICU

2.2.4 Pneumonia

- Atypical presentations requiring further evaluation or specialized treatment

2.2.5 Pulmonary Arterial Hypertension

- At initial referral for workup
- For commencement of pulmonary vasodilators

2.2.6 Lung Malignancy

- For Initial workup and for specialized diagnostic investigations ie. Bronchoscopy or Transthoracic biopsy

2.2.7 Miscellaneous Diseases

This category includes respiratory disorders considered rare/unusual or requiring specialized investigation or treatment and those requiring further observation e.g. post bronchoscopy

2.3 EXIT CRITERIA

Patients will be considered for discharge once the attending physician is satisfied that the appropriate investigations and treatment have been instituted and whatever remains can be done on an outpatients basis.

The following general criteria will apply for a patient to be called stable and dischargeable.

- Haemodynamically stable
- Respiratory function has been optimized
- Appropriate supportive and other measures have been arranged for the patients ongoing care, e.g. physiotherapy, domiciliary oxygen, etc
- Arrangements for future follow-ups have been made.

Written and updated by Dr. A Ambaram

METABOLIC & ENDOCRINE

3. Department of Diabetes and Endocrinology:

3.1 SCOPE OF PRACTICE

The Department of Diabetes and Endocrinology was established at Inkosi Albert Luthuli Central Hospital in October 2001 and has since grown to provide a comprehensive diagnostic and therapeutic facility for patients with endocrine diseases and diabetes mellitus. These services are provided in the form of 4 outpatient clinics per week and an inpatient facility, which caters for the needs of acutely ill patients as well as providing a facility for the performance of provocative endocrine testing. The Department of Diabetes and Endocrinology provides an academic service with a weekly accredited journal club, Endocrinology Registrar bedside teaching, and a Friday meeting (Basic Science, Seminar and Research meetings in rotation). The department fosters a spirit of continuing education and skills development and is engaged in building the capacity of medical and nursing staff in clinical management

3.2 ENTRY CRITERIA

The following categories of patients will be admitted to the inpatient or outpatient facility.

- Type 1 diabetes with difficult metabolic control and / or complications
- High Risk Pregnant diabetes
- Complicated diabetes acute metabolic disorders
- Type 2 diabetes in the Young (<35yr) /Adolescent
- Diabetes with chronic complications (neuropathy, nephropathy, retinopathy, macrovascular disease, foot ulcers) where there is a problem with metabolic control
- Metabolic bone disease
- Hyperthyroidism
- Thyroid disorders undiagnosed or presenting diagnostic and / or management difficulties.
- Parathyroid disease (hypo- and hyper)
- Spontaneous hypoglycaemic disorders
- All suspected or confirmed pituitary disorders
- Idiopathic syndrome of inappropriate ADH secretion.
- All suspected or confirmed adrenal disorders (both adrenal medulla and adrenal cortical disorders)
- All disorders of ambiguous genitalia / feminizing disorders in males / virilising disorders in females.
- Growth failure
- Delayed or absent puberty
- Rare forms / complicated dyslipidaemias
- Endocrine Pancreatic disorders
- Gynaecomastia
- Hirsutism
- Obesity – only via MDT for Bariatric Surgery at IALCH
- Neuroendocrine tumors
- Severe electrolyte imbalance

3.3 EXIT CRITERIA

- Stable patients with treated thyrotoxicosis and post-treatment hypothyroidism on replacement therapy for at least 18 months
- Stable iatrogenic hypothyroid patients on replacement therapy for at least 18 months
- Stable type 2 diabetic patients without complications and well controlled on medications to be followed up at least 1-2 times a year.
- Patients with diabetes, who despite continued advice, are non-compliant with the standard guidelines for management (including home blood glucose monitoring) and whose glycaemic control remains poor over a period of 1.5 – 2 years
- Dyslipidaemic patients without complications, well controlled on therapy.
- Any other patient taken over by another sub-specialty (e.g. renal) for chronic management or considered by the endocrinology unit as no longer requiring tertiary care or follow up.

AAM/Dept of Diabetes and Endocrinology Entry & Exit Criteria/AAM/final/ 08 Sept 2014

GASTRO-INTESTINAL & LIVER

4.1 SCOPE OF PRACTICE

Specialized gastrointestinal procedures that are carried out at IALCH are as follows:

Upper Endoscopy

- Diagnostic endoscopy and biopsy
- Therapeutic endoscopy
 - Polypectomy
 - Injection of bleeding ulcers
 - Sclerotherapy
 - Banding –Oesophageal varices
 - Oesophageal dilatation
 - Endo-clipping of bleeding lesions
 - Pyloric dilatation
 - Oesophageal stenting
 - Placement of PEG

Diagnostic and therapeutic procedures for liver and pancreatic disease.

- Diagnostic ERCP
- Therapeutic ERCP
 - Stone extraction
 - Sphincterotomy
 - Worm extraction
 - Dilatation of CBD strictures
 - Dilatation of PD strictures
 - Stent placement of CBD and PD strictures
 - Placement of metal stents for malignant strictures

Diagnostic and therapeutic procedures for lower bowel disease

- Flexible colonoscopy + biopsy
- Flexible sigmoidoscopy + biopsy
- Therapeutic colonoscopy
- Injection of bleeding lesion
- Dilatation of strictures

Diagnostic and therapeutic procedures for upper and lower gut motility disorders

- Upper Gut
 - 24-hour ambulatory pH study
 - 24-hour ambulatory motility study
 - Stationary oesophageal motility study
 - Stationary gastric motility study
 - Stationary duodenal motility study
 - Stationary sphincter of ODDI motility study
- Lower Gut
 - Colonic motility study
 - Ano-rectal motility study
 - Bio feedback

Endoscopic Ultrasound

- Upper G.I.T. (with 360° scope)
- Lower G.I.T. (with 360° scope)
- Pancreatic and duodenal (with probes)

Specialised procedures that require the use of screening

- Placement of feeding tubes
- Jejunal biopsy
- Gastric acid study
- Serum gastrin study

Diagnostic and therapeutic endoscopic procedures for liver disease.

- Peritoneoscopy + biopsy
- Gel-foam liver biopsy

4.2 ENTRY & EXIT CRITERIA**4.2.1 Ulcerative Colitis and Crohn's disease: Severe cases & those with complications**Entrance Criteria

- Requires high care or intensive care supervised by a specialist gastroenterologist.
- Requires daily or even more frequent attention and opinion by a specialist gastroenterologist.
- Requires high care or intensive care with a view to surgery at Inkosi Albert Luthuli Central Hospital.

Exit Criteria

- No longer needs or requires high or intensive care supervised by a specialist gastroenterologist.
- Does not require daily or even more frequent attention by a specialist gastroenterologist.
- Patient recovered from procedure/s without the development of complications and is in a fit state to be discharged home or to a referring hospital for care e.g. general physician.

4.2.2 Refractory ConstipationEntrance Criteria

- Require specialist test/s not available at patient's regional hospital.
- Requires test/s not available at the regional hospital to which the patient might be referred.
- Patient may need surgery.

Exit Criteria

- No longer needs or requires care supervised by a specialist gastroenterologist.
- Patient recovered from procedure/s without the development of complications and is in a fit state to be discharged home or to referring hospital for care e.g. general physician.

4.2.3 Cystic Fibrosis

Entrance Criteria

- Require specialist test/s not available at patient's regional hospital.
- Requires test/s not available at the regional hospital to which the patient might be referred.

Exit Criteria

- Patient recovered from procedure/s without the development of complications and is in a fit state to be discharged home or to referring hospital for care e.g. general physician.

4.2.4 Severe Dysentery

Entry Criteria

- Requires high care or intensive care supervised by a specialist gastroenterologist.
- Requires daily or even more frequent attention and opinion by a specialist gastroenterologist.
- Requires high care or intensive care with a view to surgery at Inkosi Albert Luthuli Central Hospital.

Exit Criteria

- No longer needs or requires high or intensive care supervised by a specialist gastroenterologist.
- Does not require daily or even more frequent attention by a specialist Gastroenterologist

4.2.5 Refractory Irritable Bowel Syndrome

Entry Criteria

- Require test/s not available at patient's regional hospital.
- Requires test/s not available at the regional hospital to which the patient might be referred.

Exit Criteria

- Patient recovered from procedure/s without the development of complications and is in a fit state to be discharged home or to referring hospital for care e.g. general physician.

4.2.6 Acute Pancreatitis with complications

Entry Criteria

- Requires high care or intensive care supervised by a specialist gastroenterologist.
- Requires daily or even more frequent attention and opinion by a specialist gastroenterologist
- Requires high care or intensive care with a view to surgery at Inkosi Albert Luthuli Central Hospital.
- Require test/s not available at patient's regional hospital.
- Require test/s not available at the regional hospital to which the patient might be referred.

Exit Criteria

- No longer needs or requires high or intensive care supervised by a specialist gastroenterologist.
- Does not require daily or even more frequent attention by a specialist

gastroenterologist.

