

American University of Barbados

School of Medicine, Barbados

Clinical Science Curriculum

Clinical Student Handbook

Clinical Science Program

Mission

American University of Barbados seeks to provide world class medical education with cutting edge equipment and pedagogy, in an environment that fosters appreciative enquiry, human sensitivity and collaborative research aimed at reducing human suffering and pain.

Introduction

The Clinical Science Program is comprised of 72 weeks of Clinical Rotations at our affiliated hospitals and specialized Clinical facilities across the United States. During the Rotations/Clerkships, the student participates in supervised patient care while rotating through various medical specialties and sub-specialties. Training includes history taking, physical examinations, laboratory analysis, case presentations, Clinical workshops, and conferences. The student receives personalized guidance by the Clinical faculty and develops the skills and knowledge that are essential for graduate medical education. The student also has an opportunity to assess the degree of his/her interest in each of the major fields of medical training.

The 72 weeks of Clinical Rotations consists of 48 weeks of Core Rotations and 24 weeks of Elective Rotations.

Core Rotations	Duration
Internal Medicine	12 weeks
Surgery	12 weeks
OB-GYN	6 weeks
Pediatrics	6 weeks
Psychiatry	6 weeks
Family Practice	6 weeks
Total	48 weeks

Elective Rotations	Duration Varies (minimum 4 weeks each)
Nephrology	Urgent Care (Family Practice)
Haematology and Oncology	Dermatology
Rheumatology	Orthopaedic Surgery
Immunology and Allergy	Ophthalmology
Gastroenterology	Otolaryngology (ENT)
Neurology	Plastic Surgery
Cardiology	Colorectal Surgery
Pulmonology	Cardiology (PEDS Focus)
Infectious Disease	Total : 24 weeks

Note: This is not an exhaustive list of possible elective rotations.

Core-Clinical Clerkship Curriculum

A. MEDICINE

EDUCATIONAL OBJECTIVES OF MEDICINE CLERKSHIP

1. To learn the art of a complete and relevant history. In particular, the ability to synthesise information in to an informative, concise and complete written and oral narrative is stressed. The student must also learn to recognise symptoms unrelated to each other that may represent multiple clinical problems.
2. To continue to improve the skills involved in a physical examination and to learn the importance and meaning of abnormal findings.
3. To understand mechanisms of disease and pathophysiology.
4. To learn the relevance, indication for interpretation of the major laboratory tests.
5. To read in depth about the symptoms and signs which lead to the recognition of various organ dysfunction and the clinical course, management and prognosis of major disease entities.
6. To understand the mechanisms of actions, toxicity, and proper use to the major pharmacological agents used in Internal Medicine.
7. To observe and learn procedures such as veinpuncture, lumbar puncture, thoracentesis, arterial puncture, insertation of intravenous lines, and urinary bladder catheterization.
8. To learn the importance of a professional and compassionate doctor/patient relationship and develop the skills necessary for this.
9. To learn the importance of and the techniques of educating patients to improve patient compliance and patient participation in their own care.

TOPICS FOR CORE MEDICINE

These topics serve as an outline of recommended reading from the current standard Medical texts and should be supplemented and enhanced by the study of current patient-Oriented problems.

1. Abnormal Physiology
 - a) Acute and chronic failure of the major organ systems (Heart, lungs, liver, kidney)
 - b) Shock (cardiogenic, septic, hypovolemic)
 - c) Acid-base, fluid and electrolyte, and blood gas disorders
 - d) The roles of non-invasive imaging in medicine - CT scans, sonograms and MRI

2. Cardiology
 - a) Approach to the patient with chest pain i.e. differential diagnosis of chest pain
 - b) Congestive heart failure
 - c) Electrocardiogram interpretation
 - d) Recognition and treatment of common arrhythmia
 - e) Role of echocardiography
 - f) Arteriosclerotic and hypertensive heart disease
 - g) Valvular heart disease - including rheumatic fever
 - h) Infective endocarditis
 - i) Cardiomyopathies
 - j) Non-invasive and invasive methods of cardiac evaluation
 - k) Pericarditis
 - l) Pericardial tamponade and constrictive pericarditis
 - m) Aneurysms
 - n) Peripheral arterial disease
 - o) Pulmonary embolism
 - p) Cor pulmonale
 - q) Thrombophlebitis

3. Pulmonary disease
 - a) Asthma
 - b) Chronic obstructive pulmonary disease
 - c) Pneumonia
 - d) Carcinoma of lung
 - e) Pneumothorax
 - f) Tuberculosis
 - g) Pleural effusion
 - h) Hilar adenopathy
 - i) Atelectasis
 - j) Pulmonary infections in immunosuppressed patients (e.g. HIV)
 - l) Interstitial lung disease and (e.g. sarcoidosis)
 - m) Smoking and environmental factors in lung disease
 - n) Occupational lung disease

o) Bronchiectasis

4. Gastroenterology

- a) Gastrointestinal bleeding
- b) Duodenal ulcer
- c) Gastric ulcer
- d) Gastric carcinoma
- e) Esophageal disease including carcinoma, achalasia, diffuse Esophageal Spasm, and peptic esophagitis
- f) Cholelithiasis, Cholecystitis
- g) Jaundice
- h) Inflammatory bowel diseases
- i) Hepatitis
- j) Cirrhosis
- k) Malabsorption syndrome
- l) Adenocarcinoma of the colon and rectum
- m) Pancreatic carcinoma
- n) Pancreatitis
- o) Drug-induced liver disease

5. Nephrology

- a) Urinary tract infection
- b) Obstructive uropathy
- c) Hematuria
- d) Proteinuria
- e) Urolithiasis
- f) Renal disease and systemic disorders
- g) Drugs and the Kidney
- h) Acute renal failure
- i) Chronic renal failure
- j) Acute and chronic glomerulonephritis
- k) Reflux nephropathy
- l) Polycystic kidneys
- m) Nephritic syndrome
- n) Hypertension

6. Endocrinology

- a) Diabetes mellitus
- b) Hypothyroidism
- c) Hyperthyroidism
- d) Thyroiditis
- e) Thyroid nodule
- f) Thyroid carcinoma

- g) Hypogonadism
- h) Addison's disease
- i) Cushing's syndrome
- j) Pheochromocytoma
- k) Hypopituitarism
- l) Acromegaly
- m) Metabolism and disorders of calcium and phosphate
- n) Multiple endocrine adenomas
- o) Viralizing syndromes
- p) Osteoporosis and Osteomalacia

7. Rheumatology

- a) Osteoarthritis
- b) Rheumatoid arthritis
- c) Low back pain and spinal stenosis
- d) Systemic Lupus erythematosus
- e) Spondyloarthritides
- f) Septic arthritis
- g) Crystal-induced arthritis
- h) Indications for the joint replacement
- i) Temporal arteritis and polymyalgia rheumatica
- j) Scleroderma
- k) Polymyositis

8. Infectious Diseases

- a) Fever of unknown origin
- b) Opportunistic infections
- c) Sepsis
- d) AIDS
- e) Sexually transmitted diseases
- f) Nosocomial infection
- g) Principles of antibiotic therapy
- h) Infectious diarrhoea
- i) Parasitic diseases including malaria, amebiasis, trichinosis, cysticercosis, and strongyloides
- j) CNS infections
- k) Lyme disease

9. Hematology/Oncology

- a) Anaemia
- b) Hemostasis and thrombosis
- c) Leukaemia
- d) Myeloproliferative disorders

- e) Lymphoproliferative disorders and paraproteinemia
- f) Cancer screening and cancer prevention
- g) Cancer staging
- h) Principles of chemotherapy
- i) Cancer of breast, prostate, lung, colon and rectum

10. Neurology

- a) Cerebrovascular disease
- b) Extracranial vascular disease (TIA's)
- c) Spinal cord compression
- d) Peripheral neuropathies
- e) Demyelinating diseases
- f) Syncope
- g) Vertigo
- h) Ataxia
- i) Myasthenia gravis
- j) Brain tumours
- k) Headaches
- l) Seizures
- m) Meningitis
- n) Encephalitis
- o) Myopathies
- p) Parkinson's disease
- q) Head injury
- r) Coma
- s) Dementia
- t) Diagnosis and treatment of depression and anxiety
- u) Myopathies
- v) Spinal Stenosis and disc disease

11. Dermatology

- a) Adverse cutaneous drug reaction
- b) Psoriasis
- c) Acne
- d) Neurodermatitis
- e) Pemphigus
- f) Fungal infections
- g) Cutaneous manifestations of systemic diseases
- h) Cutaneous neoplasms

12. Preventive Medicine

- a) Risk factor evaluation
- b) Screening for disease

- c) Adult immunisation
 - d) Hyperlipidimia
 - e) Oseoporosis
 - f) Postmenopausal state
 - g) Counselling
13. Geriatric medicine
- a) Dementia
 - b) Delirium
 - c) Urinary incontinence
 - d) Functional; evaluation

READING FOR THIRD-YEAR CORE MEDICINE

As mentioned earlier medical information through reading should proceed on four different levels.

