RMU
راولپنڈی میڈیکل یونیورسٹی
Rawalpindi Medical University

CURRICULUM & REGULATIONS
5 YEARS DEGREE PROGRAMME
IN DERMATOLOGY

RAWALPINDI MEDICAL UNIVERSITY RAWALPINDI

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DEPARTMENT OF DERAMATOLOGY

PREFACE

The horizons of ***Medical Education*** are widening & there has been a steady rise of global interest in *Post Graduate Medical Education*, an increased awareness of the necessity for experience in education skills for all healthcare professionals and the need for some formal recognition of postgraduate training in Internal Medicine.

We are seeing a rise in the uptake of places on postgraduate courses in medical education, more

frequent issues of medical education journals and the further development of e-journals and other new online resources. There is therefore a need to provide active support in *Post Graduate Medical Education* for a larger, national group of colleagues in all specialties and at all stages of their personal professional development. If we were to formulate a statement of intent to explain the purpose of this log book, we might simply say that our aim is to help clinical colleagues to teach and to help students to learn in a better and advanced way. This book is a **state-of-the-art**log book with representation of all activities of the **MD/MS Research Elective** program at RMU.A summary of the curriculum is incorporated in the logbook for convenience of supervisors and residents. It also allows the clinicians to gain an understanding of what goes into basic science discoveries and drug development. Translational **research** has an **important role** to play in **medical research**, and when used alongside basic science will lead to increased knowledge, discovery and treatment in **medicine**. A perfect monitoring system of a training program including monitoring of teaching and learning strategies, assessment and Research Activities cannot be denied so we at RMU have incorporated evaluation by ***Quality Assurance Cell*** and its comments in the logbook in addition to evaluation by ***University Training Monitoring Cell (URTMC)***. Reflection of the supervisor in each and every section of the logbook has been made sure to ensure transparency in the training program. The mission of Rawalpindi Medical University is to improve the health of the communities and we serve through education, biomedical research and health care. As an integral part of this mission, importance of research culture and establishment of a comprehensive research structure and research curriculum for the residents has been formulated and a separate journal for research publications of residents is available.

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SECTION I PREAMBLE

1 INTRODUCTION

The MD dermatology program is a five (5) years course which will cover all aspect of Dermatology. The curriculum provides the approved framework for the training of doctors to the level of independent, consultant dermatological practices, according to needs and requirements of Dermatology patients, general public and health services.

MISSION STATEMENT

RMU MISSION STATEMENT:

To Impart Evidence Based Research Oriented Health Professional Education In Order To Provide Best Possible Patient Care And Inculcate The Values Of Mutual Respect, Ethical Practice Of Healthcare And Social Accountability

MISSION STATEMENT DERMATOLOGY DEPARTMENT

The mission of the Dermatology Residency Program at Rawalpindi Medical University is to deliver outstanding dermatological care while fostering a learning environment rooted in excellence, respect, and dedication. We strive to advance dermatological research and translate scientific discoveries into cutting-edge patient care. Our commitment extends beyond our department, advocating for equitable healthcare and the well-being of communities at large.

Motto

AIMS AND OBJECTIVES OF THE COURSE

AIM

The aim of five years MD in Dermatology is to train residents to acquire the competency of a specialistin the field of Dermatology so that they can become good teachers, researchers and clinicians in their specialty after completion of their training.

GENERAL OBJECTIVES

1. To provide a broad experience in Dermatology, including its interrelationship with other disciplines.
2. To enhance dermatological knowledge, clinical skills, and competence in bedside diagnostic and therapeutic procedures.
3. To achieve the professional requirements to prepare for Higher Physician Training in one or more specialty in Dermatology.
4. To cultivate the correct professional attitude and enhance communication skill towards patients, their families and other healthcare professionals.
5. To enhance sensitivity and responsiveness to community needs and the economics of health care delivery.
6. To enhance critical thinking, self-learning, and interest in research and development of patient service.
7. To cultivate the practice of evidence-based medicine and critical appraisal skills.
8. To inculcate a commitment to continuous dermatological education and professional development.
9. To provide a broad training and in-depth experience at a level for trainees to acquire competence and professionalism of a specialist in Dermatology especially in the diagnosis, investigation and treatment of dermatological problems towards the delivery of holistic patient care.
10. To acquire competence in managing acute dermatological emergencies and identifying dermatological problems in patients referred by primary care and other doctors, and in selecting patients for timely referral to appropriate tertiary care or the expertise of another specialty.
11. To develop competence in the inpatient and outpatient management of dermatological problems and in selecting patients for referral to tertiary care facilities and treatment modalities requiring high technology and/or the expertise of another specialty.
12. To manage patients in general dermatological units in regional/District hospitals; to be a leader in the health care delivery team and to work closely with networking units which provide convalescence, rehabilitation and long term care.

13. To encourage the development of skills in communication and collaboration with the community towards health care delivery.

14. To foster the development of skills in the critical appraisal of new methods of investigation and/or treatment. 15.To reinforce self-learning and commitment to continued updating in all aspects of Dermatology. To encourage contributions aiming at advancement of knowledge and innovation in medicine through basic and/or clinical research and teaching of junior trainees and other health related professionals.

15. To acquire professional competence in training future trainees in Dermatology at Rawalpindi Dermatological University.

SPECIFIC OBJECTIVES

Dermatological Knowledge

1. The development of a basic understanding of core Dermatology concepts.

2. Etiology, clinical manifestation, disease course and prognosis, investigation and management of common dermatological diseases.

3. Scientific basis and recent advances in pathophysiology, diagnosis and management of dermatological diseases.

4. Spectrum of clinical manifestations and interaction of multiple dermatological diseases in the same patient.

5. Psychological and social aspects of dermatological illnesses.

6. Effective use and interpretation of investigation and special diagnostic procedures.

7. Critical analysis of the efficacy, cost-effectiveness and cost-utility of treatment modalities.

8. Patient safety and risk management

9. Dermatological audit and quality assurance

10. Ethical principles and medico legal issues related to dermatological illnesses.

11. Updated knowledge on evidenced-based medicine and its implications for diagnosis and treatment of dermatological patients.

12. Familiarity with different care approaches and types of health care facilities towards the patients care with dermatological illnesses, including convalescence, rehabilitation, palliation, long term care, and dermatological ethics.

13. Knowledge on patient safety and clinical risk management.

14. Awareness and concern for the cost-effectiveness and risk-benefits of various advanced treatment modalities.

15. Familiarity with the concepts of administration and management and overall forward planning for a general dermatological unit.

Skills

1. Ability to take a detailed history, gathers relevant data from patients, and assimilates the information to develop diagnostic and management plan.

2. Students are expected to effectively record an initial history and physical examination and follow-up notes as well a deliver comprehensive oral presentations to their team members based on these written documents.

3. Competence in eliciting abnormal physical signs and interpreting their significance.

4. Ability to relate clinical abnormalities with pathophysiologic states and diagnosis of diseases.

5. Ability to select appropriate investigation and diagnostic procedures for confirmation of diagnosis and patient management.

6. Residents should be able to interpret basic as well as advanced laboratory data as related to the disorder/disease.

7. Basic understanding of routine laboratory and ancillary tests including complete blood count, chemistry panels, ECG, chest x-rays, pulmonary function tests, and body fluid cell counts. In addition, students will properly understand the necessity of incorporating sensitivity, specificity, pre-test probability and Bayes laws/theorem in the ordering of individual tests in the context of evaluating patients' signs and symptoms.

8. The formulation of a differential diagnosis with up-to—date scientific evidence and clinical judgment using history and physical examination data and the development of a prioritized problem list to select tests and make effective therapeutic decisions.
9. Assessing the risks, benefits, and costs of varying, effective treatment options; involving the patient in decision- making via open discussion; selecting drugs from within classes; and the design of basic treatment programs and using critical pathways when appropriate.

10. Residents must be able to perform competently all dermatological and invasive procedures essential for the practice of general dermatology. This includes technical proficiency in taking informed consent, performing by using appropriate indications, contraindications, interpretations of findings and evaluating the results and handing the complications of the related procedures mentioned in the syllabus.