4.2.7 Peptic Ulcer Disease with complications

Entry Criteria

- Requires high care or intensive care supervised by a specialist gastroenterologist.
- Requires daily or even more frequent attention and opinion by a specialist gastroenterologist
- Requires high care or intensive care with a view to surgery at Inkosi Albert Luthuli Central Hospital.

Exit Criteria

- No longer needs or requires high or intensive care supervised by a specialist gastroenterologist.
- Does not require daily or even more frequent attention by a specialist gastroenterologist.

4.2.8 Liver Abscess with poor response to therapy / complications

Entry Criteria

- Requires daily or even more frequent attention and opinion by a specialist gastroenterologist
- Requires care with a view to surgery at Inkosi Albert Luthuli Central Hospital.
- Require test/s not available at patient's regional hospital.

Exit Criteria

- No longer needs or requires care supervised by a specialist gastroenterologist.
- Does not require daily or even more frequent attention by a specialist gastroenterologist

4.2.9 Chronic Viral Hepatitis

Entry Criteria

- Require test/s not available at patient's regional hospital.
- Requires test/s not available at the regional hospital to which the patient might be referred.

Exit Criteria

- No longer needs or requires care supervised by a specialist gastroenterologist.
- Does not require daily or even more frequent attention by a specialist gastroenterologist.
- Patient recovered from procedure/s without the development of complications and is in a fit state to be discharged home or to referring hospital for care e.g. general physician.

4.2.10 Metabolic Disease of the Liver and GIT (Wilson's Disease, Haemochromatosis)

Entry Criteria

- Requires test/s not available at patient's regional hospital.
- Requires test/s not available at the regional hospital to which the patient might be referred.

Exit Criteria

- No longer needs or requires care supervised by a specialist gastroenterologist.
- Does not require daily or even more frequent attention by a specialist gastroenterologist.
- Patient recovered from procedure/s without the development of complications and is in a fit state to be discharged home or to referring hospital for care e.g. general physician.

4.2.11 Malabsorption Syndromes

Entry Criteria

- Requires high care or intensive care supervised by a specialist gastroenterologist.
- Requires daily or even more frequent attention and opinion by a specialist gastroenterologist
- Requires high care or intensive care with a view to surgery at Inkosi Albert Luthuli Central Hospital.
- Requires test/s not available at patient's regional hospital.
- Requires test/s not available at the regional hospital to which the patient might be referred.

Exit Criteria

- No longer needs or requires care supervised by a specialist gastroenterologist.
- Does not require daily or even more frequent attention by a specialist gastroenterologist.
- Patient recovered from procedure/s without the development of complications and is in a fit state to be discharged home or to referring hospital for care e.g. general physician.

4.2.12 GIT Malignancies

Entry Criteria

- Requires high care or intensive care supervised by a specialist gastroenterologist.
- Requires daily or even more frequent attention and opinion by a specialist gastroenterologist
- Requires high care or intensive care with a view to surgery at Inkosi Albert Luthuli Central Hospital.
- Test/s not available at patient's regional hospital.
- Test/s not available at the regional hospital to which the patient might be referred.

Exit Criteria

- No longer needs or requires care supervised by a specialist gastroenterologist.
- Does not require daily or even more frequent attention by a specialist gastroenterologist.
- Patient recovered from procedure/s without the development of complications and is in a fit state to be discharged home or to referring hospital for care e.g. general physician.

4.2.13 Specialised Gastrointestinal procedures that would be done at IALCH

Entry Criteria

Basically, one or more of the following would be applicable to patients admitted to Inkosi Albert Luthuli Central Hospital.

- Requires high care or intensive care supervised by a specialist gastroenterologist.
- Requires daily or even more frequent attention and opinion by a specialist gastroenterologist
- Requires high care or intensive care with a view to surgery at Inkosi Albert Luthuli Central Hospital.
- Requires test/s not available at patient's regional hospital.
- Requires test/s not available at the regional hospital to which the patient might be referred.

Exit Criteria

The following would be reasons for transfer of patients from Inkosi Albert Luthuli Central Hospital.

- No longer needs or requires high or intensive care supervised by a specialist

- gastroenterologists.
- Does not require daily or even more frequent attention by a specialist gastroenterologist.
- Patient recovered from procedure/s without the development of complications and is in a fit state to be discharged home or to referring hospital for care e.g. general physician.

Written by Prof. A.E. Simjee and updated by Prof Keith Newton.

DERMATOLOGY

6. DERMATOLOGY

6.1. SCOPE OF PRACTICE

Dermatology at IALCH is only at tertiary level. Patients with skin diseases in the DFR region are treated at "Skin Clinics" at RKK, PMH, MGH, Addington and King Edward VII hospital. These are run by Registrars and are supervised by part time consultants at RKK, PMH, MGH & Addington Hospitals and full time consultants at KEH & IALCH. Full time consultants also go to PMH, RKKH and ADDH but their offices are at KEH and Medical School.

6.2 ENTRY CRITERIA

6.2.1 Steven Johnson's Syndrome

For Steven Johnson's Syndrome affecting more than 30% of the body surface area. Patients will be kept in hospital for 3 to 5 days. These patients need systematic steroids and intravenous fluids high care nursing especially for the first 24 hours to 48 hours. Mortality in this condition is very high. Patients die of fluid and electrolyte imbalance, hypothermia, shock and septicaemia.

6.2.2 Toxic Epidermal Necrolysis

If more than 20 to 30% of the body area is affected. In this acute drug reaction large areas of the body are blistered. Mortality is high in severe cases. Patients need intravenous fluid and hydrocortisone and need ICU nursing for a few days. The more extensive the skin involvement the longer the duration of hospitalization, +/- 7 days of in-patient care. IV immunoglobulin has been found to improve the outcome of patients with SJS and TEN

6.2.3 Autoimmune Bullous Diseases

➤ Pemphigus Foliaceous and Vulgaris

These are a group of chronic blistering diseases. In-patients if over 30% of the skin is involved. The mortality rate is very high. Again, patients die of fluid and electrolyte loss and septicaemia. These diseases are treated with systematic steroids and immunosuppressives like cyclophosphamide. There was no cure for these diseases in the past and the blisters persisted for many years. Mucous membranes are also affected. Pemphigus Vulgaris is very painful. Chronic use of steroids causes diabetes, hypertension, aseptic necrosis of the hips. With intravenous dexamethasone and cyclophosphamide pulses we have now cured many patients i.e. with 12 – 24 months of pulses these patients are put into remission. Patients with less than 30% of skin involvement will be given monthly pulses as outpatients. Those with more extensive involvement or those who have septicemia will be treated as inpatients. Some patients with more extensive involvement i.e. greater than 30% involvement and who come from a higher socio-economic background and who have their own transport will be also treated as outpatients for monthly pulse therapy.

- **Phase 1** of the pulse therapy lasts for 6 to 8 months
- **Phase 2** for 6 months and;
- **Phase 3** is totally an outpatient procedure for a further 12 months.

These patients are then cured and do not have to come back to us.

Patients who relapsed in phase II were given Cellcept (Mycophenylate Mofetil)

➤ Bullous Pemphigoid

This disease occurs in elderly patients and lasts for 2-5 years. When more than 25% of the body is blistered they need to be treated as inpatients. Again septicaemia, fluid and electrolyte imbalances, debility due to old age and mortality due to the side effects of systemic steroids develop.

➤ Bullous S.L.E

Clinically this disease resembles Pemphigus Vulgaris. Mortality is very high. If patients do not respond to pulse therapy plasmapheresis is required.

Plasmapheresis is also required for the other autoimmune chronic diseases that do not respond to immunosuppressives.

➤ Chronic Bullous Disease of Childhood

Chronic Bullous Disease of Childhood is another chronic blistering disease, which lasts for 1-2 years in children. If the body surface involved is more than 20% these patients need to be admitted. These children also develop septicemia, lose fluid and electrolytes and develop side effects of prolonged immunosuppressive therapy.

It must be understood that patients with these blistering diseases are mainly Africans, come from outside Durban (often the Eastern Cape, Newcastle, Dundee, Empangeni, etc). Many of them do not even have running water and are already infected when they come in.

6.2.4 Erythroderma due to extensive eczema, psoriasis, drug eruptions, cutaneous T-cell lymphoma (Sezary Syndrome)

Here more than 90% of the body is red and scaly. These patients also have a high mortality rate as they lose fluids, electrolytes, protein and temperature from the surface area. Septicaemia may develop. They can develop high output cardiac failure. They need to be admitted and nursed in a warm environment. Their blood has to be monitored and they need a high protein diet. Some of them may be hypo-albuminaemic and anemic because of the loss of protein and Fe from the skin. IV albumin is sometimes necessary to control the anasarca. Patients respond very well with this supportive care. Patients with eczema and psoriasis will need third line chemotherapy and or PUVA or UVB. Once stabilized they may continue PUVA and chemotherapy as outpatients. Those maintained on chemotherapy alone may be discharged to their nearest hospital.