1. Systematic reading of a general medical text. The university has required that all students read Harrison's Principles of Internal Medicine Handbook Ed. Eisselbacher McGraw-Hill, 1995 to provide a general overview of medicine. The end of clerkship written exam will be based on this text. The advantage of this text is it provides a general overview of the field of Internal Medicine and can provide a framework for learning on a deeper level. Students understand that they will not be able to see patients with all different general medical problems during their core rotation in Medicine or even during medical school. However, they still must be somewhat familiar with problems to which they are not exposed. Reading Harrison's can fulfil this purpose.
2. Patient oriented reading in general text, especially texts in primary literature. All students should acquire a more detailed general medical text. These texts will be different from Harrison's, in that they will provide more detailed information about specific disease entitles on one hand, yet cannot easily be read from cover to cover during a twelve week rotation. Students can choose their own text from suggested text listed below or from any other text that they feel will supply them with the appropriate information. In this sense, a student's textbook of medicine is different than the Harrison's required text and will serve a different purpose.
3. Reviewing basic pathophysiology. Advances in clinical medicine frequently grow out of basic science principles that need to be constantly reviewed and learned. The necessity to return continually to basic science principles cannot be emphasised enough throughout a clinical career to reinforce the understanding of clinical medicine.

4. Developing efficient medical information access skills is beyond the scope of the clinical manual. Students should make an effort to learn how to do literature searches and use computers.

Required reading

Harrison's Principles of Internal Medicine Handbook

Ed. Eisselbacher McGraw-Hill,

FREQUENTLY USED TEXTBOOKS IN MEDICINE:

Davidson's Principle in the Practice of Medicine

Churchill and Livingston,

Clinical Medicine

Ed. P.J. Kumar and M.L. Clark

Medicine - 4th edition - ISBN#0-397-51464-6

Ed. Fishman, Hoffman, Klausner, Thaler. Lippincott-Raven

A Practical guide to the care of the Medical patient

Ed. Ferri Mosbey,

Current Medical Diagnosis and Treatment

Ed. Tierney Appleton and Lang,

Oxford Handbook of Clinical Medicine

NMS Medicine

Scientific American Medicine

Ed. Rubinstein and Federman

Heart Disease

Ed. Braunwald. Saunders

Textbook of Pulmonary Disease

Ed. Baum and Wolinsky. Little, Brown and Co

Infectious Disease

Ed. Mandell et al. John Wiley and Sons

Textbook of Rheumatology

Ed. Keely et al. Saunders

The Kidney

Ed. Brenner and Rector. Saunders

Endocrinology and Metabolism

Ed. Felig et al. McGraw Hill

Clinical Gastroenterology

Ed. Spiro. Macmillan

Clinical Hematology

Ed. Wintrobe. Lea and Febiger.

Neurological Skills

Ed. Harrison, M.J. G. Butterworth

Essential Neurology

Ed. Wilkinson, I.M.S Blackman

Practical guide to the care of the Medical Patient

Ed. Ferri, F Mosby

Baby Cecil

B. SURGERY

EDUCATIONAL OBJECTIVES OF SURGICAL CLERKSHIP

During the surgical clerkship the student must demonstrate knowledge, skills and appropriate behaviour in the following areas:

1. Patient evaluation and pre and post-operative management:

- a) Consistently obtain a reliable and organised patient history and physical examination, recorded in a problem-oriented format
- b) Develop a problem list, differential diagnosis, and plan of investigation
- c) Present pertinent findings and therapeutic alternatives, and the rationale for each, to the attending surgeon and colleagues
- d) Actively participate in diagnostic manoeuvres, pre-operative preparation, and post-operative management
- e) Formulate appropriate management orders and record daily progress of the patient in the problem oriented Medical record (POMR) format

2. Operative Experience:

- a) Demonstrate knowledge of scrubbing and sterile technique, proper conduct and attire in the operating room
- b) Observe the important aspects of the operative procedure on all patients personally evaluated
- c) Demonstrate proficiency in the principles of tissue response to injury, handling of the tissues, wound healing, location of incisions, wound closures, suture material and basic technique of surgical management

3. Trauma and emergency management:

- a) Perform a basic evaluation of a traumatised patient and outline the priorities of management
- b) Demonstrate knowledge of fluid management in the patient with burn or traumatic shock
- c) Observe and/or perform with supervision, emergency department procedures, such as laceration closure, abscess drainage, insertion of chest tubes, management of simple fractures, and other similar procedures

4. Outpatient management:

- a) Perform initial and follow-up outpatient evaluations and record them in a format unique to the setting
- b) Become familiar with and demonstrate, where appropriate, the various outpatient procedures and practices unique to a given surgical speciality

5. Diagnosis and management of Fundamental surgical Diseases:

- a) Demonstrate proficiency in knowledge of basic surgery knowledge as outlined in the objectives of the learning modules which follow

Clinical Skills

Overview

- a) Become competent in detailed physical examination of head and neck, breast, abdomen, hernias and peripheral blood vessels
- b) Consistently demonstrate the ability to precisely and succinctly present patient information to attending physician and colleagues
- c) Perform veinpuncture
- d) Perform arterial puncture for blood sample
- e) Properly insert foley catheter and demonstrate care
- f) Properly insert and secure nasogastric tube and demonstrate care.
- g) Perform or observe paracentesis
- h) Manage a thoracostomy tube to water-seal drainage
- i) Insert an intravenous cannula
- j) Demonstrate proper management and dressing change of a contaminated wound
- k) Demonstrate technique for removing sutures
- l) Demonstrate care of a tracheostomy or a nasotracheal tube

General Surgery

1. Module 1: shock

- a) Recognise the clinical signs of hypovolemic shock and relate them to the underlying physiologic changes
- b) Devise an initial plan for the patient in hypovolemic shock due to bilateral femoral fractures and suspected abdominal visceral injury
- c) Describe the critical objective measurements that may be monitored in the shock patient
- d) Outline the cardiovascular response to acute hypovolemia

- e) Detail factors which aid the physician in deciding whether to use blood or Ringer's lactate solution for fluid replacement
- f) Differentiate other types of shock: Septic, carigenic, anaphylactic, neurogenic
- g) Describe the complications of prolonged shock

2. Module 2: Abdominal Trauma

- a) Write initial plans for a patient with suspected blunt abdominal trauma and penetrating trauma
- b) Work up of patients with abdominal trauma - x-rays, sonogram, CT scan

3. Module 3: Pediatric Trauma

- a) Describe and recognise the main differences between the adult and pediatric trauma patient
- b) Describe the basic problems encountered with burns in pediatric patients

4. Module 4: Head Injuries

- a) Become acquainted with the Glasgow coma score
- b) Know the principles and early management of head injuries
- c) Understand mechanisms of injury and associated injuries e.g. Cervical spine

5. Module 5: Intestinal Obstruction

- a) Define strangulation and paralytic ileus
- b) Characterise three main categories of mechanical obstruction and list three examples of each
- c) Describe the pathophysiology of fluid and electrolyte disturbances resulting from bowel obstruction
- d) Describe the laboratory and radiographic studies that are of greater value in diagnosis of intestinal obstruction
- e) Present the indications for urgent or deliberate surgical management
- f) Outline the essentials of pre-operative management

6. Module 6: Peripheral Vascular Disease

- a) Describe signs and symptoms of abdominal aortic aneurysm. Describe the tests necessary to reach that diagnosis. Outline the management of abdominal aortic aneurysm
- b) Describe the pathophysiology of peripheral arterial occlusive disease.
- c) Become competent in detailed examination of the vascular system
- d) Understand the principles involved in peripheral vascular procedures (including endovascular)
- e) Describe the signs and symptoms of cerebral transient ischemia attacks and outline the tests used for diagnosis, principles of carotid artery disease
- f) Describe the clinical course of thromboembolic disease, and discuss the methods of management.

7. Module 7: Venous Disease

- a) Review the venous systems of the lower extremity, the significance of the muscle pump and valvular incompetence
- b) Understand the principles of management of varicose veins.
- c) Understand the pathophysiology of venous ulcer. See patients with venous ulcers, and the principles of treatment.
- d) Know the diagnosis and treatment of DVT, major DVT, phlebotic Syndrome, and PE.

8. Module 8: Appendicitis

- a) Given a list of age brackets, identify the age group in which the incidence of appendicitis is highest, and be aware of the major differential diagnoses in each age group. Know the management of acute appendicitis and its complications.