11. Residents should be instructed in additional procedural skills that will be determined by the training environment, residents practice expectations, the availability of skilled teaching faculty, and privilege delineation.

12. Skills in performing important bedside diagnostic and therapeutic procedures and understanding of their indications. Trainees should acquire competence through

supervised performance of the required number of each of the following procedures during the 1 and a half year training period and should record them in the Trainee's Log Book.

At least 10 times during the three-year training period:

a. Cardiopulmonary resuscitation
b. Central venous cannulation
c. Marrow aspiration and trephine biopsy
d. Abdominal paracentesis
e. Pleural tapping and biopsy
f. Endotracheal intubation
g. Lumbar puncture
h. Chest drain insertion
i. Arterial Blood gases sampling

13. Ability to present clinical problems and literature review in grand rounds and seminars.

14. Good communication skills and interpersonal relationship with patients, families, dermatological colleagues, nursing and allied health professionals.

15. Ability to mobilize appropriate resources for management of patients at different stages of dermatological illnesses, including critical care, consultation of dermatological specialties and other disciplines, ambulatory and rehabilitative services, and community resources.

16. Competence in the diagnosis and management of emergency dermatological problems, in particular cardiorespiratory problems, stroke, organ failures, infection and shock, gastrointestinal bleeding, metabolic disorders and poisoning.

17. Competence in the diagnosis and management of acute and chronic dermatological problems as secondary care in a regional/district hospital.

18. Diagnostic skills to effectively manage complex cases with unusual presentations.

19. Ability to implement strategies for preventive care and early detection of diseases in collaboration with primary and community care doctors.

20. Ability to understand dermatological statistics and critically appraise published work and clinical research on disease presentations and treatment outcomes. Experience in basic and/or clinical research within the training programme should lead to publications and/or presentation in seminars or conferences.

21. Practice evidence—based learning with reference to research and scientific knowledge pertaining to their discipline through comprehensive training in Research Methodology

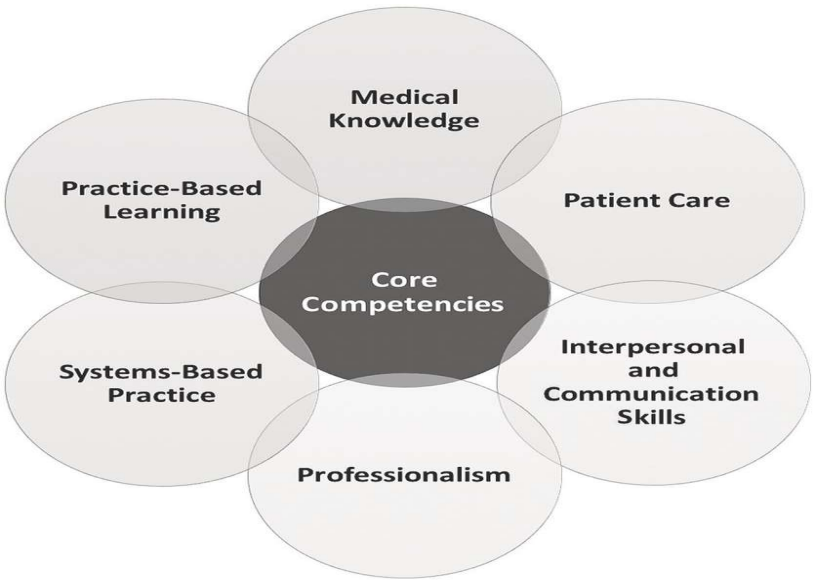
22. Ability to recognize and appreciate the importance of cost-effectiveness of treatment modalities.

23. The identification of key information resources and the utilization of the dermatological literature to expand one's knowledge base and to search for answer to dermatological problems. They will keep abreast of the current literature and be able to integrate it to clinical practice.

Attitudes

1. The well-being and restoration of health of patients must be of paramount consideration.
2. Empathy and good rapport with patient and relatives are essential attributes.
3. An aspiration to be the team-leader in total patient care involving nursing and allied dermatological professionals should be developed.
4. The cost-effectiveness of various investigations and treatments in patient care should be recognized.
5. The privacy and confidentiality of patients and the sanctity of life must be respected.
6. The development of a functional understanding of informed consent, advanced directives, and the physician-patient relationship.
7. Ability to appreciate the importance of the effect of disease on the psychological and socio-economic aspects of individual patients and to understand patients' psycho-social needs and rights, as well as the dermatological ethics involved in patient management.
8. Willingness to keep up with advances in Dermatology and other Specialties.
9. Willingness to refer patients to the appropriate specialty in a timely manner.
10. Aspiration to be the team leader in total patient care involving nursing and allied dermatological professionals.
11. The promotion of health via adult immunizations, periodic health screening, and risk factor assessment and modification.
12. Recognition that teaching and research are important activities for the advancement of the profession.

B. Other Required Core Competencies:



PATIENT CARE

1. Residents are e
2. xpected to provide patient care that is compassionate, appropriate and effective for the promotion of health, prevention of illness, treatment of disease and at the end of life.
3. Gather accurate, essential information from all sources, including dermatological interviews, physical examinations, dermatological records and diagnostic/therapeutic procedures.
4. Make informed recommendations about preventive, diagnostic and therapeutic options and interventions based on clinical judgment, scientific evidence, and patient preference.
5. Develop, negotiate and implement effective patient management plans and integration of patient care.
6. Perform competently the diagnostic and therapeutic procedures considered essential to the practice of dermatology.

INTERPERSONAL AND COMMUNICATION SKILLS

1. Residents are expected to demonstrate interpersonal and communication skills that enable them to establish and maintain professional relationships with patients, families, and other members of health care teams.
2. Provide effective and professional consultation to other physicians and health care professionals and sustain therapeutic and ethically sound professional relationships with patients, their families, and colleagues.
3. Use effective listening, nonverbal, questioning, and narrative skills to communicate with patients and families.
4. Interact with consultants in a respectful, appropriate manner.
5. Maintain comprehensive, timely, and legible dermatological records.

PROFESSIONALISM

1. Residents are expected to demonstrate behaviors that reflect a commitment to continuous professional developmental, ethical practice, an understanding and sensitivity to diversity and a responsible attitude toward their patients, their profession, and society.
2. Demonstrate respect, compassion, integrity, and altruism in relationships with patients, families, and colleagues.
3. Demonstrate sensitivity and responsiveness to the gender, age, culture, religion, sexual preference, socioeconomic status, beliefs, behavior and disabilities of patients and professional colleagues.
4. Adhere to principles of confidentiality, scientific/academic integrity, and informed consent.
5. Recognize and identify deficiencies in peer performance.
6. Understand and demonstrate the skill and art of end of life care.

PRACTICE-BASED LEARNING AND IMPROVEMENT

- Residents are expected to be able to use scientific evidence and methods to investigate, evaluate, and improve patient care practices.
- Identify areas for improvement and implement strategies to enhance knowledge, skills, attitudes and processes of care.
- Analyze and evaluate practice experiences and implement strategies to continually improve the quality of patient practice.
- Develop and maintain a willingness to learn from errors and use errors to improve the system or processes of care.
- Use information of technology or other available methodologies to access and manage information, support patient care decisions and enhance both patient and physician education.

SYSTEMS-BASED PRACTICE

- Residents are expected to demonstrate both an understanding of the contexts and systems in which health care is provided, and the ability to apply this knowledge to improve and optimize health care.
- Understands accesses and utilizes the resources, providers and systems necessary to provide optimal care.
- Understand the limitations and opportunities inherent in various practice types and delivery systems, and develop strategies to optimize care for the individual patient.
- Apply evidence-based, cost-conscious strategies to prevention, diagnosis, and disease management.
- Collaborate with other members of the health care team to assist patients in dealing effectively with complex systems and to improve systematic processes of care.