Patients with Cutaneous T-cell Lymphoma (CTCL) may need PUVA, re PUVA (oral retinoids with PUVA) or Electron Beam Radiotherapy. These patients will be discharged when they undergo remission and will need to be followed up at 6-month intervals.

6.2.5 Skin Cancers

➤ CTCL has been discussed under item 5.2.4.

➤ Squamous Cell Carcinoma and Basal Cell Carcinoma

Squamous Cell Carcinoma and Basal Cell Carcinoma smaller than 1cm may be treated at the OPD with curettage and cautery. Cancers in small planes (angles of eye, nose and ears) are best treated with radiotherapy. Larger lesions need to be treated by plastic surgery – All these patients are followed up at the Combined Skin Cancer Clinic conducted by dermatologists, plastic surgeons and oncologists together. This clinic will be held at IALCH, as these specialists will be there.

➤ Malignant Melanoma

Malignant melanoma are diagnosed and followed up with the “mole max” machine. Management is decided at the Combined Skin Cancer Clinic. The “mole max” will show when to biopsy. Follow up is also at this Combined Skin Cancer Clinic. “Mole max” is also used to map premalignant-pigmented lesions especially in patients with multiple naevi. The patients are reviewed at 6-month intervals. The pictures on the “mole max” are reviewed at each visit.

➤ Bowen’s disease

Bowen’s disease i.e. Squamous cell carcinoma – insitu and other skin tumours may be treated with the Photodynamic Therapy, which is a new tool in tertiary dermatology. It is a novel non-invasive way of treating skin cancers.

Solar Keratoses, Superficial BCC, Bowen’s disease and even small nodular BCC’S can be easily treated with Photo Dynamic Treatment. This should be provided to our department at IALCH.(We have sent a motivation to Mrs Anderson)

6.2.6 Autoimmune or Connective Tissue diseases

Autoimmune or connective tissue diseases like SLE, Dermatomyositis, Scleroderma, Systemic Sclerosis and Vasculitides are tertiary skin diseases where there is often systematic involvement. These are very sick patients that need inpatient care for stabilization. Once stable, +/- 1 week, they may be discharged. Patients are treated with systemic steroids and immunosuppressives. IV pulses may be necessary. They need to be seen at follow up clinics initially monthly until they improve (+/- 6 months). If these diseases are not treated promptly death may result. Plasmapheresis of autoimmune diseases including bullous diseases will be done on patients who do not respond to other modalities of treatment.

Mycophenylate mofetil has also been useful in patients resistant to other conventional immunosuppressives.

6.3 EXIT CRITERIA

All the disease mentioned above will be diagnosed in OPD and will be followed up in OPD. They will be discharged when the disease is stabilized. They will then be transferred to their nearest hospital. If they are complicated and still require specialists to monitor their progress they will be transferred to hospitals where a dermatologist is in attendance (Grey’s, RK Khan, Prince Mshiyeni, Addington or King Edward Hospitals). Hopefully dermatologists will be available at all the district hospitals in the future and they will be able to continue the after care of these patients.

6.4 OTHER SKIN DISEASES THAT NEED TERTAIKY SERVICES

6.4.1 Occupational or Contact Dermatitis

These patients need to be seen by a senior dermatologist with some experience in Occupational Skin Diseases and patch testing. Diagnosis will be established with patch testing. This procedure is done on the OPD and patients need to be called back on day 3,5 and 7. Once diagnosed the patient and employer (if occupational in origin) are counselled, the dermatitis treated and patient discharged to the referring doctor or hospital.

In *Photo contact dermatitis* photo patch tests are done for diagnostic purposes. This will be done as an OPD procedure.

6.4.2 Hyperhidrosis

Hyperhidrosis is a very disabling condition where there is excessive sweating of the palms and soles usually. Iontophoresis is one modality of treatment that will be offered at the OPD.

6.4.3 Psoriasis, Eczema, CTCL, Vitiligo, Pityriasis Lichenoides, Chronica Pityriasis Rubra Pilaris

PUVA, UVB, Photophoresis will be offered to patients with severe psoriasis, eczema, CTCL, Vitiligo, Pityriasis Lichenoides, Chronica Pityriasis Rubra Pilaris which does not respond to conventional treatment. Once the rash is improved the patient will be discharged to his/her referring hospital. Hopefully PUVA will be set up at Greys, Newcastle, Empangeni and Port Shepstone hospitals where Dermatologists will be able to continue this therapy nearer the patient's home.

6.4.4 Granulomatous Diseases

Granulomatous diseases like Sarcoidosis, TB, Leprosy and Deep Fungal infections will be diagnosed at the OPD at tertiary level, as management depends on accurate diagnosis. Clinically all these diseases are similar. Histopathology, Microbiology and Dermatological acumen is necessary to differentiate these diseases. The diseases are all chronic with great morbidity and management depends on an accurate diagnosis. The treatment of especially the fungal infections is very costly.

Granulomatous Syphilis and genital ulcer disease also falls into the above category. Dermatological skills are required for accurate diagnosis and hence correct treatment. These diseases will be diagnosed and treated at the OPD. Once patients begin to improve they will be transferred to one of the regional hospitals where the relevant medications are available.

6.4.5 Nodulocystic Acne and Hidradenitis

Nodulocystic Acne and Hidradenitis require Roaccutane, which is very expensive. A senior dermatologist will have to assess the need, dosage and duration of treatment. Treatment will be at IALCH OPD and the patient will be discharged to another center where Roaccutane is available until the patient's acne is in remission (4 to 6 months).

Hidradenitis and deep fungal infections may resemble one another. Accurate diagnosis and culture of tissues will be necessary. Some improve on Roaccutane. Others will need proper and adequate plastic surgery by a trained person.

6.4.6 Benign Skin Tumours and Naevi

Benign Skin Tumours and Naevi like pigmented lesions; haemangioma and port-wine stain will be diagnosed in the OPD and treated with proper lasers. Lasers are also used to treat tattoos.

6.4.7 Systemic Mycosis (Histoplasmosis, Cryptococcosis) and Deep fungal infections

Systemic Mycosis (Histoplasmosis, Cryptococcosis) and Deep fungal infections require expensive anti-fungals like Fluconazole, Terbinafine, Itraconazole and Amphoterecin – B. The duration of treatment is prolonged. Dermatology, Microbiology and Histopathological skills at IALCH will be required to diagnose and monitor these patients. This will be done in the OPD except in severe systemic mycoses in the immuno compromised patient who needs to be admitted into hospital. If these patients are not followed up by competent specialists very expensive medications may be abused.

6.4.8 Vitiligo

Vitiligo, unresponsive to topical steroid will be treated with PUVA bath PUVA or punch grafts. These will be done in OPD. Patients will be discharged once they improve.

Written by Prof. J. Aboobaker and uopdated by Dr A Skenjana

HAEMATOLOGY & PLASMAPHORESIS

7. HAEMATOLOGY & PLASMAPHORESIS

7.1 SCOPE OF PRACTICE

DEPARTMENT OF HAEMATOLOGY INKOSI ALBERT LUTHULI CENTRAL HOSPITAL

The Department of Haematology at the IALCH is an autonomous department which provides both clinical and laboratory services at the IALCH.

Clinical Services:-

The clinical services comprise a 13 bed in-patient ward, a 5 bed bone marrow transplant unit (to be commissioned) and a 5 bed plasmapheresis unit.

In addition out-patient clinics are conducted daily. The wards and clinics are staffed by trained nursing and medical staff.

As this is a tertiary facility, the patients treated in the department are those with complicated lymphoma and myeloma, acute leukaemia, aplastic anaemia, hereditary and acquired anaemias and severe clotting and thrombotic problems.

Consultative services are provided to all the other clinical departments at the IALCH. In addition, telephonic consultative services are provided to staff at the other institutions.

The department services the province of KwaZulu-Natal and the northern half of the Eastern Cape. Close contact is kept with the regional and district level institutions to provide services at these levels for patients referred to the department, and thus utilize our resources optimally.

Laboratory Services:-

The modern haematology laboratory at IALCH provides a service primarily for the IALCH where severely ill patients are housed. In addition, it is a referral laboratory for the province of KwaZulu-Natal. Full blood counts, bone marrow aspirate and trephine examinations, flow cytometry, immuno-phenotypic analyses of leukaemias and lymphomas, haemolytic studies, coagulation studies, cytogenetic analyses, molecular investigations of leukaemias and lymphomas are performed by trained technicians and technologists.

The laboratory consultants and registrars assess the various laboratory tests and interact with staff from within and without the hospital, providing advice on further investigations and on patient management. The region covered is the same as for the clinical services.

Training:-

The department strives to provide ongoing training for staff to improve their skills and knowledge.