9. Module 9: The acute Burn

- a) Classify burns, etiology and staging.
- b) Estimate the area of burn using tables and the rule of nines.
- c) Discuss the principles of initial burn management.
- d) Discuss the basics of fluid replacement in the burn patient. Use the crystalloid formula to calculate fluid requirements for resuscitation.
- e) Discuss the basics of burn wound care methods and various antibiotics topical preparations.
- f) Discuss major complications and causes of mortality in burn patients.

- g) Describe and recognise late problems after healing has occurred.

10. Module 10: Abdominal wall hernia

- a) Define hernia and describe the different types of abdominal wall hernias.
- b) Demonstrate understanding of incidence, etiology, complications, operative risks, and failures to give proper advice to patients concerning care required for abdominal wall hernias.
- c) Outline the fundamentals of surgical hernia repair of various groin, umbilical, and ventral hernias.
- d) Define specified terms related to abdominal wall hernias - reducible, irreducible, incarcerated strangulated.
- e) Physical examination of hernias, genitalia.

11. Module 11: Surgery of the Breast.

- a) Discuss the frequency of the various masses of the breast and their appropriate treatment.
- b) Breast examination - be competent at breast masses.
- c) Describe the specific signs associated with cancer of the breast.
- d) Outline the reasonable management for benign and malignant diseases of the breast.

12. Module 12: Biliary Surgery

- a) Describe the usual gross anatomy of Biliary system and give the Physiologic function of each of its parts.
- b) Outline the signs and symptoms of acute and chronic gallbladder disease and the diagnostic tests used in detection.
- c) Describe the rationale for treatment of Biliary colic, prolonged acute obstructive choecystitis in young and healthy vs. old and feeble patients, and recurrent acute cholecystitis.
- d) Outline the diagnostic procedures necessary to differentiate obstructive from non-obstructive jaundice. Describe the proper treatment of common duct obstruction.

13. Module 13: Surgical disease of the Liver, Spleen, and Pancreas

- a) Discuss the significance, signs, symptoms and complications of traumatic injury to the liver.
- b) Discuss the management of portal hypertension.

- c) Recognise a traumatic rupture of the spleen and describe those diagnostic tests necessary to determine rupture.
- d) Identify those disorders where splenectomy is indicated.
- e) Describe those conditions associated with acute Pancreatitis.
- f) Discuss the basic management of acute Pancreatitis.
- g) Describe and recognise the signs and symptoms of cancer of the pancreas and outline and tests to make such a diagnosis.

14. Module 14: Colon and Rectal Surgery

- a) Describe common ano-rectal condition - haemorrhoids, Fissure-in-ano, fistula-in-ano, perianal abscess, ischio-rectal abscess.
- b) Describe management of patients with large bowel disease diverticulosis, diverticulitis, inflammatory bowel disease (UC, Crohn's ischemic colitis) colonic polyps.
- c) Observe endoscopy of the colon, and rectum and barium enema.
- d) Perform a rectal examination.

15. Module 15: Surgical aspects of the child with abdominal pain

- a) List five disease conditions that would fall into the urgent surgery Category.
- b) Describe the behaviour of a child with peritonitis.
- c) List six signs of peritonitis.
- d) Be aware of surgical causes of abdominal pain in children.

16. Module 16: Peptic Ulceration

- a) Clarify the important differences between gastric and duodenal ulceration. Know the classification.
- b) Prepare an initial plan for the management of the patient with surgical Complications of peptic ulceration of the stomach or duodenum and describe indications for surgery.
- c) Discuss stress ulcer symptomatology and describe management.
- d) Name and describe briefly the currently acceptable surgical procedures for peptic ulcer disease and understand the underlying physiological principles.
- e) Describe the effects of gastrin-producing tumours.
- f) Demonstrate awareness and understanding of the three primary sequelae of surgical management for peptic ulcer disease.

17. Module 17: Thoracic Surgery

- a) Know the work-up of a solitary lung mass.
- b) Get an overview of tumours in the chest by location.
- c) Understand the principles of surgical management of lung cancer.
- d) Get overview of benign and malignant esophagus conditions.

18. Module 18: Transplant surgery

- a) Get an overview of the status of transplant surgery in the USA and worldwide.
- b) Understand the immunological aspects of transplant surgery.
- c) Know the drugs commonly used in transplant surgery.

A. Knowledge Base:

Anaesthesia

- 1. Pre-op evaluation
clinical exposure, informal discussion, Didactic lectures set reading.
Specific chronic diseases states:
DM, Hypertension, ASHD (IDH)
Risk stratification and Medical Manipulation.
Pre-op optimisation consent
- 2. Intra-op
Induction of Anaesthesia - methods / risks, Intubation and airway management care and monitoring of unconscious blood and fluid management local, Regional, general anaesthesia
- 3. Post-op
Monitoring in PACU (recovery room) general, regional; anaesthetics pain management early/late complications
- 4. Applied pharmacology
Local anaesthetics agents-toxicity
Induction agents, including Paralysing agents
Common general anaesthetic agents

B. Clinical Skills

- 1. Airway management - chin

- Lift jaw thrust, use of mask
 - 2. Use of oral, nasal airway
 - 3. Endo-tracheal intubation - adult/child
- C. Student Assessment
 - Log books to document exposure
 - Case presentations at end of rotation
 - Should include anaesthesia management
 - Questions on oral exams to include Anaesthesia
- D. Structure
 - Either
 - a. One week full time rotation
 - or
 - b. Systematic co-ordinated exposure over the entire 12-week core rotation
- A. Knowledge Base:
 - Orthopedics**
 - 1. General orthopaedics:
 - Diseases of childhood and adolescence low back pain - work-up, diagnosis, management
 - sciatica - work-up, diagnosis, management
 - Arthritis - long term sequelae and Management
 - Bone tumours
 - Hand surgery - principles, common problem
 - 2. Trauma
 - Importance of history - work-up, tests,
 - Referrals - mechanism of injury
 - importance of initial evaluation - work-up
 - tests, referrals- neurovascular status
 - Importance of early care and immobilisation
 - Common fractures, Dislocation - long and Short term sequelae, hand injuries pelvic Injuries
 - 3. Rehabilitation
 - Long and short term, disability, cast management
- B. Clinical Skills
 - Relevant orthopaedic history learn
 - Examination of extremities, joints
 - Nerves, learn case placement - splints,
 - Full casts, learn proper immobilisation of

Common injuries see common orthopaedic
Procedures, learn radiologic appearance of
Common fracture, orthopaedic conditions

C. Student Assessment

Log book recording of cases seen
Logbook - cast placement/immobilization
Questions on oral examinations

A. Knowledge Base

Urology

1. Detailed history
Clinical work-up
& differential
diagnosis

Clinical exposure, lectures
Tutorials, informal discussions

Dysuria
Frequency
Hematuria
Flank pain
Urinary retention incontinence
Prostatism
Scrotal swelling
Sexual problems and infertility

2. Urinary tract
infections

Childhood, adult

3. Urinary Stones

Renal, ureteric, bladder

4. Malignancy

Renal, Bladder, prostate, testicular
Staging
Principles of treatment, operative
Chemotherapy, radiation, other

5. Trauma (principles)

Renal-blunt, penetrating
Urethra-principles of repair
Bladder intra-and extra-peritoneal
Rupture

6. Laparoendoscopic

Cystoscopy, Tulp, Turbt
Stents
Laparoscopic node sampling

7. Sexual problems

Impotence-emphasis on work-up tests
referrals to sub-specialist
Infertility-emphasis on work-up tests
Referrals to sub-specialist

- B. Clinical Skills: Urological history taking
 Clinical examination of genitalia
 Bimanual examination of abdomen prostate
 Aseptic placement of foley catheter
 Become acquainted with investigative and
 Contrast procedures, urethrography,
 Cystography, IUP, sonography, scans
 See common urologic procedures
 Cystoscopy, TURP, TURBT, open
 Procedures - renal, bladder
- C. Student Assessment Log book recoring of OR procedures seen
 Log book recoring of foley catheter
 Be prepared to answer questions at end of
 Rotation oral exams.

Ophthalmology

I. Goals and Objectives:

The Ophthalmology inductory clerkship will provide the student with:

- a) An understanding of the visual apparatus, its functions, dysfunctions and diseases, especially as related to other systemic conditions
- b) An opportunity for direct observation of the effects of aging and diseases on the eye
- c) The skills and discipline required in the understanding of Ophthalmology
- d) The basic information required for diagnosis of Ophthalmic diseases.

Students are expected to master the information and techniques in the following areas as indicated:

Visual Acuity: Measuring and recording of the visual acuity, colour vision, and determine whether to refractive error or a pathological condition.

Ophthalmoscopy: Differentiation of normal fundus from an abnormal fundus with the description of the normal versus abnormal. Its relationship to systemic neurological and ocular diseases.