TABLE 1: TRAINING PATHWAY MD DERMATOLOGY

Training Year	Module Name	Duration	Exams	Research
First 6 months	Dermatology	6 Months	MTA	**One Disease Statistical Review**
Next 1 year	General Medicine	1.5 year		
2nd	Rotation in allied medicine	2 months rotation each in Cardiology, Nephrology, Gastroenterology		One Research Paper in R-JRM
3rd	Dermatology	12 months	**In training assessment 3rd year**	Synopsis Topic& Submission to IRF/ ERB - BASR Approval
4th	Dermatology	12 months		Data Collection / Data Analysis / Thesis Writing
5th	Rotations 1.Histopathology 2.Plastic surgery 3.Laser 4.leprosy	During 3 years Training in Dermatology,one ,month rotaion in Plastic surgery and Histopathology and 15 days each in Laser and leprosy		Thesis Completion Certification (DME) / BASR - Thesis Approval
			FTA	Thesis Submission

ROTATIONS

Dermatology Training

MODULAR SYSTEM

The 5-year MD Dermatology training will comprise of:

First six months in Dermatology, then next 1.5 years in General medicine,then next six months in allied of medicine

TRAINING YEAR	MODULE NAME	DURATION
FIRST 6TH MONTHS	DERMATOLOGY	6 MONTHS
2ND YEAR	MEDICINE	
3RD	DERMATOLOGY	12 MONTHS
4RTH	DERMATOLOGY	12 MONTHS
5TH	DERMATOLOGY	12 MONTHS

ROTATIONS IN FINAL YEAR

HISTOPATHOLOGY

PLASTIC SURGERY

LASER

LEPROSY

- Credit hours will be awarded to the candidates after they have attended and cleared the Internal assessment of each module.

- MD Dermatology will comprise of 03 exams; one at the end of 1st year at the end of 2nd year of training (MTA) and then on completion of 5th year of training (FTA).

8 TEACHING STRATEGIES

8.1) TEACHING PROGRAM IN GENERAL MEDICINE

1. GENERAL PRINCIPLES

- Acquisition of practical competencies being the keystone of postgraduate medical education, postgraduate training is skills oriented.
- Learning in postgraduate program is essentially self-directed and primarily emanating from clinical and academic work. The formal sessions are merely meant to supplement this core effort.

Inpatient Services: Orthopedic Surgery residents will have work in surgery allied for an initial 2 years and will appear in MTA Surgery. This training component will be according to RMU MS Orthopedic Surgery initial 2 years' curriculum. Afterwards, the resident will work in Orthopedic Surgery during 3rd, 4th and 5th year of training.

Outpatient Experiences: Orthopedic Surgery residents should demonstrate expertise in diagnosis and management of patients in acute care clinics and gain experience in dealing with diagnosis of hernia, cholecystitis, acute abdomen, thyroid swelling, and breast lumps etc.

Emergency services: Residents take an early active role in patient care and obtain decision-making roles quickly. Within the Emergency Department, residents direct the initial stabilization of all critical patients, manage airway interventions, and oversee all critical care being first responder, and be able to diagnose surgical emergency such as acute abdomen, blunt trauma abdomen/chest, penetrating injury, and be able to perform minor surgical procedures like chest intubation, central line catheterization, FAST scan etc.

Electives / Specialty Rotations: Orthopedic Surgery resident will elective rotations in a variety of electives including General Surgery, neurosurgery, pediatric surgery, plastic surgery/ Spine surgery. Residents may also select electives at other institutions if the parent department does not offer the experiences they want.

Mandatory Workshops: Residents achieve hands on training while participating in mandatory workshops of Basic surgical skills, Research Methodology, Advanced Life Support, Communication Skills, Computer & Internet, and Clinical Audit. Specific objectives are given in detail in the relevant section of Mandatory Workshops.

Surgical / procedural competencies: The clinical skills, which a surgeon must have are, varied and complex. A complete list of the same necessary for residents and trainers is given below. Some examples, which are a sub sample of the whole, follow. These are to be taken as guidelines rather than definitive requirements. Key for assessing competencies:

1. Observer status.
2. Assistant status.
3. Performed under direct supervision.
4. Performed under indirect supervision.
5. Performed independently

Note: Levels 4 and 5 for practical purposes are almost synonymous

8.2) TEACHING PROGRAM IN ORTHOPEDICS

- Bedside teaching rounds
- Journal club
- Seminar
- PG case discussion
- X – Ray discussion
- Ortho-radiology meeting

Central session (held in hospital auditorium regarding various topics like CPC, guest lectures, student seminars, grand round, sessions on basic sciences, biostatistics, research methodology, teaching methodology, health economics, medical ethics and legal issues).

8.3) TEACHING SCHEDULE

In addition to bedside teaching rounds, in the department there will be daily hourly sessions of formal teaching per week. The suggested time distribution of each session for department's teaching schedule as follows:

- Journal club Once a week
- Seminar once a week
- PG case discussion Twice a week
- Ortho-radiology meeting Once a month
- Central session as per hospital schedule
- Workshop – once every 3 months

NOTE:

- All sessions are supervised by faculty members. It is mandatory for all residents to attend the sessions except those posted in emergency.
- All the teaching sessions are assessed by the faculty members at the end of session and marks are given out of 10 and kept in the office for internal assessment.
- Attendance of the residents at various sessions has to be at compulsory.

9 ASSESSMENT GUIDELINES

ASSESSMENT

It will consist of action and professional growth oriented student-centered integrated assessment with an additional component of informal internal assessment, formative assessment and measurement-based summative assessment.

Student-Centered Integrated Assessment It views students as decision-makers in need of information about their own performance. Integrated Assessment is meant to give students responsibility for deciding what to evaluate, as well as how to evaluate. It encourages students to 'own' the evaluation and to use it as a basis for self-improvement. Therefore, it tends to be growth-oriented, student-controlled, collaborative, dynamic, contextualized, informal, flexible and action-oriented.

SELF ASSESSMENT BY THE STUDENT

- Each student will be provided with a pre-designed self-assessment form to evaluate his/her level of comfort and competency in dealing with different relevant clinical situations. It will
- be the responsibility of the student to correctly identify his/her areas of weakness and to take appropriate measures to address those weaknesses.

360-DEGREE EVALUATION INSTRUMENT-MULTI-SOURCE FEEDBACK (MSF):

- The students will also be expected to evaluate their peers after the monthly small group meeting. These should be followed by a constructive feedback according to prescribed guidelines and should be nonjudgmental in nature. This will enable students to become good mentors in future.
- From peers.
- Paramedical staff.
- From Patients.
- From Supervisors.

INFORMAL INTERNAL ASSESSMENT BY THE FACULTY

- There will be no formal allocation of marks for the component of Internal Assessment so that students are willing to confront their weaknesses rather than hiding them from their instructors.
- It will include:
  - Punctuality
  - Ward work
  - Monthly assessment (written tests to indicate particular areas of weaknesses)
  - Participation in interactive sessions

FORMATIVE ASSESSMENT

- Will help to improve the existing instructional methods and the curriculum in use

WPBA of Orthopedic Resident in Rawalpindi Medical University

Monthly Assessments in hospital	Online assessments on LMS
DOPS	25 MCQs fortnightly
Mini-CEx	
CBD	
DOPS	
Mini-CEx	
CBD	
360-degree evaluation LOG BOOK	
CBD ➡ DOPS ➡ Mini - CEX after every 03 months. Fort nightly 25 MCQ on LMS	

1. 360 Degree evaluation will be done at every 6 months by:

a. Supervisor/consultant
b. Paramedical staff
c. Patients
d. Self-assessment of postgraduate trainee by himself.

2. LOG BOOK will be maintained by the resident and counter signed by the supervisors.

FEEDBACK TO THE FACULTY BY THE STUDENTS:

- After every three months' students will be providing a written feedback regarding their course components and teaching methods. This will help to identify strengths and weaknesses of the relevant course, faculty members and to ascertain areas for further improvement.

MINI-CLINICAL EVALUATION EXERCISE(MINI-CEX)

This tool evaluates a clinical encounter with a patient to provide an indication of competence in skills essential for good clinical care such as history taking, examination and clinical reasoning. The trainee receives immediate feedback to aid learning. They can be used at any time and in any setting when there is a trainee and patient interaction and an assessor is available.