7.2. ENTRY CRITERIA

The following patients will be admitted:

- Acute Leukaemias
- Aplastic Anaemias
- Patients requiring high dose chemotherapy
- Patients requiring autologous and allogeneic bone marrow transplant.
- Complicated Hodgkin's and Non-Hodgkin's lymphomas
- Complicated chronic myeloid
- Chronic lymphocytic leukaemias
- Myeloma
- Complicated haemolytic disorders
- Complicated bleeding disorders e.g. Haemophilias
- Complicated thrombotic disorders e.g. inherited and acquired thrombophilias, myelodysplastic syndromes and severe haematological disorders seen with retroviral disease.

These patients will be referred from various regional hospitals within the Province and the northern half of the Eastern Cape. The majority of these patients will be referred from the regional hospitals within the DFR, which drain the more peripheral hospitals. These regional hospitals are Addington Hospital, RK Khan hospital and Prince Mshiyeni Memorial Hospitals.

7.3. EXIT CRITERIA

These patients will be subjected to intensive medical and nursing care of a first world standard. The long-term success of the therapeutic interventions to a large extent depends on the medical and nursing follow-up of these patients. As these patients receive high dose chemotherapy, they often have bone marrow depression with severe pancytopenia and immunocompromisation resulting in severe infections. Patients with bone marrow transplants are prone to many complications such as graft vs. host disease, cytomegalovirus infections, etc

For these reasons a well-organised follow-up system at the outpatient clinics is essential. Patients will be followed up at the outpatient clinics in the oncology area if the primary diagnosis is oncological, or in the general haematology area if the primary diagnosis is non-malignant haematological disorder. These patients will probably be followed up monthly or more frequently depending on their condition until such time as they are stable. Once they are stable they will be seen less frequently probably at 3-6 monthly intervals. Thereafter, some of the patients such as those with thrombotic disorders or bleeding disorders can be referred back to the regional or district hospitals for further follow up. These patients will be referred back to the secondary or primary level hospitals with clear protocols for their future management. They will thereafter have to attend the haematology clinic probably on a yearly basis for the purpose of follow-up and record keeping.

Written and updated by Prof. V.B. Jogessar

**RENAL,
PERITONEAL DIALYSIS
&
HEAMODYIALYSIS**

8. RENAL, PERITONEAL DIALYSIS & HEAMODIALYSIS

8.1 SCOPE OF PRACTICE

Inkosi Albert Luthuli Central Hospital will be the central unit, co-coordinating renal services for the province and will be providing support for the following:

- Acute Renal Failure
 - Haemodialysis / haemofiltration for both ICU and non-ICU patients.
 - Peritoneal dialysis
- Chronic renal failure
 - Assessment of new patients for the renal programme
 - Complications
- Chronic haemodialysis
 - Routine chronic haemodialysis will not be available at IALCH. Patients with complications will be managed.
 - Vascular access will be provided by transplant / renal surgeons.
- Continuous ambulatory peritoneal dialysis (CAPD)
 - Training of new patients
 - Re-training of patients with complications
 - Clinics

A CAPD training center needs to be established, support for this may also be available from the pharmaceutical industry.
- Renal transplantation
 - Cadaver transplants
 - Living donor transplants
 - Clinics for transplant recipients and renal donors (pre and post donation)
- Clinical Nephrology / severe and complicated hypertension will be managed at this center. Renal biopsies will be centralized in this unit.

8.2 ENTRY & EXIT CRITERIA

8.2.1 Renal Transplant

Entry Criteria

- Renal transplant recipient (patient undergoing renal transplantation).
- Acute rejection of kidney transplantation or kidney transplantation complication

Exit Criteria

Not discharged from IALCH but when stable patients are to be followed up at IALCH's outpatient department.

8.2.2 Chronic Heamodialysis

Entry Criteria

Complications in patient on chronic haemodialysis on CAPD

Exit Criteria

Complication corrected or stabilized

8.2.3 Continuous Ambulatory Peritoneal Dialysis (CAPD)

Entry Criteria

Initiation of CAPD

Training of patients on CAPD

Complications of CAPD

Exit Criteria

Complication corrected or stabilized

Patient stable/or complication corrected or stabilized

Patient passed CAPD test

8.2.4 Acute renal failure

Entry Criteria

Severely ill acute renal failure

Exit Criteria

Patient recovers kidney function and/or clinically stable

8.2.5 Multi-system disease

Entry Criteria

Multi-system disease with kidney involvement.

Exit Criteria

Renal recovery or stable on chronic dialysis

8.2.6 Renal bone disease

Entry Criteria

Renal bone disease

Exit Criteria

Patient completed investigation and stable on treatment.

8.2.7 Renal tubular acidosis

Entry Criteria

Renal Tubular acidosis

Exit Criteria

Patient completed investigation and stable on treatment.

8.2.8 Kidney Biopsy

Entry Criteria

All patients requiring kidney biopsy

Exit Criteria

Biopsy done, disease diagnosed, treatment instituted and patient stable

8.2.9 Chronic renal failure

Entry Criteria

Pre-end stage chronic renal failure for evaluation for RRT

Exit Criteria

Patient assessed, RRT initiated and patient stable / or patient discharge if not eligible for RRT programme.

8.2.10 Uncontrolled Hypertension

Entry Criteria

Uncontrolled hypertension

Exit Criteria

B.P. stabilized, investigation complete.

Written and updated by Prof. A. Assounga

PAEDIATRIC MEDICINE

9. PAEDIATRIC MEDICINE

9.1 ENTRY & EXIT CRITERIA - DIFFERENT DISCIPLINES

9.1.1 PAEDIATRIC RENAL UNIT

Paediatric Renal Ward Entry Criteria

- Children with congenital renal anomalies requiring evaluation
- Patients with obstructive uropathy *for evaluation & intervention*
- Complicated nephrotics/ nephritics requiring intensive management
- Children with renal failure being worked up for dialysis and/ or transplantation
- Patients admitted for renal biopsies
- Patients with severe hypertension
- Children with severe Pyelonephritis

Paediatric Renal Ward Exit Criteria

- Resolution of the clinical problem with transfer back to the referral hospital or discharge
- Failure to meet the criteria to enter the chronic renal care programme
- Refusal of hospital treatment
- Death

Paediatric Renal Clinic Entry Criteria

- Children with steroid resistant nephrotic syndrome
- Established renal impairment
- Children on renal replacement therapy
- Obstructive uropathy
- Established hypertension
- Congenital renal anomalies - All. Uncomplicated ones should be at KEH
- Complicated UTI

Paediatric Renal Clinic Exit Criteria

- Patients > 18 years of age
- Children who respond and require de-escalation therapy
- In any other situation where the patient is not suitable for intensive therapy or renal replacement therapy

Acute Peritoneal Dialysis or Haemodialysis

Entry criteria –

- Children with rising levels of urea(>40) and creatinine (>200) or symptomatic uraemia;
- Children requiring more than five days of dialysis at the regional hospital;
- Children with uncontrolled hyperkalaemia not stabilised by medical management;
- Children with pulmonary oedema not responsive to diuretic therapy;
- Children with complex metabolic disorders, such as those having metabolic problems since birth.

Exit criteria

- Children who have improved urine output with improved biochemistry (urea and creatinine decreasing steadily);
- Response to dialysis with improvement of volume overload;
- Improvement in electrolyte and acid-base balance status.

Chronic Peritoneal Dialysis and Haemodialysis

Entry criteria

- Children who are accepted for the transplant programme.

Exit criteria

- Children who are stable on dialysis;
- Children who have been transplanted.

9.1.2 PAEDIATRIC METABOLIC AND ENDOCRINE

Paediatric Endocrine Clinic Entry Criteria:

- Any child or adolescent with a suspected endocrine, diabetes or metabolic problem.
- Initial evaluation of endocrine or metabolic problem.
- Initial evaluation of all newly diagnosed diabetes (Type 1 or 2 or other)
- Initiation and chronic therapy of endocrine, diabetes or metabolic condition
- Monitoring of response to therapy and changes with puberty

Paediatric Endocrine Clinic Exit criteria:

- At the end of adolescence for transfer to Transitional /Adult clinic for ongoing treatment and follow up
- Transfer to appropriate primary/secondary/tertiary service as necessary

Conditions Managed at the clinic include:

- Diabetes Mellitus: Type 1 and Type 2 : All Newly Diagnosed patients have an initial evaluation and management plan drawn up/ Difficult metabolic control/ Complications of Diabetes
- Other Diabetes: Neonatal Diabetes and Monogenic Diabetes
- Disorders of growth (short stature, tall stature, obesity, failure to thrive)
- Disorders of puberty (precocious and delayed puberty)
- Disorders of Sexual Development
- Metabolic Bone Disease (Rickets/Osteogenesis Imperfecta/Osteoporosis)
- Hypoglycaemia for investigation and management
- Thyroid disorders (Hyperthyroidism/Thyroid disorders undiagnosed or presenting diagnostic and / or management difficulties/ Goitre with compression
- Parathyroid disorders (Hyper or hypo)
- All suspected and confirmed Adrenal Disorders (adrenal cortex and medulla)
- Obesity in infancy and childhood (early onset/ co-morbidities)
- Post pituitary surgery and post cranial irradiation (including all survivors of childhood malignancy)
- Inborn Errors of Metabolism