Glaucoma:	The measurement of intraocular pressure, the standard classifications of the nerve head with differential of the glaucomatous, normal glaucomatous-like, and relationship to visual field.
Red Eye:	Determining whether red eye disorders require the attention of an Ophthalmologist or whether a primary care physician might appropriately treat the condition.
Ocular trauma:	Evaluating the problems of common ocular and orbital injuries and whether such injuries require the prompt attention of an ophthalmologist or whether a primary care physician can treat the condition.
Motility: (strabismus)	The student learns to perform a complete neurosensory and ocular motility examination. Evaluations of tropias, floras, paralytic EOM disorders, and extraocular muscles is taught through participation and observation in the instructual period. The student is instructed in the classificational of stabismus and basic management, including the diagnosis and therapy amblyopia
Neuro- Ophthalmology:	Evaluating the ophthalmological signs of neurological disorders, through the observation of the visual functions, appearance of retina and optic nerve head, ocular movements, pupillary reactions, and performance of accurate confrontation fields. An understanding of the localising values of the formal visual fields and its relationship in the neuro-ophthalmic emergencies requiring prompt attention to the amblyopia in a child or adult and diagnosis of type of strabismus.

II. Format:

The curriculum in ophthalmology is integrated into several pre-clinical and clinical courses, including physical diagnosis the pathophysiology course, and rotation in surgery, E.D and OPD.

III. Evaluation and Grades

Evaluation will be based on attendance, involvement, attitude and a multiple-choice examination.

IV. Self-Instructional Materials:

- a) Ophthalmology study guide for student practitioners of medicine
Bierson, American academy of ophthalmology and otolaryngology
- b) Atlas of clinical Ophthalmology
Spalton, J.P. Lippincott Company
- c) The physician's guide to eye care
Jonathan Detrobe, American academy of Ophthalmology

Curriculum/Objectives for Otolaryngology

1. The students should be able to collect, record and communicate information from the history, physical examination and routine investigations on all their ENT patients as outlined in the first four objectives of the first clinical year. The physical examination will include an examination of the ear, nose and throat with instruments which can reasonably be expected to be available in general practice, in wards or in accident and emergency departments. It will also include the performance of tuning fork tests and audiograms, as well as the interpretation of the results of caloric tests.
2. During the term, the students should witness audiometric tests of hearing.
3. The students should be able to examine and interpret x-rays and CT scans of skull, including sinuses and mastoids, along with barium studies of the upper digestive tract and esophagus.
4. The students should be able to recognise and describe a plan of management of the following emergency and potentially lethal conditions:
 - a) Respiratory obstruction, by tracheostomy or intubation
 - b) Epistaxis
 - c) Cancer in the upper respiratory and digestive tracts.

- d) Peritonsillar abscess.
- e) Students should be exposed to technique of fiberoptic nasopharyngo-Laryngoscopy.

Format:

The curriculum in Otolaryngology is integrated into several pre-clinical and clinical courses including physical diagnosis, the pathophysiology course, and rotations in surgery, E.D and OPD.

Evaluation and Grading:

Evaluation will be based on attendance, involvement and multiple-choice exams.

Surgery Reading List

The basic required short textbook for the surgical rotation and the materials that students will be responsible for in preparation for the written examination, are two volumes of Lawrence's textbooks:

Required

Essentials of General surgery - 2nd edition - ISBN# 0-683-04869-4
Lawrence, Williams and Wilkins

Essentials of surgical specialties - ISBN# 0-683-04871-6

Recommended

Students are also encouraged to do further reading for interest, as reference, for preparing talks, etc. suggested additional sources are:

Principles of surgery
Schwartz, McGraw Hill

Early diagnosis of the acute abdomen
Cope, Oxford University press

Lecture notes in general surgery
Ellis and Calne

Journals

British Journal of Surgery

Surgery

C. PEDIATRICS

Guidelines for Clinical Clerkship in Pediatrics

1. Length: Minimum of 6 weeks.
2. Sites: In-patient or adolescent/general pediatric unit, ambulatory care unit, and normal newborn nursery, ER/urgent care.
3. At the beginning of each rotation, there should be an orientation meeting including the fact that a student should be assigned to a particular resident.
4. The students must attend and participate in night, weekend, and holiday call schedules
5. The student must attend a schedule of teaching conferences, including grand rounds, subspecialty conferences, and didactic sessions.
6. A preceptor should meet with each student at least twice a week. A total of at least three hours per week should be spent in this way.
7. The student is involved with all patient care activities whether the patient is seen in an ambulatory facility or on one of the in-patient wards.
8. A minimum of four clinical write-ups is required per student. Each should include a complete a complete database, problem list, clinical assessment, and differential diagnosis. A management plan should be discussed where relevant.
9. Critiques of write-ups are returned to students.
10. There should be at least one major presentation weekly by a student with a preceptor present. The student may be assigned weekly reading that revolves around such a presentation.
11. A mid clerkship evaluation of students' progress is required including discussion of areas that need improvement.
12. Each student will maintain a patient log (by record number and diagnosis). These should be patients with whom he has been personally involved. The preceptor should be in a position to verify that the student can perform specific aspects of a clinical examination, e.g. full CNS examination, developmental assessment, examination of the heart and lungs and abdomen, comment on gait, use of Ophthalmoscope and stethoscope etc.

13. Patient logs will be inspected by the Deans and the chairman of pediatrics during their site visits to the hospital to ensure a reasonable mix of patients. A minimum of one directly observed physical exam will be documented on a patient log.
14. A written examination is taken at the end of the rotation. This exam is based on the core text. The University will send the chairman of the department, as well as the program director in each affiliated hospital, the grades of each student who has rotated through the particular hospital.
15. The department of pediatrics places special emphasis on developing student skills in clinical problem solving, interviewing techniques, presentations and physical examinations.

Topics for core pediatrics

The following topics have been chosen to represent the more common and the more serious disorders as well as the subjects basic to an understanding of the developing child with which the student should be familiar. The student must read both clinical and non-clinical sections to develop a fuller understanding of the inter-relationships between genetics, normal development, and pediatric diseases. They are as follows:

1. The scope of pediatrics - genetics, prenatal and perinatal events, pre-school and school period, and adolescence.
2. Growth and development - factors involved, objective measurements, speech and language, personality milestones, Denver development, and bailey scales.
3. Psychological aspects of childhood - basic emotional needs, parental attitudes, psychosis, suicide in adolescents.
4. Educational health and development - the learning disabled child, recognition of educational and psychological assessments.
5. Adolescence - physical and emotional changes, nutrition, substance abuse, sexually transmitted diseases, suicide gestures.
6. Mental retardation - etiology.
7. Genetic disorders - common congenital and chromosome disorders, polygenic inheritance.

8. Nutritional requirements - in general and specific disease related.
9. Fluid and Electrolytes - dehydration, acidosis and alkaloses, parenteral fluid therapy.
10. Routine Immunizations
11. Accidents and accidental poisoning - especially salicylate and lead, toxic screening, poison control centers.
12. Child abuse and neglect - manifestations and diagnosis including child sexual abuse.
13. The pediatric history and physical examination
14. The new-born - physiologic adaptations, the delivery room, physical examination, anticipatory guidance, respiratory syndrome, hemolytic disease, jaundice, sepsis.
15. Digestive system - diarrhoea, colitis, hepatitis.
16. Respiratory tract - structure and physiology, acute pharyngitis and tonsillitis, acute otitis media, T&A, croup, acute epiglottitis laryngotracheitis, bronchiolitis, asthma, pneumonia.
17. Cardiac diseases - history and physical examination, congestive heart failure, VSD, ASD, PDA, tetralogy of fallot, acute rheumatic fever, review of embryology.
18. Arthritis - infectious, anaphylactoid, SLE, mucocutaneous lymph node syndrome (Kawasaki disease) juvenile rheumatoid arthritis, lyme disease.
19. Hematology-Iron deficiency anemia, G-6-PD deficiency, sickle cell disease, B-thalassemia, homeostasis, thrombocytopenia, haemophilia A.
20. Nephrology - Urinalysis, poststreptococcal acute glomerulonephritis, idiopathic nephrotic syndrome, acute renal failure, hypertension, urinary tract infections, congenital anomalies.
21. Endocrine and metabolic disturbances - physiological relationship, hypopituitarism, hypothyroidism, adrenogenital syndrome, sex determination, diabetes mellitus, PKU.
22. Cystic fibrosis.