DIRECT OBSERVATION OF PROCEDURAL SKILLS (DOPS)

A DOPS is an assessment tool designed to evaluate the performance of a trainee in undertaking a practical procedure, against a structured checklist. The trainee receives immediate feedback to identify strengths and areas for development.

CASE-BASED DISCUSSION (CBD)

The CBD assesses the performance of a trainee in their management of a patient to provide an indication of competence in areas such as clinical reasoning, decision-making and application of medical knowledge in relation to patient care. It also serves as a method to document conversations about, and presentations of, cases by trainees. The CBD should focus on a written record (such as written case notes, out-patient letter, and discharge summary). A typical encounter might be when presenting newly referred patients in the out- patient department.

AUDIT ASSESSMENT (AA)

The Audit Assessment tool is designed to assess a trainee's competence in completing an audit. The Audit Assessment can be based on review of audit documentation OR on a

presentation of the audit at a meeting. If possible, the trainee should be assessed on the same audit by more than one assessor.

SUMMATIVE ASSESSMENT

It will be carried out at the end of the program to empirically evaluate cognitive, psychomotor and affective domains in order to award diplomas for successful completion of courses.

SECTION 2: COURSE CONTENT FIRST YEAR DERMATOLOGY

S NO.	CONTENT
1	History Taking (Knowledge)

2	History Taking (Skills)
3	History Taking (Behaviors)
4	Clinical examination (knowledge)
5	Clinical examination (skills)
6	Clinical examination (Behaviors)
7	Time management and decision making
8	Decision making and clinical reasoning
9	Acute hepatitis A&E
10	Chronic hepatitis B&C
11	Ascites + HRS
12	Stroke
13	Asthma
14	Tuberculosis
15	Anemia
16	General Management of poisoning
17	Diabetes Mellitus
18	Acute Kidney Injury

Second Year MD- Dermatology

Sno.	Content
1	General objectives of the clinical training
2	General internal medicine

3	Critical care unit (intensive care unit –ICU) & emergency Medicine
4	Coronary care unit
5	Ambulatory Medicine
6	Cardiology
7	Dermatology
8	Endocrinology
9	Gastroenterology
10	General Medical Consult Service
11	Neurology
12	Psychiatry
13	Radiology
14	Haem-oncology
15	Infectious diseases
16	Nephrology
17	Pulmonary and critical care medicine
18	Rheumatology
19	Emergency medicine
20	Geriatrics

THIRD YEAR MD DERMATOLOGY

Foundation of Dermatology

1. History of dermatology

2. Structure and Function of skin
3. Histopathology of skin: general principles
4. Diagnosis of skin disease
5. Epidemiology of skin disease
6. Health economics and skin disease
7. Genetics and the skin
8. Inflammation, immunology and allergy
9. Photobiology
10. Cutaneous response to injury and wound healing
11. Psychological and social impact of long term dermatological conditions
12. Adverse immunological reactions to drugs
13. Topical drug delivery
14. Clinical pharmacology

Management

1. Principles of holistic management of skin disease
2. Principles of measurement and assessment in dermatology
3. Principles of evidence based dermatology
4. Principles of topical therapy
5. Principles of systemic therapy
6. Principles of skin surgery
7. Principles of phototherapy
8. Principles of photodynamic therapy
9. Principles of cutaneous laser therapy
10. Principles of radiotherapy

Infections And Infestations

1. Viral infections
2. Bacterial infections
3. Mycobacterial infections

4. Leprosy
5. Syphilis and congenital syphilis
6. Other sexually transmitted bacterial diseases
7. HIV and the skin
8. Fungal infections
9. Parasitic diseases
10. Arthropods

Inflammatory Dermatoses

1. Psoriasis and related disorders
2. Pityriasis rubra pilaris
3. Lichen planus and lichenoid disorders
4. Graft versus host disease
5. Eczematous disorders
6. Seborrheic dermatitis
7. Atopic eczema
8. Urticaria
9. Recurrent angio oedema without weals
10. Urticarial vasculitis
11. Autoinflammatory diseases presenting in the skin
12. Mastocytosis
13. Reactive inflammatory erythemas
14. Adamantiades behcet disease
15. Neutrophilic dermatoses
16. Immunobullous diseases
17. Lupus erythematosus
18. Antiphospholipid syndrome
19. Dermatomyositis
20. Mixed connective tissue disease
21. Dermatological manifestations of rheumatoid disease

22. Systemic sclerosis
23. Morphoea and allied scarring and sclerosing inflammatory dermatoses

Metabolic & Nutritional Disorders Affecting The Skin

1. Cutaneous amyloidosis
2. Cutaneous mucinoses
3. Cutaneous porphyrias
4. Calcification of skin and subcutaneous tissue
5. Xanthomas and abnormality of lipid metabolism and storage
6. Nutritional disorders affecting the skin
7. Skin disorders in diabetes mellitus

Fourth Year MD-Dermatology

Genetic Disorders Involving the Skin

11. Inherited disorders of cornification
12. Inherited acanpholytic disorders
13. Ectodermal dysplasias
14. Inherited hair disorders
15. Genetic defects of nails and nail growth
16. Genetic disorders of pigmentation
17. Genetic blistering diseases
18. Genetic disorders of collagen, elastin and dermal matrix
19. Disorders affecting cutaneous vasculature
20. Genetic disorders of adipose tissue
21. Congenital naevi and other developmental abnormalities affecting the skin
22. Chromosomal disorders
23. Poikiloderma syndromes
24. DNA repair disorders with cutaneous features
25. Syndromes with premature ageing
26. Hamartoneoplastic syndromes
27. Inherited metabolic diseases

28. Inherited immunodeficiency

Psychological, Sensory And Neurological Disorders And The Skin

29. Pruritus,prurigo and lichen simplex
30. Mucocutaneous pain syndromes
31. Neurological conditions affecting the skin
32. Psychodermatology and psychocutaneous disease

Skin Disorders Associated With Specific Cutaneous Structure

33. Acquired disorders of epidermal keratinization
34. Acquired pigmentary disorders
35. Acquired disorders of hair
36. Acne
37. Rosacea
38. Hidradenitis suppurative
39. Other acquired disorders of the pilosebaceous unit
40. Disorders of sweat glands
41. Acquired disorders of nails and nail unit
42. Acquired disorders of dermal connective tissue
43. Granulomatous disorders of the skin
44. Sarcoidosis
45. Panniculitis
46. Other acquired disorders of subcutaneous fat

Vascular Disorders Involving The Skin

1. Purpura
2. Cutaneous vasculitis

3. Dermatoses resulting from disorders of the veins and arteries
4. Ulceration resulting from disorders of the veins and the arteries
5. Disorders of the lymphatic vessels
6. Flushing and blushing

Skin Disorders Associated With Specific Sites,Sex And Age

1. Dermatoses of the scalp
2. Dermatoses of external ear
3. Dermatoses of the eye,eyelids and eyebrows
4. Dermatoses of the oral cavity and lips
5. Dermatoses of the male genitalia
6. Dermatoses of the female genitalia
7. Dermatoses of perineal and perianal skin
8. Cutaneous complications of stomas and fistulae
9. Dermatoses of pregnancy
10. Dermatoses of the neonate
11. Dermatoses and haemangiomas of infancy

FINAL YEAR MD DERMATOLOGY

Skin Disorders Caused By External Agents

1. Benign cutaneous adverse reactions to drugs

2. Severe cutaneous adverse reactions to drugs
3. Cutaneous side effects of chemotherapy and radiotherapy
4. Dermatoses induced by illicit drugs
5. Dermatological manifestations of metal poisoning
6. Mechanical injury to the skin
7. Pressure injury and pressure ulcers
8. Cutaneous reactions to cold and heat
9. Burns and heat injury
10. Cutaneous photosensitivity diseases
11. Allergic contact dermatitis
12. Irritant contact dermatitis
13. Occupational dermatology
14. Stings and bites