9.1.3 PAEDIATRIC NEUROLOGY

In-patient entry criteria

1. Epilepsy
 - Intractable seizures for control
 - Optimization of multi-drug regimens
 - Investigation of progressive and complicated epilepsy
 - Presurgical assessment of intractable epilepsy
 - 24-hour EEG/video monitoring for diagnosis and management for indicated cases
2. Neuromuscular
 - Stabilization and investigation of acute flaccid paralysis and spinal diseases
 - Metabolic workup for neurodegenerative diseases, neurogenetic disorders and congenital myopathy
 - Therapy for spasticity: Botulinum injections, intrathecal baclofen, anterior rhizotomy
 - Invasive investigations: muscle/nerve biopsy
3. Encephalopathies
 - Investigation and stabilisation of acute encephalopathy
 - Management of complicated meningoencephalitis
 - Assessment and Management of acute neurological deficits- cerebral, cerebellar, basal ganglia
4. General
 - Presurgical evaluation of central nervous system obstructive lesions
 - Specialized investigations:
 - Neuroradiology- MRI, MRA, Angiographies, SPECT, PET, cranial USS
 - Neurophysiological studies: EEG, EMG, AEBR, ERG

Exit criteria

1. Epilepsy: firm diagnosis and satisfactory control of seizures
2. Neuromuscular diseases: clinical improvement of acute presentation
3. Encephalopathies: clinical resolution and improvement

Neuro-developmental Clinic

Entry criteria

1. Assessment and follow-up of complicated cases as in “in-patient” category who still require specialized care: acute neurocognitive disorders
2. Preop and post-op care of intractable epilepsy
3. Transdisciplinary arena assessment of neurodevelopmental delay by: paediatrician, child neurodevelopmentalist, psychologist(educational), OT, PT, Social worker, Speech-Language pathologist, child psychiatrist
4. Neurodevelopmental disorders referred from KZN Children’s Hospital for investigation and management.

Patients with cerebral palsy, intellectual impairment, learning disability, language disorders and global developmental delay to be referred to KZN Children’s Hospital

Exit criteria

1. Stable patients who no longer require specialized care.

Written and updated by DR LMubaiwa

9.1.4 PAEDIATRIC OPHTHALMOLOGY**Entrance criteria**

- All paediatric ophthalmological cases requiring surgery, excluding:
 - straight-forward squints
 - Meibomian cysts
 - simple lid procedures
 - congenital nasolacrimal duct obstruction requiring probing and syringing
- These will include:
 - congenital cataracts
 - congenital glaucoma
 - paediatric corneal grafts
 - ROP and other retinal disorders
 - orbital pathology/oncology
 - complicated squints
 - oculoplastic cases

Exit criteria

Patients will be discharged back to the referring hospitals/clinics once it has been established that the wounds are sound and there is no post-operative infection.

9.1.5 PAEDIATRIC CARDIOLOGY***7.3.1 Inpatient/Admission Entry Criteria at IALCH***

Neonates , infants, or older children with the following :

1. Cyanotic/acyanotic or complex cardiac conditions requiring investigations, interventions &/or surgery
2. Cardiac problems requiring ICU care .
3. Patients requiring diagnostic or interventional cardiac catheterization
4. Patients requiring multiple investigations at the same time viz; catheterisation, MR/CT, Echo, Holter, stress test etc
5. Patients requiring temporary or permanent pace makers

6. Selected patients with uncontrolled dysrhythmias requiring specialist supervised treatment not available in other hospitals
7. Selected sick patients that may require short term stabilization/treatment

Selected patients with pericardial, myocardial or endocardial diseases requiring special investigations &/or interventions
8. All patients who have undergone cardiac surgery in the previous 21 days who present to IALCH with an acute deterioration must be admitted directly to the paediatric cardiology ward.
9. Patients who have undergone cardiac surgery at either the Wentworth Hospitals or the IALCH.
10. Patients who have been diagnosed as having congenital or acquired heart disease for follow up management.

9.1.6 PAEDIATRIC GENETIC SERVICES

Paediatric Genetic Clinic Entry Criteria:

Presence in an individual or family of:

Individuals with known genetic disorders for genetic counselling
Unexplained intellectual disability or developmental delay
Dysmorphic features and developmental delay
Possible inherited metabolic disorder
Possible single gene or dysmorphic syndromes
Suspected chromosomal deletion or micro-deletion syndrome
Unusual dermatological conditions
Individuals with multiple congenital abnormalities / birth defects
Newborns with ambiguous genitalia

Paediatric Genetic Clinic Exit criteria

➤ Transfer to appropriate primary/secondary/tertiary service as necessary

PRENATAL GENETIC CLINIC:

Prenatal Genetic Clinic Entry Criteria

Presence in a couple, who are currently pregnant, of:

Advanced maternal age (>35)
Consanguinity
A previous child with a birth defect / congenital abnormality or genetic disorder

An abnormal ultrasound finding, e.g. multiple congenital abnormalities
A history of recurrent pregnancy losses (especially ≥ 2 first trimester losses), stillbirths

A pregnancy exposure to medication, chemicals, drugs, e.g. alcohol, Warfarin, etc.

A couple of a specific ethnicity that has a higher incidence of specific disorders, e.g. Tay Sachs disease, thallassaemia, etc.

Intending parents who are first cousins or other blood relatives
Positive maternal or ultrasound screening for Down syndrome

Prenatal Genetic Clinic Exit criteria

➤ Transfer to appropriate primary/secondary/tertiary service as necessary

ADULT GENETIC CLINIC:

Adult Genetic Clinic Entry Criteria

Individuals affected with, or at risk of developing genetic disorders, for assessment and genetic counselling

Predictive testing for adult-onset disorders e.g. Huntington's disease, Spino-cerebellar-ataxia, etc.

Individuals with a family history of cancer where there tends to be familial cancer types, a number of affected people and earlier onset of cancers, e.g. familial breast and colon cancers.

Infertility of unknown origin – primary or secondary amenorrhoea

Family history of a chromosomal rearrangement

Family history of intellectual disability

Unexplained intellectual disability

Clinical diagnosis of dysmorphic syndromes

Carrier testing for autosomal recessive and X-linked recessive conditions

Adult Genetic Clinic Exit criteria

Transfer to appropriate primary/secondary/tertiary service as necessary

Written Prof. M. Adhikari updated By Dr T Naicker

9.1.7 PAEDIATRIC HAEMATOLOGY AND ONCOLOGY

Haematology services:

The Haematology services cover the entire Province. With the Haematology services currently commissioned at Grey's hospital this hospital will manage area 2 patients and only patients needing work-up or management that **cannot be offered at Grey's Hospital** will be admitted to the Unit at Inkosi Albert Luthuli hospital. As soon as it is feasible these patients will be referred back for care to Grey's hospital.

Specialized testing / procedures performed:

- Bone marrow aspirate and trephine biopsies
- Diagnostic tissue biopsy for suspected malignancy
- Specialised tests for haemolytic anaemia, bleeding disorders including haemophilia, suspected von Willebrand disease and platelet disorders
- Thrombophilia testing
- Tests for primary immune deficiency
- Flow cytometry
- Patients with known haematological conditions requiring specialized investigations (iron overload, endocrine or cardiac evaluation, specialised imaging)

Entry Criteria

- Haematological malignancy (AML, ALL, non-Hodgkin lymphoma, Hodgkin's disease, and histiocytic disorders) requiring diagnostic work-up and management.
- Haematological malignancy requiring high dose and intensive therapy
- HIV related childhood malignancy including Kaposi sarcoma and cytopenias including red cell aplasia
- Haemophilia – diagnostic work-up (haematological and radiological), management of complications including chronic synovitis or arthropathy needing arthroplasty or Yttrium synovectomy, intra-cranial bleeding, inhibitor complications
- Other inherited bleeding disorders
- Acquired bleeding disorders including ITP, TTP
- Bone marrow failure – hereditary and acquired aplastic anaemia for diagnostic work-up and management including anti-thymocyte globulin, immune suppression and consideration of bone marrow transplant
- Haemolytic anaemia (thalassaemia, sickle cell anaemia, spherocytosis, auto-immune haemolytic anaemia) for work up and care not available at the Regional hospital
- Complicated iron deficiency and vitamin B12 deficiency anaemia
- Patients with thrombophilia needing work-up, management and/or anti-coagulation
- Patients needing assessment and management advice by a clinical haematologist will be seen in the respective wards (for in-patients) and at the clinic for all other referrals

Paediatric Oncology

The vision is for the unit to be consolidated into a unified unit serving both childhood haematological and cancer services. There would need to be a re-alignment of services and the fragmented services currently offered would be combined. This would consolidate the services being offered by the Paediatric surgeons (surgical oncology), radiation oncology (presently the non-surgical childhood cancers, brain tumours, bone tumours, eye tumours etc.)