23. Allergic diseases - diagnostic procedures, specific treatment, eczema, bronchial asthma.
24. Infectious diseases - infectious diarrhoeas, tuberculosis, infectious mononucleosis, childhood exanthemas, parotitic diseases.
25. Nervous system-cerebral palsy, migraine, aseptic meningitis, major cerebral trauma, convulsive disorders.
26. Cancer in childhood-acute leukemia, neuroblastoma, wilms tumor.
27. Pediatric surgery - esophageal atresia, inguinal hernia, hypertrophic pyloric stenosis, congenital megacolon, intussusception, acute appendicitis.
28. Pediatric orthopedics - dysplasia of the hip, legg-perthes disease, trauma, osteomyelitis.
29. Ophthalmology - Conjunctivitis, strabismus, trauma.
30. AIDS in infants and children

TEXTBOOKS IN PEDIATRICS

These textbooks provide in depth descriptions of all aspects of pediatric care. Textbooks Or handbooks include:

Required

Pediatrics - 3rd edition - ISBN# 0-683-06245-x
Dworkin

Recommended

- 1) Introduction to clinical pediatrics
S.W.Smith, Saunders pub.
- 2) Core textbook of pediatrics
Kay Oskey and Barnes
- 3) Harriet Lane handbook of Pediatrics
- 4) Growth and development
Watson and Lowrey
- 5) Essential Pediatrics

Hull and Johnstone

- 6) Pediatrics
Bry Dworkin
- 7) "Baby Nelson"
- 8) Symptoms and disease in children
RS Illingworth, Blackpoll Scientific
- 9) Nelson Textbook of Pediatrics
Authors: Berman, Vaughn and Saunders

Textbooks 3 and 4 cover the essentials of pediatrics but not with the depth of Nelson.
Student level textbooks organised primarily by symptoms

- 1) Core textbook of pediatrics
Kaye, Oski and Barnes,
- 2) Common symptoms of Diseases in children
R.S.Illingworth, Blackwell Scientific

D. OBSTETRICS AND GYNECOLOGY

UNIT 1 - APPROACH TO THE PATIENT

OBJECTIVE 1.

History

Rationale: An annual gynecologic evaluation is an important part of primary health care and preventive medicine for women. A gynecologic assessment should be part of every woman's general medical history and physical examination.

Certain questions must be asked of every woman, whereas other questions are specific to particular problems. To accomplish these objectives, optimal communication must be achieved between patient and physician.

The student will demonstrate the following skills:

- A. Performing a thorough obstetric-gynecologic history as a portion of a general medical history, including the following:
 1. Chief complaint
 2. Present illness
 3. Menstrual history
 4. Obstetric history
 5. Gynecologic history
 6. Contraceptive history
 7. Sexual history
 8. Family history
 9. Social history
- B. Communicating with the patient in order to gain her confidence and co-operation including developing an appreciation of the effects of her age, racial and cultural background, personality, mental state and economic status.
- C. Communicating the results of the obstetric-gynaecologic and general medical history by well organised written and oral reports with the relevant and necessary components.

OBJECTIVE 2

Examination

Rationale: An accurate examination complements the history, provides additional information and helps guide diagnosis and management. It also provides an opportunity to educate and reassure the patient.

The student will demonstrate the following skills:

- A. Communicating with the patient to gain her confidence and co-operation, including demonstrating an appreciation of her comfort and modesty.
- B. Performing a thorough obstetric-gynecologic examination as part of a woman's general medical examination, in
 - 1. Breasts
 - 2. Abdomen
 - 3. Pelvis, including recto-vaginal examination
- C. Communicating the relevant results of the examination in well-organised written and oral reports.
- D. Incorporating patient education in the examination, including:
 - 1. Breast self-examination
 - 2. External genital examination

OBJECTIVE 3

Pap smear cultures

Rationale: The Pap smear is one of many screening methods used in medicine. Proper technique in performing the Pap smear or obtaining specimens for microbiologic culture will improve its accuracy and usefulness.

The student will demonstrate the following skills:

- A. Performing an adequate Pap smear
- B. Obtaining specimens for cultures to detect sexually transmitted diseases
- C. Proper handling of specimens to improve diagnostic accuracy
- D. Providing an explanation to the patient regarding the purpose of The test.

OBJECTIVE 4

Diagnosis and management plan

Rationale: Accurately identifying problems and selecting the most likely diagnosis leads to effective management plans.

- A. Generating a problem list
- B. Forming diagnostic impressions
- C. Developing a management plan, including:
 - 1. Laboratory and diagnostic studies
 - 2. Treatment
 - 3. Patient education
 - 4. Plans for continuing care of the patient
 - 5. Economic considerations
 - 6. Assessment of patient values

UNIT 2 - SECTION A - NORMAL OBSTETRICS

OBJECTIVE 5

Maternal-fetal Physiology

Rationale: Understanding physiologic adaptations to pregnancy will allow the student to understand more completely the principles of antepartum, intrapartum, and postpartum care, as well as the abnormalities that may occur at these times in pregnancy.

The student will demonstrate knowledge of the following:

- A. Maternal physiologic changes associated with pregnancy
- B. Physiologic changes of the placenta and fetus
- C. Effect of pregnancy on common diagnostic studies

OBJECTIVE 6

Preconception and Antepartum care

Rationale: The proven benefits of good health prior to conception include a significant reduction in maternal and fetal morbidity and mortality.

Antepartum care promotes patient education and provides on-going risk assessment and development of an individualised patient management plan. The student will demonstrate a knowledge of conditions that warrant preconception counselling, including the following:

- A. Medical conditions such as diabetes mellitus, chronic hypertensive vascular disease, and heart disease.
- B. Recurrent pregnancy loss
- C. History of genetic abnormalities
- D. Maternal age over 35
- E. Substance abuse
- F. Nutrition

The student will demonstrate a knowledge of the following:

- A. Methods to diagnose pregnancy
- B. Assessment of gestational age
- C. Methods to distinguish an at-risk pregnancy
- D. Assessment of fetal growth, well-being and maturity
- E. Appropriate diagnostic studies
- F. Patient education programs.
- G. Nutritional needs of pregnant women
- H. Adverse effects of drugs and the environment

The student will demonstrate the following skills:

- A. Performing a physical examination on obstetric patients
- B. Answering commonly asked questions concerning pregnancy, labor and delivery.

OBJECTIVE 7

Intrapartum care

Rationale: Understanding the process of normal labor and delivery allows optimum care and reassurance for the parturient and timely recognition of abnormal events.

The student will demonstrate a knowledge of the following:

- A. Characteristics of true and false labor
- B. Initial assessment of the laboring patient
- C. Stages and mechanism of normal labor
- D. Techniques to evaluate the progress of labor
- E. Pain management during labor
- F. Methods of monitoring the mother and fetus
- G. Management of normal delivery and episiotomy repair
- H. Indications for operative delivery
- I. Immediate postpartum care of the mother

OBJECTIVE 8

Immediate care of the new-born

Rationale: Assessment of the new-born allows recognition of abnormalities requiring intervention.

The student will demonstrate a knowledge of the following:

- A. Techniques for assessing new-born status
- B. Immediate care of abnormal new-born
- C. Situations requiring immediate intervention in new-born care

OBJECTIVE 9

Postpartum care

Rationale: Knowledge of normal postpartum events allows appropriate care, reassurance, and early recognition of abnormal events.

The student will demonstrate a knowledge of the following:

- A. Normal maternal physiologic changes of the postpartum period
- B. Normal postpartum care
- C. Appropriate postpartum patient counselling

SECTION B - ABNORMAL OBSTETRICS

OBJECTIVE 10

Ectopic pregnancy

Rationale: Ectopic pregnancy is a leading cause of maternal morbidity and mortality in the United States. Early diagnosis and management may not only save lives, but may also preserve future fertility.

The student will demonstrate knowledge of the following:

- A. Differential diagnosis of first trimester bleeding
- B. Risk factors predisposing patients to ectopic pregnancy
- C. Symptoms and physical findings suggestive to ectopic pregnancy
- D. Method used to confirm the diagnosis of ectopic pregnancy
- E. Treatment options

OBJECTIVE 11

Spontaneous Abortion

Rationale: Bleeding is a common complaint in early pregnancy. A logical approach to its evaluation may not only affect the outcome of the pregnancy, but also will help to reassure the patient.

The student will demonstrate a knowledge of the following:

- A. Differential diagnosis of first trimester bleeding
- B. Clinical differentiation of incomplete and threatened abortion
- C. Definition of recurrent abortion
- D. Signs of missed abortion
- E. Complications of spontaneous abortion
- F. Causes and complications of septic abortion

OBJECTIVE 12

Medical and surgical condition in pregnancy

Rationale: Medical and surgical conditions may alter the course of pregnancy, and pregnancy may have an impact on the management of these conditions.