Neoplastic ,Proliferative And Infiltrative Disorders Affecting The Skin

1. Benign melanocytc proliferation and melanocytic
2. Benign keratinocytic acanthomas and proliferation
3. Cutaneous cysts
4. Lymphocytic infiltrates
5. Cutaneous histiocytoses
6. Soft tissue tumors and tumor like conditions
7. Tumors of skin appendages
8. Kaposi sarcoma
9. Cutaneous lymphomas
10. Basal cell carcinoma
11. Squamous cell carcinoma and its precursors
12. Melanomas
13. Melanoma clinicopathology
14. Melanoma surgery

15. Systemic treatment of melanoma
16. Dermoscopy of melanoma and naevi
17. Merkel cell carcinoma
18. Skin cancer in immunocompromised patient

Systemic Disease And The Skin

1. Cutaneous markers of internal malignancy
2. The skin and the disorders of the haematopoietic and immune systems
3. The skin and endocrine disorders
4. The skin and disorders of heart
5. The skin and the disorders of the respiratory system
6. The skin and the disorders of the digestive system
7. The skin and the disorders of the kidney and urinary tract
8. The skin and the disorders of the musculoskeletal system

Aesthetic Dermatology

1. Skin ageing
2. Cosmeceuticals
3. Soft tissue augmentation
4. Aesthetic uses of botulinum toxins
5. Chemical peels
6. Lasers and energy-based devices

SECTION – 3: SPECIFIC LEARNING OBJECTIVES

SPECIFIC LEARNING OUTCOMES FOR FIRST AND SECOND YEAR MD DERMATOLOGY

TOPICS TO BE TAUGHT	LEARNING OBJECTIVES	TEACHING	ASSESSMENT

	Student should be able to know:	METHOD	
1. History Taking (Knowledge)	• To progressively develop the ability to obtain a relevant focused history from increasingly complex patients and challenging circumstances • To record accurately and synthesize history with clinical examination and formulation of management plan according to likely clinical evolution • Recognizes the importance of different elements of history • Recognizes the importance of clinical (particularly cognitive impairment), psychological, social, cultural and nutritional factors particularly those relating to ethnicity, race, cultural or religious beliefs and preferences, sexual orientation, gender and disability • Recognizes that patients do not present history in structured fashion and that the history may be influenced by the presence of acute and chronic medical conditions • Knows likely causes and risk factors for conditions relevant to mode of presentation • Recognizes that history should inform examination, investigation and management	Bedside teaching in wards and outpatient departments	mini-CEX MCQs
2. History Taking (Skills)	• Identify and overcome possible barriers (eg cognitive impairment) to effective communication • Manage time and draw consultation to a close appropriately • Supplement history with standardised instruments or questionnaires when relevant • Manage alternative and conflicting views from family, carers and friends • Assimilate history from the available information from patient and other sources • Recognise and interpret the use of non verbal communication from patients and carers • Focus on relevant aspects of history	Bedside teaching in wards and outpatient departments	mini-CEX
3. History Taking (Behaviors)	• Show respect and behave in accordance with Good Medical Practice	Bedside teaching in wards and outpatient departments	ACAT mini-CEX
4. Clinical examination (knowledge)	• To progressively develop the ability to perform focussed and accurate clinical examination in increasingly complex patients and challenging circumstances • To relate physical findings to history in order to establish diagnosis and formulate a management plan • Understand the need for a valid clinical examination • Understand the basis for clinical signs and the relevance of positive and negative physical signs	Bedside teaching in wards and outpatient	CbD mini-CEX ACAT

	• Recognise constraints to performing physical examination and strategies that may be used to overcome them • Recognise the limitations of physical examination and the need for adjunctive forms of assessment to confirm diagnosis	departments	
5. Clinical examination (skills)	• Perform an examination relevant to the presentation and risk factors that is valid, targeted and time efficient • Recognize the possibility of deliberate harm in vulnerable patients and report to appropriate agencies • Interpret findings from the history, physical examination and mental state examination, appreciating the importance of clinical, psychological, religious, social and cultural factors • Actively elicit important clinical findings • Perform relevant adjunctive examinations including cognitive examination such as Mini Mental state Examination (MMSE) and Abbreviated Mental Test Score (AMTS)	Bedside teaching in wards and outpatient departments	CbD mini-CEX ACAT
6. Clinical examination (Behaviors)	• Show respect and behaves in accordance with Good Medical Practice	Bedside teaching in wards and outpatient departments	CbD, mini-CEX, MSF
7. Time management and decision making	• To become increasingly able to prioritise and organise clinical and clerical duties in order to optimise patient care. To become increasingly able to make appropriate clinical and clerical decisions in order to optimise the effectiveness of the clinical team resource	Bedside teaching in wards and outpatient departments	ACAT, CbD
8. Decision making and clinical reasoning	• To progressively develop the ability to formulate a diagnostic and therapeutic plan for a patient according to the clinical information available • To progressively develop the ability to prioritise the diagnostic and therapeutic plan • To be able to communicate the diagnostic and therapeutic plan appropriately	Bedside teaching in wards	ACAT, CbD, mini-CEX
Common Clinical Disorders			
1. Acute hepatitis A&E	• What is Acute hepatitis, its various causes • Investigations for hepatitis • Epidemiology, incubation period, transmission, clinical features, complication, management of acute viral hepatitis • Medications and toxins causing acute hepatitis, associated clinical features, diagnosis, management with focus on acute hepatic failure	Large class format (interactive lecture	MCQs & SEQs Long case Short case
2. Chronic hepatitis B&C	• What is chronic hepatitis • Epidemiology, pathophysiology, clinical features and complications of chronic hepatitis B/C • Investigation for diagnosing chronic hepatitis • Management and outcome	Large class format (interactive lecture	MCQs & SEQs Long case Short case

3. Ascites + HRS	**Ascites** • What is ascites, its causes, and pathophysiology • Clinical features, investigations (SAAG analysis included), management, complications, and outcome depending on cause **HRS** • What is hepatorenal syndrome • Its causes, pathophysiology, and types • Clinical features, investigations, management, and outcome	Bed side teaching	MCQs & SEQs OSCE Long case Short case
4. Stroke	• Definition the definition of Stroke • epidemiology and types of stroke • Presenting symptoms and Neurological Manifestation • Importance of investigation like CT SCAN brain • differential diagnosis of stroke • Treatment and prognosis • Follow up	Problem Based Learning	MCQs & SEQs OSCE Long case Short case
5. Asthma	• What is asthma, its epidemiology, pathophysiology, types, aggravating factors • Clinical features including, signs of severity, grading • Investigations including PFTS, and differential diagnosis • Treatment of asthma with focus on acute severe, and graded treatment of chronic asthma Complications/outcome	Large class format (interactive lecture	MCQs & SEQs OSCE Long case Short case
6. Tuberculosis	• Differentiate between primary tuberculosis and reactivated tuberculosis on the basis of pathophysiology • Discuss the incidence of TB worldwide, and identify the causative agent • Explain how TB is spread • Differentiate between Ghon focus &Ghon complex • Compare causes, pathophysiology, clinical features, diagnosis and treatment of primary and secondary tuberculosis • Discuss complications and prevention of tuberculosis	Large class format (interactive lecture	MCQs & SEQs Long case Short case
7. Anemia	• Define Anemia • Different Classifications of anemia • Causes of different types of anemias • Clinical features of anemia • Specific features of different anemias • Normal values of hematological parameters • Basic investigations in anemia • Specific investigation in different types of anemias • Treatment options in different anemia	Bedside teaching	MCQs & SEQs OSCE Long case Short case
8. General Management of poisoning	• What is poisoning , and its types • General approach to poisoning (triage and resuscitation, clinical assessment and investigations, general, management, psychiatric evaluation) • Gastrointestinal decontamination • Commonly used antidotes and methods of poison removal	Large class format (interactive lecture	MCQs & SEQs Long case Short case