Entry criteria for Paediatric Oncology

- Nephroblastoma and neuroblastoma
- Germ cell tumours
- Liver tumours
- Other solid tumours (rhabdomyosarcoma, soft tissue sarcoma etc)
- Bone tumours
- CNS (brain and spinal cord) tumours
- Eye tumours
- Other Paediatric tumours not specified above

Exit Criteria

- No longer requires high care or intensive care supervised by a specialist paediatric haematologist or oncologist
- Can be managed or followed up at a Regional hospital or District hospital
- Patient in fit state to be discharged home or to referring hospital for care
- Patient has been assessed as having advanced, refractory, inoperable or incurable disease and requires palliation or supportive care to be provided by the referring regional hospital or closer to home
- Patients who have been managed in the unit prior to the age of 12 years will be transferred to the adult services for further care and follow up once they are stable and if they have relapsed after 12 years of age.
- Patients who can be treated at Regional or District hospital level under the direction of the specialist from the unit.

Written by Dr R Thejpal

9.1.8 PAEDIATRIC GASTRO-ENTEROLOGY AND HEPATOLOGY

Specialized procedures performed:

- Upper endoscopy – diagnostic and therapeutic
- Lower endoscopy / ileocolonoscopy
- Sigmoidoscopy
- Ileostomy
- Diagnostic and therapeutic procedures of the liver
- Diagnostic and therapeutic procedures of the pancreas
- Diagnostic and therapeutic procedures for upper and lower GI motility studies
- Specialized procedures that require screening – feeding tubes etc.

Entry Criteria

- Requires high care or intensive care supervised by a specialist gastroenterologist.
- GI or liver disease requiring high care with a view to surgery at IALCH
- Requires tests or investigations not available at regional hospital
- Requires treatment not available at the regional hospital
- Patient requires nutritional support not available at regional hospital

Exit Criteria

- No longer requires high care or intensive care supervised by a specialist paediatric gastroenterologist
- Patient recovered from procedure/s without complications
- Patient in fit state to be discharged home or to referring hospital for care
- Patient has been deemed for no further GI intervention and requires palliation or supportive care to be provided by the referring regional hospital

Entry criteria for specific referral conditions

HEPATOLOGY

1. Prolonged neonatal jaundice
 - jaundice since birth and persisting more than 14 days old excluding sepsis, breast milk jaundice and blood group incompatibility
 - Conditions diagnosed include : Biliary atresia, Progressive familial intrahepatic cholestasis types 1,2,3 , alpha 1 anti-trypsin deficiency, Alagille syndrome, Zellweger Syndrome, inborn errors of metabolism, cystic fibrosis, viral hepatitis, drug induced hepatitis
2. Jaundice in an older child
 - With or without evidence of hepatitis (provided that sepsis has been excluded);
 - Conditions diagnosed include: autoimmune hepatitis, Wilson's disease, viral hepatitis, cystic fibrosis, Alagille Syndrome, biliary atresia with failed Kasai procedure, ascending cholangitis, cystic fibrosis, alpha 1 anti-trypsin deficiency
3. Paediatric acute liver failure
 - Defined as INR >1.5 WITH encephalopathy or INR >2.0 WITHOUT encephalopathy that is UNRESPONSIVE to the administration of Vitamin K
 - This may be with or without the background of pre-existing liver disease
4. Portal Hypertension

- May present with hepatosplenomegaly with ascites (excluded infective and haematological pathology)
- Conditions diagnosed include: Autoimmune hepatitis, IEM, veno-occlusive disease, chronic liver disease

5. Complicated / intractable ascites

- Refractory ascites
- Chylous ascites
- Neonatal ascites (non-chylous)

OTHER GI DISEASES

1. Suspected pancreatic disease

- Failure to thrive
- Fatty stool
- Chronic recurrent abdominal pain
- Patient may require specialized investigation and management including lab workup and radiological investigation

2. Oesophageal disease

- Vomiting
- Reflux
- Recurrent aspiration
- No response to a proton pump inhibitor in an OLDER child
- Patient may require specialized investigation and management including lab workup and radiological investigation

3. Stomach

- Recurrent abdominal pain
- No response to a proton pump inhibitor in an OLDER child
- Failure to thrive
- Upper GIT bleed
- Patient may require specialized investigation and management including lab workup and radiological investigation

4. Small intestinal pathology

- Patient with FTT
- Patient has evidence of malabsorption
- Failure to thrive
- Persistent Fe deficiency anaemia and vitamin B12 deficiency
- Patient requiring specialized investigation and management including lab workup and radiological investigation

5. Colonic pathology

- Patient with malabsorption
- Patient with FTT
- Occult blood in stool
- Lower GI bleed
- Recurrent persistent abdominal pain

- Non-infective persistent diarrhoea
- Chronic constipation – with no response to dietary intervention
- Persisting constipation in an infant
- Patient may require specialized investigation and management including lab workup and radiological investigation

6. Allergic conditions

- Recurrent persistent diarrhoea – non-infectious
- Blood in stool
- Conditions diagnosed include: allergic colitis, eosinophilic disorders, food protein induced enterocolitis syndrome

NUTRITIONAL

- Patient with malabsorption (may be due to PLE/coeliac disease)
- Patient may require specialized nutritional support, investigation and further management that is not offered by the regional referral hospital

Exit criteria for specific conditions outlined above

- Patient recovered from procedure/s
- Underlying diagnosis confirmed
- No longer needs paediatric gastroenterology specialist care
- Fit for care at referring or Regional hospital

Written by Dr R Thejpal and Dr Bissety

OPHTHAMOLOGY

10.1 SCOPE OF PRACTICE

Specialised ophthalmology (i.e. tertiary) problems to be seen and treated only according to entrance and exit criteria. Bookings are to be made through the IALCH clinic on appropriate lists by referring hospitals, Addington Hospital and St Aidan's Mission Hospital. Retinal, glaucoma, corneal, ocular adnexal, paediatric, oculo-inflammatory, neuro-ophthalmic, oculo-plastic and squint patients will first need preoperative assessments through a 'special clinic' appointment. Urgent referrals may be seen and booked directly by referring participating consultants in discussion with the IALCH consultant. All patients to be fully "investigated" prior to booking at special clinics, including:

- Blood tests
- Radiological assessments

10.2 ENTRY & EXIT CRITERIA

10.2.1 Medical and Surgical Retina

Entrance Criteria

Patient will be admitted to clinics at IALCH according to scope of practice criteria. Selected patients will be admitted to the ward for surgery or investigation.

Retinal conditions must first be investigated and referred only where there is a diagnostic or management problem or if surgery is needed.

a) Uveitis associated conditions

- Non-infectious systematic diseases
 - Sarcoidosis
 - Behçet disease
 - Vogt-Kayanagi-Harada syndrome
 - Inflammatory bowel disease
 - Nephritis
- Chronic systemic infections
 - Acquired immune deficiency syndrome
 - Acquired syphilis
 - Tuberculosis
- Parasitic conditions
 - Toxoplasmosis
 - Toxocariasis
 - Cysticercosis
- Viral conditions
 - Acute retinal necrosis, CMV, PORN
- Fungal retinitis and endophthalmitis
 - Presumed ocular histoplasmosis syndrome
 - Candidiasis
- Idiopathic multifocal white-dot syndrome

Multiple evanescent white-dot syndrome
Acute posterior multifocal placoid pigment epitheliopathy
Serpiginous choroidopathy
Birdshot choroidopathy
Punctate inner choroidopathy
Multifocal choroiditis with panuveitis syndrome

b) Intraocular tumour

- Uvea
 - Malignant melanoma
 - Choroidal haemangioma
 - Metastatic carcinoma
 - Intraocular lymphoma
 - Other suspected undiagnosed tumours
- Retina
 - Retinoblastoma
 - Haemangioma

c) Macular disorders

- Acquired
 - Age related macular degeneration
 - Central serous retinopathy
 - Macular hole
 - Toxic maculopathies
 - Other causes of subretinal neovascularisation
- Hereditary dystrophies
 - Photoreceptor dystrophies
 - Retinitis pigmentosa
 - Stationary night blindness
 - Cone dystrophy
 - Leber congenital amaurosis
 - Dystrophies of the retinal pigment epithelium
 - Best vitelliform macular dystrophy
 - Stargardt macular dystrophy and fundus flavimaculatus
 - Familial dominant drusen
 - Sorsby fundus dystrophy
 - North Carolina macular dystrophy
 - Pattern dystrophies
 - Choroidal dystrophies
 - Choroideraemia
 - Gyrate atrophy
 - Central areolar choroidal dystrophy
 - Diffuse choroidal atrophy
 - Hereditary vitreoretinal degenerations
 - Stickler syndrome
 - Congenital retinoschisis
 - Favre – Goldman syndrome

Familial exudative vitreoretinopathy

- Albinism
 - Oculocutaneous albinism
 - Ocular albinism

d) **Retinal Vascular Disease**

- Diabetic retinopathy – proliferative retinopathy with macular traction, recurrent vitreous haemorrhage and combined traction detachment / rhegmatogenous retinal detachment. retinal
- Retinal vein occlusion with vitreous haemorrhage, traction or retinal break
- Retinopathy of prematurity - Stage 3 “plus” disease or higher
- Lebers military aneurysms
- Coats disease
- Miscellaneous vascular retinopathies

e) **Rhegmatogenous Retinal detachment**

- All detachments.