The student will demonstrate a knowledge of the following conditions in pregnancy:

- A. Anaemia
- B. Diabetes mellitus
- C. Urinary tract disorders
- D. Infectious diseases including:
 - 1. Herpes
 - 2. Rubella
 - 3. Streptococcus
 - 4. Hepatitis B
 - 5. Human immunodeficiency virus (HIV) human papilloma virus (HPV) and other sexually transmitted diseases
 - 6. Cytomegalovirus (CMV) and varicella
- E. Cardiac disease
- F. Asthma
- G. Alcohol, tobacco, and other substance abuse
- H. Acute abdominal symptoms

OBJECTIVE 13

Pre-eclampsia and Eclampsia syndrome

Rationale: Pre-eclampsia/eclampsia syndrome accounts for significant morbidity and mortality in both the mother and new-born.

The student will demonstrate knowledge in the following:

- A. Definition(s) and classification of Hypertension in pregnancy
- B. Pathophysiology of pre-eclampsia/eclampsia syndrome
- C. Symptoms, physical findings, and diagnostic methods
- D. Approach to management
- E. Maternal and fetal complications.

OBJECTIVE 14

D Isoimmunization

Rationale: The problem of fetal hemolysis from maternal D Isoimmunizations been greatly lessened in the past few decades. Awareness of the red cell antigen antibody system is important to help further reduce the morbidity and mortality from isoimmunization.

The student will demonstrate a knowledge of the following:

- A. Antigens of the Rh system
- B. Use of immunoglobulin prophylaxis during pregnancy
- C. Clinical circumstances under which D isoimmunization is likely to occur
- D. Methods used to determine maternal isoimmunization and severity of fetal involvement.

OBJECTIVE 15

Multi-fetal gestation

Rationale: When there is more than one fetus, antepartum, intrapartum, and postpartum management must be modified in order to minimise adverse outcome for the mother and fetuses.

The student will demonstrate knowledge of the following:

- A. Etiology of monozygotic, and multi-zygotic gestation
- B. Altered physiologic state with multi-fetal gestations
- C. Symptoms, physical findings, and diagnostic methods
- D. Approach to antepartum, intrapartum, and postpartum management.

OBJECTIVE 16

Fetal death

Rationale: Early and accurate diagnosis and management will help the patient with emotional adjustments surrounding fetal death and may prevent associated obstetric complications.

The student will demonstrate a knowledge of the following:

- A. Differential diagnosis of the causes of fetal death in each trimester
- B. Symptoms, physical findings, and diagnostic methods to confirm the diagnosis.
- C. Management of a patient with fetal death
- D. Emotional reactions and their effect on management
- E. Maternal complications of fetal death, including disseminated intravascular coagulation.

OBJECTIVE 17

Abnormal labor

Rationale: Labor is expected to progress in an orderly and predictable manner. Careful observation of the mother and fetus during labor will allow early detection of abnormalities so that management can be directed to reduce the frequency of adverse outcome.

The student will demonstrate a knowledge of the following:

- A. Various abnormal labor patterns
- B. Methods of evaluating fetopelvic disproportion
- C. Fetal and maternal complications resulting from abnormal labor.
- D. Indications and contraindications for oxytocin administration
- E. Management of abnormal fetal presentations
- F. Vaginal birth after cesarean delivery.

OBJECTIVE 18

Third Trimester bleeding

Rationale: Bleeding in the third trimester requires immediate patient evaluation. Thoughtful, prompt evaluation and management is necessary to reduce the threat to the lives of the mother and fetus.

The student will demonstrate a knowledge of the following:

- A. Approach to the patient who presents with third trimester bleeding
- B. Symptoms, physical findings, and diagnostic methods that differentiate patients with placenta previa and abruptio placenta from those with other causes of third trimester bleeding
- C. Complications of placenta previa and abruptio placenta
- D. Immediate management of shock secondary to third trimester Bleeding
- E. Components of the various blood products and indications for their use.

OBJECTIVE 19

Preterm labor

Rationale: Prematurity is the most common cause of neonatal mortality and morbidity. The reduction of preterm birth remains an important goal in obstetric care. Understanding the causes and recognising the symptoms of preterm labor provides the basis for management decisions.

The student will demonstrate a knowledge of the following:

- A. Factors predisposing to preterm labor
- B. Signs and symptoms of premature uterine contractions
- C. Causes of preterm labor
- D. Principles of tocolysis

OBJECTIVE 20

Premature rupture of membranes

Rationale: Rupture of the membranes prior to labor is a problem for both term and preterm pregnancies. Careful evaluation of this condition may affect fetal and maternal outcome.

The student will demonstrate a knowledge of the following:

- A. History, physical findings, and diagnostic methods to confirm rupture of the membranes
- B. Conditions favouring expectant management versus timely delivery with premature rupture of the membranes
- C. Methods to monitor maternal and fetal status in expectant management

OBJECTIVE 21

Intrapartum fetal distress

Rationale: Intrapartum fetal evaluation allows detection of changes during labor that may jeopardise the fetus.

The student will demonstrate a knowledge of the following:

- A. Techniques of intrapartum fetal surveillance including:
 1. Auscultation
 2. Electronic fetal monitoring
 3. Fetal scalp sampling
- B. Reassuring fetal heart rate patterns
- C. Recognitions and management of nonreassuring fetal heart patterns

OBJECTIVE 22

Postpartum hemorrhage

Rationale: Postpartum hemorrhage continues to be a major, although often preventable, cause of maternal morbidity and mortality.

The student will demonstrate a knowledge of the following:

- A. Risks associated with postpartum hemorrhage
- B. Immediate management of the patient with postpartum hemorrhage, including:
 - 1. Inspection for laceration
 - 2. Use of contractile agents

OBJECTIVE 23

Postpartum Infection

Rationale: Early recognition and treatment of postpartum infection will decrease maternal and morbidity and mortality.

The student will demonstrate a knowledge of the following:

- A. Risk factors for postpartum infection
- B. Infectious organisms
- C. Evaluation and management of the patient with postpartum infection
- D. Uses of prophylactic antibiotics

OBJECTIVE 24

Anxiety and depression

Rationale: Pregnancy, like any significant life event, may be accompanied by anxiety and depression. Recognition of psychologic disturbances is essential for early intervention.

The student will demonstrate a knowledge of the following:

- A. Normal emotional responses to pregnancy changes
- B. Signs and symptoms of postpartum depression and psychosis
- C. Management of patient with psychiatric illness

OBJECTIVE 25

Mortality

Rationale: Recognition of the causes and relationships of maternal and perinatal outcome.

The student will demonstrate a knowledge of the definitions of the common causes and effects on health care planning of each of the following:

- A. Maternal death
- B. Fetal death
- C. Neonatal death
- D. Perinatal death

OBJECTIVE 26

Postterm pregnancy

Rationale: Perinatal mortality and morbidity may be increased significantly in a prolonged pregnancy. Prevention of complications associated with postterm pregnancy is one of the goals of antepartum and intrapartum management.

The student will demonstrate a knowledge of the following:

- A. Normal period of gestation
- B. Risks of prematurity
- C. Antepartum fetal surveillance
- D. Management of prolonged gestation

OBJECTIVE 27

Fetal growth abnormalities

Rationale: Abnormalities of fetal growth carry increased risks for morbidity and mortality. Monitoring fetal growth is an important aspect of prenatal care and is performed on a regular basis throughout the antepartum period.

The student will demonstrate a knowledge of the following procedures:

- A. Definitions of macrosomia and fetal growth retardation
- B. Etiologies of abnormal growth
- C. Methods of detection of fetal growth abnormalities
- D. Associated morbidity and mortality

OBJECTIVE 28

Obstetric procedures

Rationale: Knowledge of Obstetric procedures is basis to management and counseling of the pregnant patient

The student will demonstrate a knowledge of the following procedures:

- A. Ultrasound
- B. Episiotomy
- C. Caesarean delivery
- D. Forceps delivery
- E. Induction and augmentation of labour
- F. Vacuum assisted delivery
- G. Breech delivery
- H. Antepartum fetal assessment
- I. Amniocentesis and Cordocentesis
- J. Chorionic villus sampling
- K. New-born circumcision

- L. Vaginal birth after cesarean delivery
- M. Spontaneous vaginal delivery
- N. Fetal monitoring.

UNIT 3 - SECTION A - GYNECOLOGY

OBJECTIVE 29

Contraception

Rationale: Primary care physicians are frequently called upon to provide counselling regarding methods of contraception. An understanding of the medical and personal issues involved in decisions regarding contraceptive methods is necessary to adequately advise these patients.

The student will demonstrate a knowledge of the following:

- A. Physiologic or pharmacologic basis of action of the various methods of contraception.
- B. Effectiveness
- C. Benefits and risks
- D. Financial considerations

OBJECTIVE 30

Sterilization

Rationale: In the process of deciding whether to have a sterilization procedure, men and women often seek the advice of their physicians. Providing accurate information will allow patients to make an informed decision regarding this elective surgery

The student will demonstrate a knowledge of the following:

- A. Methods of male and female surgical sterilization
- B. Risks and benefits
- C. Factors needed to help the patient make informed decisions including:
 - 1. Potential surgical complications
 - 2. Failure rates
 - 3. Reversibility
- D. Financial considerations

OBJECTIVE 31

Vulvar and vaginal disease

Rationale: Vaginal and vulvar symptoms are frequent patient concerns. In order to provide appropriate care, the physician must understand the common etiologies of these problems.