	• Role of psychiatric evaluation		
9. Diabetes Mellitus	• Understand the etiology • Pathogenesis of Diabetes • Know the types of Diabetes mellitus • Know the criteria for the diagnosis • Management of diabetes. • Complications and its management • Special situations	Small group discussion	MCQs & SEQs Long case Short case
10. Acute Kidney Injury	• What is AKI, its pathophysiology, and causes (pre/post, and renal) • Clinical features, criteria for AKI, and investigations. • Management of AKI including hemodynamic monitoring , acid-base and electrolyte management, dietary measures, use of medications/renal replacement therapy, complications and their treatment prognosis	Bedside teaching	MCQs & SEQs Long case Short case

SPECIFIC LEARNING OUTCOMES FOR THIRD YEAR MD DERMATOLOGY

FOUNDATION OF DERMATOLOGY

BY THE END OF THIS SESSION THE STUDENT SHOULD BE ABLE TO:

MANAGEMENT AT THE END OF THIS SESSION/TOPIC STUDENT SHOULD BE ABLE TO:

Sno	Topic	Learning outcome
Sno.	Topic	Learning Outcome
1.	History of dermatology	Describe the major historical milestones in dermatology, including the development of key diagnostic tools and treatments, and how these advancements have shaped modern dermatological practices
2.	Structure and Function of skin	Understand and explain the relationship between the structural components of the skin (epidermis, dermis, and subcutaneous tissue) and their respective functions in protection, sensation, thermoregulation, and vitamin D synthesis
3.	Histopathology of skin: general principles	Identify and describe the histological features of the skin's three main layers (epidermis, dermis, and subcutaneous tissue) and adnexal structures (hair follicles, sebaceous glands, and sweat glands).
4.	Principles of topical therapy	Diagnose common dermatological conditions by integrating patient history and physical examination, and by recognizing characteristic clinical features of various skin disease
5.	Epidemiology of skin disease	Understand the global burden and distribution of common skin diseases, including their prevalence, risk factors, and impact on public health.
6.	Health economics and skin disease	Analyze the direct and indirect costs associated with common skin diseases, including treatment expenses, loss of productivity, and impact on quality of life
7.	Genetics and the skin	Explain how genetic mutations and variations contribute to the development of common skin disorders such as psoriasis, atopic dermatitis, and melanoma
8.	Inflammation, immunology and allergy	Describe how the immune system, including various immune cells and mediators, contributes to the development and regulation of skin inflammation and allergic responses
9.	Photobiology	Explain how different types of ultraviolet (UV) radiation (UVA, UVB, and UVC) interact with the skin, leading to various biological effects such as DNA damage, photoaging, and the synthesis of vitamin D. 1
10.	Cutaneous response to injury and wound healing	Describe the three overlapping phases of cutaneous wound healing—inflammation, proliferation, and remodeling—and explain the cellular and molecular mechanisms involved in each phase
11.	Psychological and social impact of long term dermatological conditions	Emphasize with the psychological and social challenges faced by patients with long-term dermatological conditions, and integrate this understanding into patient-centered care.
12.	Adverse immunological reactions to drugs	Describe the immunopathogenesis, identify the clinical features, and outline the diagnostic criteria and management strategies for severe cutaneous adverse reactions such as Stevens-Johnson Syndrome (SJS), Toxic Epidermal Necrolysis (TEN), and Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS)
13.	Topical drug delivery	Explain how the anatomy and physiology of the skin influence the absorption of topical drugs, including the roles of the stratum corneum, dermis, and various permeation enhancers.
14.	Clinical pharmacology	Understand and explain the pharmacokinetics and pharmacodynamics of topical medications used in dermatology, including their mechanisms of action, therapeutic uses, and potential side effects
1.	History of dermatology	by considering the patient's overall health, lifestyle, and underlying causes of skin conditions
2.	Principles of measurement and assessment in dermatology	interpret various dermatological assessment tools, such as the PASI (Psoriasis Area and Severity Index) and SCORAD (Scoring Atopic Dermatitis), to evaluate the severity and progression of common dermatological conditions
3.	Principles of evidence based dermatology	Understand and apply the principles of evidence-based medicine (EBM) in dermatology to diagnose and manage common skin conditions.
4.	Principles of topical therapy	understand and apply the principles of selecting appropriate topical vehicles and agents based on the type and location of dermatologic conditions
5.	Principles of systemic therapy	Understand and apply the pharmacological principles of systemic therapy in dermatology, including the mechanisms of action, indications, contraindications, and potential side effects of commonly used systemic medications
6.	Principles of skin surgery	Demonstrate a thorough understanding of aseptic techniques and their critical importance in preventing infections during dermatologic surgical procedures. This includes proper hand hygiene, sterilization of instrument.
7.	Principles of phototherapy	Explain the fundamentals and types and clinical applications of phototherapy.
8.	Principles of photodynamic therapy	Describe photodynamic therapy utilizes photosensitizing agent for destroy cells.
9.	Principles of cutaneous laser therapy	Explain how selective photo thermolysis allows for the targeted destruction of specific skin structures using laser therapy, minimizing damage to surrounding tissues.
10.	Principles of radiotherapy	Understand the Indications and Mechanisms of Radiotherapy in Treating Skin Cancers Identify the appropriate clinical scenarios for using radiotherapy in dermatology, particularly for non-melanoma skin cancers such as basal cell carcinoma (BCC) and squamous cell carcinoma (SCC).
11.	Principles of holistic management of skin disease	Understand how various factors contribute to skin health and the importance of a multidisciplinary approach in treatment
12.	Principles of measurement and assessment in dermatology	interpret various dermatological assessments, including skin biopsies, patch testing, and dermoscopy, to diagnose and manage common skin conditions effectively
13.	Principles of evidence based dermatology	Evaluate dermatological research and clinical guidelines to make informed decisions about patient care.
14.	Clinical pharmacology	Understand the hierarchy of evidence, interpreting study results, and integrating clinical expertise with the best available evidence to manage common dermatological conditions effectively.

INFECTIONS AND INFESTATIONS AT THE END OF THIS SESSION, THE STUDENT SHOULD BE ABLE TO :

Sno.	topic	Learning outcome
1	Viral infections	Identify and describe the clinical presentations, pathophysiology, and management of common viral skin infections.
2	Bacterial infections	Describe the clinical features, pathogenesis, and treatment options for common bacterial skin infections, including impetigo, cellulitis, and folliculitis.
3	Mycobacterial infections	Understand the clinical presentation, diagnosis, and management of cutaneous mycobacterial infections, including the differentiation between common mycobacterial species
4	Leprosy	Recognize and differentiate the clinical presentations and classifications of leprosy (Hansen's disease) to accurately diagnose and manage the condition
5	Syphilis and congenital syphilis	Identify and differentiate the characteristic skin manifestations of syphilis and congenital syphilis, including primary, secondary, and tertiary syphilis lesions, as well as early and late congenital syphilis skin findings.
6	Other sexually transmitted bacterial diseases	Explain the clinical presentation, diagnosis, and treatment of sexually transmitted bacterial infections, including their stages and potential complications.
7	HIV and the skin	Recognize and differentiate common cutaneous manifestations associated with HIV infection, including their clinical presentations, underlying pathophysiology, and implications for patient management.
8	Fungal infections	Identify and describe the clinical features and diagnostic methods for common superficial fungal infections of the skin, such as tinea corporis, tinea pedis, and candidiasis
9	Parasitic diseases	Identify and describe the clinical manifestations, diagnostic methods, and treatment options for common parasitic skin infections such as scabies, lice, and cutaneous larva migrans.
10	Arthropods	Identify and describe the clinical manifestations, diagnostic methods, and treatment options for common arthropod infections of the skin, including scabies, lice infestations, and tick-borne diseases.