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 wounds are considered sound and there is no postoperative infection and the retinal condition is satisfactory.

10.2.2 Strabismus (squints)

Entrance Criteria

Patient will be admitted to clinics at IALCH according to scope of practice criteria. Selected patients will be admitted to the ward for surgery or investigation.

Patients must first be investigated and referred only where there is a diagnostic or management problem.

- a) All children with strabismus except
 - Accommodative esotropia
 - Essential infantile esotropia
 - Constant and intermittent exotropia
- b) All children with “oblique” muscle involvement “A” and “V” patterns.
- c) All children where surgical management has become a problem due to previous surgery.
- d) All “traumatic” strabismus
- e) All adults with strabismus
- f) Special syndromes
 - Duane's syndrome
 - Brown syndrome

- Mäbius syndrome
- Fibrosis syndromes

g) All parietic squints which have been fully investigated and no other definitive management required is required, e.g. 3rd nerve palsy with posterior communicating artery aneurysm.

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 wounds are considered sound and there is no postoperative infection

10.2.3 Cornea

Entrance Criteria

- All corneal conditions where there is a diagnostic or management problem.
- All corneal grafts, excluding scleral patches
- All corneal ectasias requiring collagen cross-linkage

Exit Criteria

Once the anterior chamber is well formed, the wound is sound and there is no postoperative infection.

10.2.4 Glaucoma

Entrance Criteria

- Eyes which have two failed trabeculectomies
- Eyes which have had two previous flat anterior chambers postoperatively.
- Aniridic eyes in adults with medically uncontrolled glaucoma
- Aniridic eyes in children with glaucoma
- Eyes requiring goniotomy or trabeculotomy
- All eyes requiring setons

Exit criteria

Patients will be discharged back to the referring hospitals / clinics once it has been established that the wounds are sound, anterior chambers are formed and there is no postoperative infection.

Paediatric glaucoma patients will be followed up for examination under anaesthesia.

10.2.5 Orbits

Entrance Criteria

- Orbital blow out fractures
- Orbital tumours and inflammatory masses, but excluding orbital inflammation requiring only medical treatment and preseptal abscesses (including lacrimal inflammation and tumours) and thyroid ophthalmology
- Congenital lesions requiring surgery
- Mucocoeles and nasolacrimal duct obstruction, requiring repeat or difficult DCR surgery.

NOTE:

Squamous cell carcinomas of the conjunctiva and skin tumours requiring simple excision are excluded.

Investigations should include:

- CT scan of the orbit and brain
- Metastatic workup including chest X-ray, abdominal ultrasound, full blood count and other routine bloods, CT scan of the chest or abdomen, bone scans, etc.
- Biopsy of orbital, adnexal, ocular or metastatic mass if possible.

Exit Criteria

Patients can be sent back to their referral hospitals as soon as they are stable i.e.

- Their periorbital swelling and prognosis is stable or improving
- They are haemodynamically stable
- They have no corneal exposure

This will usually be by the second or third postoperative day. Intraocular tumour surgery patients can be discharged usually on the second postoperative day once infection is excluded and inflammation controlled.

10.2.6 Oncology

Entrance criteria

All orbital tumours, as shown above in 10.2.5

All intraocular tumours, as shown in 10.2.1 b

NOTE

Eyelid tumours that can be treated by simple local excision and conjunctival neoplasia / dysplasia are excluded.

Exit Criteria

Patients can be sent back to their referral hospitals as soon as they are stable i.e.

- Their periorbital swelling and prognosis is stable or improving
- They are haemodynamically stable
- They have no corneal exposure

This will usually be by the second or third postoperative day. Intraocular tumour surgery patients can be discharged usually on the second postoperative day once infection is excluded and inflammation controlled.

10.2.7 Oculoplastics

Entrance criteria

- Eyelid reconstruction following injury or tumour surgery.
- Eyelid tumour excision requiring reconstruction / skin flaps or grafts at the time of surgery.
- All ptosis surgery
- Mucocutaneous grafts
- Blepharoplasty

Exit Criteria

Patients can be discharged or referred back to their referral hospitals usually on the first postoperative day as long as they show no signs of infection.

10.2.8 Problem Cataracts

Entrance Criteria

The following cataracts will be operated on at IALCH:

- partially subluxed cataracts
- cataract associated with uveitis, rubeosis, proliferative diabetic retinopathy, posterior synechiae or corneal opacities.
- Combined procedures
 - Cataract and corneal graft
 - Cataract and vitrectomy
- Where complications during surgery may be expected for any other reason

Exit Criteria

Most surgeries will be performed on an outpatient basis, where possible i.e. as day cases. Those admitted will be discharged back to their referring hospitals / clinics on the first postoperative day once it has been established that the wounds are sound and there is no infection.

Written by Prof. A.L. Peters and updated by Dr L Visser

ONCOLOGY

Department of Clinical Oncology IALCH

Scope of Practice, Entry & Exit Criteria

The Department of Clinical Oncology is responsible for the management of solid organ and selected haematological malignancies with radiotherapy, chemotherapy, hormonal therapy and targeted treatments. The scope of practice includes adult and paediatric patients.

Entry Criteria for Outpatient Bookings:

All patients requiring referral will need to be discussed with an oncology doctor. If the case has been adequately worked up as per pre-requisites below, the referring doctor will be given a password. This password will be relayed to the admin clerk at the oncology clinic who will give an appointment date. In the event that an expedited date is required, the case must be discussed with the oncology consultant assigned to the clinic, who will allocate an emergency appointment slot if deemed appropriate.

The following is a summarized list of pre-requisite criteria for patient referral:

Breast Cancer:

Only patients from Stanger Hospital, Addington Hospital, Prince Mshiyeni Hospital, King Edward VIII Hospital, Ngwelezane Hospital and Port Shepstone Hospital will be referred to IALCH Breast-Oncology unit. District hospitals making a diagnosis of breast cancer must send patients to respective regional hospital for appropriate work-up of the patient.

Patients booked for the Breast Oncology Clinic will first be presented at a Tumour Board meeting by the surgical representative of the referring hospital on Thursdays between 7:30-9:00.

Presentations will be done as per Breast Clerking proforma.

A management plan for the patient will be drafted and the patient will be seen at the clinic by the in-house team

CNS Malignancies:

MRI of involved site

Histological confirmation of diagnosis where possible, CSF cytology where applicable

Head & Neck Ca:

Histological confirmation of diagnosis, CT scan of Head and Neck, CXR, GFR if chemotherapy is proposed, HIV Elisa, details on surgery performed where relevant.

Lung Ca:

Biopsy with histological confirmation of diagnosis, staging CT scan Chest/Abdomen (cytology will only be accepted in exceptional circumstances where obtaining a tissue diagnosis is technically impossible, details on surgery performed where relevant.

GIT Ca:

Histological confirmation of diagnosis, Endoscopy and Colonoscopy findings for Oesophagogastric and Colorectal Ca respectively), Staging CT scan, Tumour markers (CEA, AFP for Colorectal Ca and Hepatocellular Ca respectively), HIV Elisa, details on surgery performed where relevant.

Urological malignancies:

Histological confirmation of diagnosis, staging CT scan Chest/Abdomen/ Pelvis for Bladder, Testicular, Penile and Renal Cell Ca, Bone scan for Ca Prostate, PSA level(s) for Ca Prostate, AFP/ B HCG/ LDH levels for Ca Testis, details on surgery performed where relevant.

Gynaecological malignancies:

Ca Cervix/Vulva: Histological confirmation of diagnosis, CXR, USS abdomen and Pelvis, GFR, HIV Elisa, details on surgery performed where relevant.

Ca Ovary, Ca Endometrium:

Histological confirmation of diagnosis, Staging CT scan Chest/ Abdomen/ Pelvis , GFR if chemotherapy is proposed, HIV Elisa, details on surgery performed where relevant.

Gestational Trophoblastic Neoplasia:

B- HCG

TFT

HIV Elisa

USS abdomen/ Pelvis

CXR

Skin Ca and Sarcomas:

Skin: Histological confirmation of diagnosis, Staging CT scans Chest/Abdomen/Pelvis for melanoma, CXR for Basal Cell Ca and Squamous Cell Ca, details on surgery performed where relevant

Sarcomas: Histological confirmation of diagnosis, MRI scan of primary site, CT chest/ abdomen, MUGA scan if chemotherapy is proposed, HIV Elisa, details on surgery performed where relevant.

Thyroid Ca:

Histological confirmation of diagnosis and surgical details, incl. post-operative course.

TFT, Calcium and Phosphate levels

USS neck

Haematological malignancies:

Patients requiring radiotherapy will need to be sent across with a detailed referral letter. This will encompass disease type, stage, treatment to date and indication for radiotherapy. All relevant imaging, bone marrow aspiration and trephine (BMAT) findings and biopsy results must accompany the referral letter.