The student will demonstrate a knowledge of the following:

- A. Physiologic changes in normal vaginal discharge
- B. Evaluation and management of common vulvar and vaginal diseases, including:
 - 1. Vaginitis due to bacteria, candida, trichomonas, viruses, foreign bodies, and atrophy.
 - 2. Vulvitis due to candida, atrophy, and allergic reaction.
 - 3. Dermatologic conditions of the vulva
 - 4. Bartholin's gland disease

OBJECTIVE 32

Sexually transmitted diseases

Rationale: To prevent sexually transmitted diseases and minimise their impact on reproductive health, it is necessary to understand their basic epidemiology, diagnosis and treatment.

The student will demonstrate a knowledge of the following:

- A. Organisms and methods of transmission
- B. Symptoms and physical findings
- C. Evaluation and management for each of the following:
 - 1. Gonorrhoea
 - 2. Chlamydia
 - 3. Herpes simplex virus infection
 - 4. Syphilis
 - 5. Human papillomavirus infection
 - 6. Human immunodeficiency virus (HIV) infection
 - 7. Hepatitis B. Virus infection
- D. Public health concerns including:
 - 1. Screening programs
 - 2. Costs
 - 3. Prevention

OBJECTIVE 33

Salpingitis

Rationale: The potential impact of acute or chronic salpingitis is significant. Tubal infection may result in chronic pain and infertility. Early recognition and optimal management may help prevent the long-term sequelae of tubal disease.

The student will demonstrate knowledge of the following:

- A. Pathogenesis
- B. Common organisms
- C. Signs and symptoms
- D. Methods of diagnosis
- E. Treatment
- F. Sequelae, including:
 - 1. Tuboovarian
 - 2. Chronic salpingitis
 - 3. Ectopic pregnancy
 - 4. Infertility

OBJECTIVE 34

Pelvic relaxation

Rationale: Patients with conditions of pelvic relaxation and urinary incontinence present in a variety of ways. In order to identify those patients who would benefit from therapy, the student should be familiar with the types of pelvic relaxation and incontinence and the approach to the patient with symptoms suggestive of these problems.

The student will demonstrate knowledge of the following:

- A. Predisposing factors
- B. Anatomic changes
- C. Signs and symptoms
- D. Initial approach to the patient and options for the therapy for each of the following conditions:
 - 1. Cystocele
 - 2. Rectocele
 - 3. Vaginal or uterine prolapse
 - 4. Urinary incontinence

OBJECTIVE 35

Endometriosis and Adenomyosis

Rationale: Endometriosis and adenomyosis are common problems of women of reproductive age. This chronic problem may result in pelvic pain, infertility and menstrual dysfunction.

The student will demonstrate knowledge of the following:

- A. Theories of pathogenesis
- B. Symptoms and physical findings
- C. Common sites of implants
- D. Methods of diagnosis

OBJECTIVE 36

Chronic pelvic pain.

Rationale: Manifestations of a heterogeneous group of pelvic disorders may have serious sequelae if not recognised.

The student will demonstrate knowledge of the following:

- A. Definition of chronic pelvic pain
- B. Incidence and etiologies
- C. Clinical manifestations
- D. Diagnostic procedures
- E. Physiologic component
- F. Management

OBJECTIVE 37

Disorders of the Breast

Rationale: Breast cancer is among the leading causes of death in women. Every physician should understand the basic approach to evaluating the common symptoms associated with the breast.

The student will demonstrate knowledge of the following:

- A. Standards of surveillance of an adult woman, including breast self-examination, physical examination, and mammography.
- B. Diagnostic approach to a woman with the chief complaint of breast mass, nipple discharge, or breast pain
- C. History and physical findings that might suggest the following abnormalities:
 - 1. Intaductal papilloma
 - 2. Fibrocystic changes
 - 3. Fibroadenoma
 - 4. Carcinoma
 - 5. Mastitis
- D. Teaching a woman how to perform breast self examination

SECTION C - GYNECOLOGIC PROCEDURES

OBJECTIVE 38

Rationale: Evaluation and management of gynecologic problems frequently require performing diagnostic and therapeutic surgical procedures. Understanding the risks and benefits of such procedures is important in counselling patients about their options for treatment and reasons for having the procedures performed.

The student will demonstrate knowledge of the following:

- A. Definition
- B. Indications
- C. Risk
- D. Contraindications
- E. Financial considerations
- F. Language useful in describing the procedure to a patient for each of the following:
 1. Colposcopy and cervical biopsy
 2. Cone biopsy
 3. Cryotherapy
 4. Culdocentesis
 5. Dilation and curettage
 6. Electrosurgical
 7. Endometrial biopsy
 8. Hysterectomy
 9. Hysterosalpingography
 10. Hysteroscopy
 11. Laparoscopy
 12. Laser vaporisation
 13. Mammography
 14. Needle aspiration of breast mass
 15. Pelvic ultrasonography
 16. Pregnancy termination
 17. Vulvar biopsy

UNIT 4 - REPRODUCTIVE ENDOCRINOLOGY, INFERTILITY AND RELATED TOPICS

OBJECTIVE 39

Puberty

Rationale: The maturation of the reproductive system at the time of puberty is accompanied by physical and emotional changes that are part of this normal transition. In order to provide appropriate care and Counselling, the physician must have an understanding of the normal sequence of puberty and recognise deviation from the norm.

The student will demonstrate knowledge of the following:

- A. Normal puberty, including:
 - 1. Physiological events that take place in the hypothalamic-pituitary-ovarian axis and their target organs.
- B. Abnormal puberty, including:
 - 1. Characteristics, causes, and diagnostic approach to evaluate the cause
 - 2. True precocious puberty, pseudoprecocious puberty, and delayed puberty.

OBJECTIVE 40

Amenorrhea

Rationale: The absence of normal menstrual bleeding may represent physical, endocrinologic, or psychologic problems. A systematic approach for the evaluation of this complaint will aid in the timely determination of the cause.

The student will demonstrate knowledge of the following:

- A. Definitions of primary amenorrhea, secondary amenorrhea, and Oligomenorrhea
- B. Causes of amenorrhea
- C. Approach to evaluate a patient with amenorrhea
- D. Treatment options

OBJECTIVE 41

Hirsutism and Virillisation

Rationale: The signs and symptoms of androgen excess in a woman may cause anxiety and may represent serious underlying disease.

The student will demonstrate knowledge of the following:

- A. Normal variations in secondary sex characteristics
- B. Definitions of hirsutism, defeminisation, and virillisation
- C. Causes, including ovarian, adrenal, pituitary, pharmacologic
- D. Basic evaluation of the patient with hirsutism or virillisation.

OBJECTIVE 42

Normal and abnormal uterine bleeding

Rationale: The occurrence of bleeding at times other than expected menses is a common event. Accurate diagnosis of abnormal uterine bleeding is necessary for appropriate management.

The student will demonstrate knowledge of the following:

- A. Endocrinology and physiology of the normal menstrual Cycle.
- B. Definitions of abnormal uterine bleeding and dysfunctional uterine bleeding
- C. Causes of abnormal uterine bleeding
- D. Evaluation and diagnosis
- E. Management

OBJECTIVE 43

Dysmenorrhea

Rationale: Dysmenorrhea is often the impetus for women to seek health care. Effective treatment is available and based upon accurate diagnosis.

The student will demonstrate knowledge of the following:

- A. Definition of primary and secondary dysmenorrhea
- B. Causes of Dysmenorrhea

OBJECTIVE 44

Climacteric

Rationale: Women spend as much as one third of their lives in the postmenopausal years. Understanding the physical and emotional changes caused by estrogen depletion is important for all physicians who provide health care for women. Methods to minimize the effects of estrogen deprivation can enhance longevity and improve the physical, emotional, and sexual quality of a woman's life.

The student will demonstrate a knowledge of the following:

- A. Description of the physiologic changes in the hypothalamic-pituitary-ovarian axis
- B. Symptoms and physical findings associated with hypoestrogenism
- C. Long term changes associated with hypoestrogenism
- D. Management including:
 1. Hormone therapy
 2. Nutrition and exercise

E. Risks and benefits of estrogen therapy

OBJECTIVE 45

Infertility

Rationale: The evaluation and management of an infertile couple requires an understanding of the processes of conception and embryogenesis, as well as sensitivity to the emotional stress that can result.