INFLAMMATORY DERMATOSES

AT THE END OF THIS SESSION STUDENT SHOULD BE ABLE TO:

Sno.	Topic	Learning outcome
1.	Psoriasis and related disorders	Understand the pathophysiology, clinical features, and treatment options for psoriasis and related disorders.
2.	Pityriasis rubra pilaris	Identify the clinical presentation and management strategies for pityriasis rubra pilaris.
3.	Lichen planus and lichenoid disorders	Recognize the clinical manifestations and therapeutic approaches for lichen planus and lichenoid disorders.
4.	Graft versus host disease	Describe the cutaneous manifestations and management of graft versus host disease.
5.	Eczematous disorders	Differentiate between various eczematous disorders and outline their treatment protocols.
6.	Seborrheic dermatitis	Explain the etiology, clinical features, and treatment of seborrheic dermatitis.
7.	Atopic eczema	Understand the pathogenesis, clinical presentation, and management of atopic eczema.
8.	Urticaria	Identify the causes, clinical features, and treatment options for urticaria.
9.	Recurrent angioedema without weals	Recognize the clinical presentation and management of recurrent angioedema without weals.
10.	Urticarial vasculitis	Describe the clinical features and treatment of urticarial vasculitis.
11.	Autoinflammatory diseases presenting in the skin	Understand the clinical presentation and management of autoinflammatory diseases affecting the skin.
12.	Mastocytosis	Identify the clinical features and treatment options for mastocytosis.
13.	Reactive inflammatory erythemas	Recognize the clinical presentation and management of reactive inflammatory erythemas.
14.	Adamantiades Behcet disease	Describe the clinical features and management of Adamantiades Behcet disease.
15.	Neutrophilic dermatoses	Understand the clinical presentation and treatment of neutrophilic dermatoses.
16.	Immunobullous diseases	Identify the clinical features and management of immunobullous diseases.
17.	Lupus erythematosus	Describe the cutaneous manifestations and treatment of lupus erythematosus.
18.	Antiphospholipid syndrome	Recognize the cutaneous signs and management of antiphospholipid syndrome.
19.	Dermatomyositis	Understand the clinical presentation and treatment of dermatomyositis.
20.	Mixed connective tissue disease	Identify the clinical features and management of mixed connective tissue disease.
21.	Dermatological manifestations of rheumatoid disease	Students will be able to identify and describe the common dermatological manifestations associated with rheumatoid arthritis, including rheumatoid nodules, vasculitis, and palmar erythema.
22.	Systemic sclerosis	Students will be able to recognize and explain the cutaneous features of systemic sclerosis, such as sclerodactyly, digital ulcers, and telangiectasia, and understand their pathophysiology.
23.	Morphoea and allied scarring and sclerosing inflammatory dermatoses	Students will be able to differentiate between morphoea and other sclerosing dermatoses, describe their clinical presentations, and outline the basic principles of management.

METABOLIC AND NUTRITIONAL DISORDERS AFFECTING THE SKIN:

AT THE END OF THIS SESSIONS STUDENT SHOULD BE ABLE TO

Sno.	topic	Learning outcome
1.	Cutaneous amyloidoses	Understand the pathophysiology and clinical presentation of cutaneous amyloidoses to diagnose and manage cases
2.	Cutaneous mucinoses	Identify the types and clinical features of cutaneous mucinoses to differentiate them from other skin disorders
3.	Cutaneous porphyrias	Recognize the biochemical basis and clinical manifestations of cutaneous porphyrias for accurate diagnosis
4.	Calcification of skin andsubcutaneous tissue	Describe the mechanisms and clinical implications of skin and subcutaneous tissue calcification
5.	Xathomas and abnormality of lipid metabolism and storage	Explain the pathogenesis and clinical features of xanthomas and their association with lipid metabolism disorders.
6.	Nutritional disorders affecting the skin	Assess the impact of nutritional deficiencies on skin health and identify related dermatological conditions.
7.	Skin disorders in diabetes mellitus	Evaluate the common skin manifestations in diabetes mellitus and their management strategies

SPECIFIC LEARNING OUTCOMES FOR FOURTH YEAR MD DERMATOLOGY

SKIN DISORDERS CAUSED BY EXTERNAL AGENTS:

AT THE END OF THIS SESSION STUDENTS SHOULD BE ABLE TO:

Sno.	topic	Learning outcome
1	Benign cutaneous adverse reactions to drugs	Identify and manage common benign cutaneous adverse reactions to drugs, including maculopapular eruptions, urticaria, and fixed drug eruptions, by recognizing their clinical presentations, understanding the underlying mechanisms, and implementing appropriate treatment strategies to ensure patient safety and comfort
2	Severe cutaneous adverse reactions to drugs	Identify and manage common benign cutaneous adverse reactions to drugs, including maculopapular eruptions, urticaria, and fixed drug eruptions, by recognizing their clinical presentations, understanding the underlying mechanisms, and implementing appropriate treatment strategies to ensure patient safety and comfort
3	Cutaneous side effects of chemotherapy and radiotherapy	Identify and manage the common cutaneous side effects of chemotherapy and radiotherapy, including recognizing early signs, understanding the underlying pathophysiology, and implementing appropriate treatment and preventive measures to improve patient quality of life
4	Dermatoses induced by illicit drugs	Identify and describe the various cutaneous manifestations associated with the use of illicit drugs, including their pathophysiology, clinical presentation, and differential diagnosis.
5	Dermatological manifestations of metal poisoning	to identify and describe the dermatological manifestations associated with common metal poisonings (such as arsenic, mercury, and lead), including their clinical presentations, diagnostic approaches, and underlying pathophysiological mechanisms.
6	Mechanical injury to the skin	Describe the pathophysiology, clinical presentation, and initial management of various types of mechanical injuries to the skin, including abrasions, lacerations, and contusions.
7	Pressure injury and pressure ulcers	identify, assess, and implement evidence-based prevention and management strategies for pressure injuries and pressure ulcers, ensuring comprehensive patient care and minimizing complications.
8	Cutaneous reactions to cold and heat	identify and manage severe cutaneous adverse reactions such as Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN), including recognizing early signs, understanding pathophysiology, and initiating appropriate treatment protocols
9	Burns and heat injury	assess and classify burn injuries, understand the principles of burn management, and implement initial and ongoing care strategies to optimize patient outcomes
10	Cutaneous photosensitivity diseases	diagnose and manage cutaneous photosensitivity disorders, including identifying common triggers, understanding the underlying mechanisms, and applying preventive and therapeutic measures.
11	Allergic contact dermatitis	identify and differentiate the clinical features and pathophysiology of allergic contact dermatitis, and develop appropriate management plans including patient education on allergen avoidance.
12	Irritant contact dermatitis	recognize the causes and clinical manifestations of irritant contact dermatitis, and formulate effective treatment strategies to restore the skin barrier and prevent recurrence.
13	Occupational dermatology	assess and manage dermatological conditions related to occupational exposures, including the identification of workplace hazards and implementation of preventive measures.
14	Stings and bites	diagnose and treat various stings and bites, understanding the potential complications and providing appropriate first aid and long-term care

NEOPLASTIC ,PROLIFERATIVE AND INFILTRATIVE DISORDERS AFFECTING THE SKIN

BY THE END OF THIS TOPIC STUDENT SHOULD BE ABLE

Sno.	Topic	Learning objective
1.	Benign melanocytic proliferation and melanocytic	Identify and differentiate common benign melanocytic lesions such as nevi (moles) and freckles, based on their clinical and dermatoscopic features
2.	Benign keratinocytic acanthomas and proliferation	Diffrentiate keratocanthoma and other skin cancers based on clinical features and management strategies
3.	Cutaneous cysts	Understand and differentiate between various types of cutaneous cysts, including their histological features, clinical presentations, and management strategies.
4.	Lymphocytic infiltrates	Understands the clinical and histopathological features of cutaneous lymphoid hyperplasia
5.	Cutaneous histiocytoses	Classify cutaneous histiocytoses into langerhans cell histiocytosis and non-langerhans cell histiocytosis, and describe their clinical manifestations, including common skin lesions and systemic involvement
6.	Soft tissue tumors and tumor like conditions	Identify the common clinical features of soft tissue tumors, differentiate between benign and malignant tumors, and outline the appropriate diagnostic steps, including imaging and biopsy techniques, to accurately diagnose and manage these conditions
7.	Tumors of skin appendages	Describe the clinical presentation, histopathological characteristics, and differential diagnosis of common skin appendage tumors
8.	Kaposi sarcoma	Identify the characteristic dermatological features of kaposi sarcoma, understand its pathophysiology, and differentiate it from other skin lesions
9.	Cutaneous lymphomas	Identify the clinical features of cutaneous lymphomas, including common presentations such as mycosis fungoides and sézary syndrome
10.	Basal cell carcinoma	Describe the pathophysiology of bcc, identify its common clinical presentations, and understand the risk factors associated with its development
11.	Squamous cell carcinoma and its precursors	Understand the pathogenesis and clinical presentation of squamous cell carcinoma and its precursors
12.	melanomas	Identify and diagnose various types of melanomas through clinical examination and dermatoscopic evaluation, understanding the importance of early detection and the distinguishing features of malignant versus benign skin lesions
13.	Melanoma clinicopathology	Identify and describe the clinical presentations and histopathological characteristics of melanoma. This includes recognizing various subtypes, understanding the significance of breslow thickness, clark level, and other prognostic factors
14.	Melanoma surgery	Describe the indications, techniques, and post-operative care involved in the surgical treatment of melanoma, including wide local excision and sentinel lymph node biopsy identify potential complications and the importance of early detection