Paediatric malignancies:

All solid organ paediatric malignancies requiring radiotherapy must be sent with histological confirmation of diagnosis and relevant imaging must be sent with patient. Retinoblastoma patients must have CSF cytology and BMAT done prior to referral.

Entry Criteria for Inpatient transfers/referrals

Inpatient transfers will be considered for newly diagnosed on known oncology patients after discussion with consultant oncologist on-call.

Exit Criteria

Outpatients will be discharged to Addington Hospital Oncology Follow-up clinic when they have an uncomplicated follow-up course.

Outpatients and in-patients with advanced disease will be discharged back to referring hospital/ nearest hospital/hospice when deemed not for active oncological management i.e. radiotherapy or chemotherapy. A referral letter highlighting the management to date and recommendations for supportive care will be given to patients.

Written and updated by Dr. P. S Govender

NEUROSURGERY

1. **Scope of Practice**

- IALCH will house Neurosurgical patients in 92 beds (64 adults and 18 paediatrics).
- All Neurosurgery (Electives and Emergency) will be performed at IALCH.
- Two operating theatres will be required:
 - ◆ One will be for elective surgery (07h30 to 16h00)
 - ◆ And the second one to be operational 24 hours (electives and emergencies)
- Discharges of patients from IALCH will result in either direct transfer to base hospital or down to “step down facility”, when no acute neurosurgical care (invasive monitoring/surgery) is required. If these patients require surgery they will be transferred back to IALCH or have surgery at the hospital where the step-down facility is based.

2. **ENTRY CRITERIA**

Trauma

Selective neuro-trauma patients will be managed at IALCH. The following patient profile will be managed non-operatively until they stabilize, improve or deteriorate.

- GCS 3 or 4/15 ab-initio, irrespective of the mechanism of injury, will be managed at the referral hospital until the GCS improves to 8/15 or above.
- Penetrating missile injuries (gunshot) with $GCS \leq 8$ should have their wounds debrided and commenced on prophylactic antibiotics and managed at the referral hospital. Only if and when the patient improves, should the neurosurgeon be consulted.
- Diffuse cerebral injuries and severe head injuries, that do not require surgical intervention are to be managed at the regional hospitals, following discussion with the neurosurgeon.

Vascular

- Poor grade subarachnoid haemorrhages (Grade 4/5 WFNS) will be scanned, resuscitated and treated at regional hospitals until they improve.
- Lobar and basal ganglia hypertensive bleeds in coma ($GCS \leq 8$), except if intraventricular haemorrhage and hydrocephalus should be treated by the physicians for control of blood pressure and supportive care.
- Spontaneous intracerebral bleeds due to coagulopathies from any cause will need resuscitation (correction of haematological profile) at the referral hospital prior to referral to the neurosurgical unit.

Hydrocephalus/Spinal Dysraphism

- Congenital hydrocephalus with cortical mantle of $< 1\text{cm}$ will no longer have ventriculoperitoneal shunts because of poor outcome. However, if they have an expanding head, they may be shunted at the discretion of the Neurosurgical Consultant.
- **Severe congenital abnormalities:**
 - Gross large encephalocoele] No operative repair
 - Myeloschisis] will be performed

Neurosepsis

- Poor grade (Grades 3 & 4) tuberculous meningitis with hydrocephalus (TBM/HCP) will not receive a ventricular shunt if there is no improvement in CSF drainage after lumbar puncture or external ventricular drainage.

- TBM/HCP + HIV will be managed non-operatively by serial LP's.
- Ventriculitis from any aetiology will receive supportive care only.

Spinal Injury

- Quadriplegic patients (highest intact level C5) or ventilatory dependency will be managed non-operatively at the referral hospital. Those that show improvement and do not require ventilation will be considered for surgery.

3. EXIT CRITERIA

Patients are discharged when they are stable enough to go to the referral hospital or home.

Written by Dr E.M. Kiratu (Clinical Head, Department of Neurosurgery)

NEUROLOGY

13. NEUROLOGY

13.1 Scope of Practice

The discipline of Neurology deals with diseases of the brain, spinal cord, peripheral nerves, neuromuscular junctions and muscle. The general categories of cases that are dealt with are as follows:

- Bacterial Meningitis
- Tuberculosis of the Nervous System
- Fungal infection of the Central Nervous System
- Parasitic Protozoa and rickettsial infections
- Neurosyphilis
- Viral Meningitis
- Poliomyelitis
- Meningitis of unspecified cause
- Encephalitis / cerebritis, encephalomyelitis & Brainstem Encephalitis
- Slow virus infections of CNS
- Intracranial Abscess
- Sarcoidosis
- Meningitis due to CSF leak
- Behcet's syndrome
- Paranasal Sinus & Orbital Conditions
- Disappearing Intracranial lesions
- Aneurysm & Subarachnoid Haemorrhage
- Intracerebral Haemorrhage
- Extradural & Subdural Haemorrhage
- Proximal Cerebral Artery Occlusion & Stenosis (Extracranial)
- Cerebral Artery Occlusion (Intracranial)
- Transient Cerebral Ischaemia & Rind
- Infarction without demonstrable cause
- Other cerebrovascular disease
- Infarction of Posterior Fossa Structure
- Demyelinating Disease of the CNS
- Inherited Metabolic Disease of the Nervous System
- Acquired Metabolic Disease
- Drugs & Toxins & other Noxious Agents
- Nutritional Disturbances of CNS
- Involuntary Movement Disorders
- Parkinson's Disease
- Hereditary Ataxias and other Ataxias
- Dementias
- COMA
- Disorders of Memory
- Motor Neuron Disease
- Encephalopathy unspecified
- Encephalopathy associated with Systemic Infections
- Head injury

- Hydrocephalus & Increased Intracranial Pressure
- Neoplasia of the Nervous System & Allied Conditions
- Neuro Endocrine Disorders
- Headache & Craniofacial Pain
- Epilepsy (and long term monitoring for epilepsy surgery)
- Sleep & related disorders (including polysomnography)
- Syncope
- Language & Communication disorders
- Congenital abnormalities & Developmental disorders
- Phakomatoses & Neurocutaneous Syndromes
- Disease of the Spinal Cord, Spinal Canal & Vertebrae
- Autonomic disorders
- Pain syndrome
- Cranial nerve disorders
- Visual field abnormalities (cause specified elsewhere)
- Peripheral Nerve Disease - acquired
- Peripheral Nerve Disease – Genetic
- Spinal Muscular Atrophies (HMN)
- Muscular Dystrophy
- Mitochondrial Cytopathies
- Congenital Myopathies
- Disease of the Neuromuscular Junction
- Inflammatory Muscle Disorders
- Metabolic & Toxic Myopathies
- Other Muscle disorders
- Psychiatric Disorders
- Paediatric Related Neurologic Disorders
- Complications related to procedures & operations
- Diagnosis deferred
- Investigations

The above cover most, but not necessarily all the types of neurological cases that will be seen and dealt with by the Neurology Department.

13.2 Entry & Exit Criteria

In most instances the entry criteria for neurological disease will be to establish a diagnosis. As you are aware the majority of our patients are impoverished and come from distant areas. Where a stepwise approach to determine the diagnosis is required it is illogical and not cost effective to have the patient shuttling back and forth from his base hospital. The **exit criteria** in this group will be confirmation of diagnosis.

There will be a subgroup of patients in whom the diagnosis will remain unclear. Some of these patients will be subjected to a therapeutic trial for presumptive diagnosis. This group of patients will be kept until such time as a response is obtained or the clinician has determined that his presumptive diagnosis is wrong.

The **entry criteria** for another group of patients will be those where the diagnosis is known but management has proven problematic. The exit criteria will be stabilization of the neurological disorder. Specific situations will also pertain e.g. evaluation of intractable seizures with a view to epilepsy surgery.

13.3. Entry Criteria: Confirmation of Diagnosis

➤ Infectious Disorders

A significant proportion of our admissions are for infectious disorders. This would require stepwise examination of various body fluids and imaging techniques. In the majority of instances the rate limiting step will be the speed with which the laboratory and radiological services can turn out the results required.

➤ Cerebrovascular Disease

Unexplained strokes

➤ Undiagnosed spinal cord disorders

➤ Undiagnosed peripheral nerve disorders

➤ Undiagnosed muscle disorders

➤ Other undiagnosed intracranial disorders

13.4 Entry Criteria : Stabilisation of Neurological condition where the diagnosis has been established.

➤ Cerebrovascular Disease

Acute admission within the 3 to 6 hours of stroke

➤ Uncontrolled seizures including Status Epilepticus

➤ Rapidly progressive spinal cord disorders requiring acute intervention

➤ Neuromuscular disorders e.g. myasthenic crisis

➤ Acute nerve or muscle weakness

13.5 Exit Criteria

Refer to item 13.2 above

Written and updated by Prof. A.I. Bhigjee