The student will demonstrate a knowledge of the following:

- A. Definition
- B. Causes
- C. Evaluation and management

OBJECTIVE 46

Premenstrual syndrome

Rationale: Premenstrual syndrome involves physical and emotional discomfort and may effect interpersonal relationships. Effective management of this condition requires an understanding of symptoms and diagnostic methods.

The student will demonstrate a knowledge of the following:

- A. Definition
- B. Theories of etiology
- C. Methods of diagnosis

UNIT 5 - NEOPLASIA

OBJECTIVE 47

Gestational trophoblastic Neoplasia

Rationale: Gestational trophoblastic neoplasia is important because of its malignant potential and the associated risks of morbidity and mortality.

The student will demonstrate a knowledge of the following:

- A. Symptoms and physical findings suggestive of gestational trophoblastic neoplasia
- B. Methods used to confirm the diagnosis of gestational trophoblastic neoplasia
- C. Approach to the management and follow-up of patients with gestational trophoblastic neoplasia

OBJECTIVE 48

Vulvar Neoplasia

Rationale: Improper evaluation of vulvar symptoms often delays treatment of vulvar neoplasia. Early recognition and diagnosis will improve outcome and may avoid the need for extensive surgery.

The student will demonstrate a knowledge of the following:

- A. Characteristics of the typical patient who is at risk for vulvar neoplasia
- B. Methods of diagnosis
- C. Management of the patient with vulvar symptoms

OBJECTIVE 49

Cervical disease and Neoplasia

Rationale: Detection and treatment of preinvasive lesions reduces the medical and social costs of the cervix.

The student will demonstrate a knowledge of the following:

- A. Symptoms and physical findings of cervicitis and neoplasia
- B. Management of the patient with an abnormal pap smear
- C. Histologic categories
- D. Risk factors
- E. Course of cervical neoplastic disease
- F. FIGO staging
- G. Indicators for screening

OBJECTIVE 50

Uterine Leiomyomas

Rationale: Uterine leiomyomas represent the most common gynecologic neoplasia and is often asymptomatic. Physicians are often called upon to distinguish that it may need more immediate management.

The student will demonstrate a knowledge of the following:

- A. Symptoms and physical findings
- B. Methods to confirm the diagnosis
- C. Indicators for surgical treatment

OBJECTIVE 51

Endometrial Carcinoma

Rationale: Endometrial carcinoma is a major concern for women using estrogen replacement therapy.

The student will demonstrate a knowledge of the following:

- A. Management of the patient with postmenopausal bleeding
- B. Risk factors for endometrial carcinoma
- C. Symptoms and physical findings
- D. Methods to diagnose endometrial carcinoma
- E. FIGO staging

OBJECTIVE 52

Ovarian neoplasm

Rationale: Adnexal masses are a common finding in both symptomatic and asymptomatic patients. Management is based on determining the origin and character of these tumours.

The student will demonstrate a knowledge of the following:

- A. Approach to the patient with an adnexal mass
- B. Characteristics of functional cysts and benign neoplasm
- C. Other conditions presenting as adnexal mass
- D. Clinical issues of carcinomas of the ovary
 - 1. Symptoms and physical findings
 - 2. Risk factors
 - 3. Histologic classification
 - 4. FIGO staging

UNIT 6 - HUMAN SEXUALITY

OBJECTIVE 53

Sexuality

Rationale: All physicians should be able to provide a preliminary assessment of patients with sexual concerns and make referrals when appropriate.

The student will demonstrate a knowledge of the following:

- A. Physiology of sexual response
- B. Physiologic, emotional, and societal influences on sexuality during the following life events:
 - 1. Onset of menarche
 - 2. Initiation of sexual activity
 - 3. Pregnancy
 - 4. Postpartum
 - 5. Menopause

OBJECTIVE 54

Modes of sexual expression

Rationale: Expression of adult sexuality is determined by biologic and sociologic factors. Detection and management of a woman's health care problems may be affected by her mode of sexual expression.

The student will demonstrate a knowledge of sexual behaviour patterns and social issues of people who are:

- A. Heterosexual
- B. Homosexual
- C. Bisexual
- D. Transsexual
- E. Transvestite

OBJECTIVE 55

Physician sexuality

Rationale: A patient's willingness to discuss her sexual concerns with her physician's own comfort levels with these issues.

The student will demonstrate a knowledge of the following:

- A. Factors in the student's own sexuality that may influence the perception and management of patients.
- B. Behavior patterns of seductive patients

OBJECTIVE 56

Sexual assault and domestic violence

Rationale: Individuals who are the victims of sexual assault or domestic violence often have significant physical and emotional sequelae. To minimise these sequelae, physicians should recognise and actively care for these patients.

The student will demonstrate a knowledge of the following:

- A. Patterns of domestic violence and date rape
- B. Rape trauma syndrome
- C. Evaluation of adult and child victims
- D. Long terms physical and psychologic adjustment of victims

UNIT 7 - PROFESSIONAL BEHAVIOR, ETHICS, AND LEGAL ISSUES

OBJECTIVE 57

Personal Interaction and communication skills

Rationale: The ability to interact co-operatively with all members of a health care team and with a patient is the hallmark of professional medical care.

The student will demonstrate a knowledge of the following:

- A. Establish rapport with patients
- B. Work co-operatively and dependably with patients and other members of the health care team.
- C. Recognise personal limitations

OBJECTIVE 58

Legal issues in obstetrics and Gynecology

Rationale: Legal obligations describe minimal obligations to protect patients' Interests and are effective only if understood and applied.

The student will demonstrate knowledge of the following:

- A. Informed consent
 1. Right to refuse care
 2. Outcomes
 3. Options/alternatives
 4. Capacity to choose
 5. Surrogate decision

OBJECTIVE 59

Ethics in obstetrics and gynecology

Rationale: Recognising and understanding the basis of ethical conflicts in obstetrics and gynecology will allow better patient care and prevent critical errors in treatment planning.

The student will demonstrate a knowledge of the following:

- A. A systematic approach to ethical problems
- B. The basis of ethical conflict in maternal-fetal medicine
- C. Issues of justice relating to access to obstetric gynecology care
- D. Ethical issues raised by induced abortion
- E. Ethical issues raised by reproductive technology

UNIT 8- PREVENTIVE CARE AND HEALTH MAINTENANCE

OBJECTIVE 60

Preventive care

Rationale: The student will recognize the value of routine health surveillance as part of health promotion and disease prevention

The student will demonstrate knowledge of the following:

- A. Screening procedures and recommended time intervals for:
 1. Pap smear
 2. Mammogram
 3. Blood pressure monitoring
 4. Blood lipid profiles
- B. Patient education for the following topics:
 1. Contraception
 2. Prevention of sexually transmitted diseases
 3. Diet
 4. Exercise
 5. Stress management
 6. Smoking
 7. Immunization
- C. Costs and benefits of routine health surveillance

RECOMMENDED REFERENCES IN OBSTETRICS AND GYNECOLOGY

It is expected that the students will read and study the texts covering the above topics and read again those clinical conditions they have observed. The publication dates of the books below are not included in this list. Students should use the most recent edition.

REQUIRED

Obstetrics/Gynecology for the medical student - 3rd edition - 1998 ISBN # 0-683-30391-0

C. Beckman - William and Wilkins

RECOMMENDED

1. General text books
 - a) Fundamentals of Obstetrics and Gynecology Llewellyn-Jones
 - b) Essentials of Obstetrics and Gynecology Holker and Moore
 - c) A pocket Obstetrics and Gynecology Clayton and Newton
2. Gynecology
 - a) Novak's Gynecology
ed. Jones, Wentz and Burnett
 - b) Jeffcoate's principle of Gynecology

ed. Tindall

3. Obstetrics

- a) William's Obstetrics
ed. Cunningham, et al
- b) Obstetrics
ed. Turnbull and Chamberlain
- c) Obstetrics: Essentials of clinical practice
Niswander - Little, Brown and co.
- d) Practical Obstetric problems
I. Donald – Lippincott

- e) Obstetrics and Gynecology
Wilson - Carrington - Mosley
- f) Human reproduction and Obstetrics
Page, Villie, and Villie - Saunders

4. General text books

- a) Obstetrics and gynecology
Wilson - Carrington - Mosley
- b) Handbook of Obstetrics and Gynecology
R. Benson - Lange Medical publications

5. Obstetrics

- a) Lecture notes on Obstetrics
F. Musgrove - Blackwell scientific publications
- b) Obstetrics illustrated
Garney, Gowen, Hodge, and Callander - Churchill - Livingstone

6. Gynecology

- a) Gynecology illustrated
Garney, Gowan, Hodge, and Callander - Churchill Livingstone
- b) A pocket Gynecology
S.G. Clayton - Churchill- Livingstone
- c) Essentials of Obstetrics and Gynecology
Hacker and Moore