		and multidisciplinary management in improving patient outcomes
15.	Systemic treatment of melanoma	Explain how immunotherapy (e.g., checkpoint inhibitors like pembrolizumab and nivolumab) and targeted therapy (e.g., braf and mek inhibitors) have revolutionized the treatment of advanced melanoma by significantly improving survival rates and disease management
16.	Dermoscopy of melanoma and naevi	Differentiate between benign naevi and malignant melanoma using dermoscopic features, recognizing patterns such as asymmetry, border irregularity, color variation, and specific structures like atypical pigment networks and blue-white veils, to improve diagnostic accuracy and patient outcomes
17.	Melanoma clinicopathology	identify and describe the clinical presentations and histopathological characteristics of melanoma. This includes recognizing various subtypes, understanding the significance of breslow thickness, clark level, and other prognostic factors
18.	Melanoma clinicopathology	identify and describe the clinical presentations and histopathological characteristics of melanoma. This includes recognizing various subtypes, understanding the significance of breslow thickness, clark level, and other prognostic factors

SYSTEMIC DISEASE AND THE SKIN

BY THE END OF THIS TOPIC STUDENT SHOULD BE ABLE TO:

Topics	LEARNING OUTCOME
Cutaneous markers of internal malignancy	Identify and interpret common cutaneous markers that may indicate underlying internal malignancies, such as acanthosis nigricans, dermatomyositis, and the sign of Leser-Trélat, and understand their clinical significance in early cancer detection and diagnosis.
The skin and the disorders of the haematopoietic and immune systems	Integrate knowledge of dermatological manifestations with underlying haematopoietic and immune disorders to diagnose and manage complex clinical cases
The skin and endocrine disorders	Integrate clinical knowledge and skills to diagnose and manage common skin and endocrine disorders
The skin and disorders of heart	Understand the interrelationship between skin manifestations and cardiovascular disorders, and develop the ability to diagnose and manage dermatological signs that may indicate underlying heart diseases.
The skin and the disorders of the respiratory system	Understand the Pathophysiological Link Between Skin Manifestations and Respiratory Disorders
The skin and the disorders of the digestive system	Understand the interrelationship between dermatological manifestations and gastrointestinal disorders, and be able to diagnose and manage common skin conditions associated with digestive system diseases.
The skin and the disorders of the kidney and urinary tract	Integrate knowledge of dermatological manifestations with underlying renal and urinary tract disorders to enhance diagnostic accuracy and patient management
The skin and the disorders of the musculoskeletal system	Integrate clinical knowledge and diagnostic skills to effectively identify, differentiate, and manage common dermatological conditions and musculoskeletal disorders, emphasizing a holistic approach to patient care

Sno	*Topic*	*Learning Objective*
1.	*Skin ageing*	*Explain the changes in skin structure and function with ageing. Understand the role of oxidative stress, DNA damage, and inflammation in skin ageing*
2.	*Cosmeceuticals*	*Define cosmeceuticals and differentiate them from pharmaceuticals and cosmetics*
3.	*Soft tissue augmentation*	*Understand the indications and techniques of soft tissue augumentation*
4.	*Aesthetic uses of botulinum toxins*	*Understand the mechanism and application of botulinum toxin in aesthetic medicine*
5.	*Chemical peels*	*Explain the mechanism and clinical applications of chemical peels in aesthetic dermatology*
6.	*Lasers and energy-based devices*	*understand the principals and applications of laser and energy based devices in aesthetic medicine*

DETAILS OF COURSE CONTENTS

GENERAL INTERNAL MEDICINE

EDUCATIONAL PURPOSE

The Internal Medicine Ward rotation is structured to provide PGTs with the fundamental knowledge base of internal medicine, the essential principles in the approach to internal medicine ward patients, the basic techniques of physical examination, the necessary skills in performing clinical procedures, and the capability to communicate clearly with patients, their families and other members of the health care team.

CONTENT OF REQUIRED KNOWLEDGE:

1. Human Growth, Development, and Aging: adolescent medicine, aging and introduction to geriatric medicine, management of common problems in the elderly.
2. Preventive Medicine: principles of preventive medicine, immunization, alcohol and substances abuse.
3. Principle of Diagnosis and Management: clinical approach to the patient, clinical decision-making, interpretation of laboratory data.
4. Cardiovascular Diseases: Congestive heart failure, cardiac arrhythmias, hypertension, coronary heart disease, interpretation of EKG, interpretation of echocardiogram, nuclear medicine imaging, indication for cardiac catheterization.
5. Respiratory Diseases: Respiratory failure, COPD, asthma, pulmonary embolism, pleural effusion, interpretation of pulmonary function tests.
6. Renal Diseases: disorders of electrolytes and acid-base, acute renal failure, chronic renal failure, glomerulonephritis,tubulointerstitial diseases, vascular disorders.
7. Gastrointestinal Diseases: gastrointestinal bleeding, small bowel obstruction, large bowel obstruction, ischemic bowel diseases, pancreatitis, and diarrhea.
8. Diseases of the Liver and Hepatobiliary Tract: Viral hepatitis, cirrhosis and portal hypertension, and hepatic failure.
9. Hematologic Diseases: Anemias, interpretation of the peripheral blood smear, transfusion of blood and blood products, neutropenia, disorders of the platelets, disorders of blood coagulation.
10. Oncology: Acute leukemias, oncologic emergencies, lymphomas.
11. Metabolic Diseases:Hyperlipoproteinemias, gout.
12. Nutritional Diseases: Principles of nutritional support, parenteral nutrition.
13. Endocrine Diseases: Diabetes mellitus, diabetic keto-acidosis, adrenal disorders, thyroid diseases, osteoporosis.
14. Musculoskeletal and Connective Tissue Diseases: Arthritis, SLE, vasculitic syndromes.
15. Infectious Diseases: Septic shock, principles of antimicrobial therapy, pneumonias, UTI, soft tissue infections, osteomyelitis, infective endocarditis, bacterial meningitis, enteric infections, tuberculosis, fungal infections, HIV infection, treatment of AIDS and related disorders.
16. Neurology: The neurologic examination, radiologic imaging, cerebrovascular accident, dementias, sleep disorders, seizures.

TEACHING STRATEGY

- Bedside teaching during grand ward rounds
- Seminars
- Small group discussions
- Problem based learning
- Didactic lectures
- Case Based Discussion (CBD)
- Self-directed learning
- Follow up clinics
- Skill teaching in ward settings
- Clinic pathological conferences

ASSESSMENT

- OSCE
- MCQs
- SEQs
- Long case
- Short case

EVALUATION/FEEDBACK

1. 360 degree evaluation to judge the professionalism, ethics.
2. A formal evaluation and verbal discussion with the PGT is to be done at the end of the rotation / PGTs are encouraged to discuss with the supervisor, co- supervisor and program director/Dean their learning experiences, difficulties or conflicts.
3. Evaluation of training program by trainees pertinent to effectiveness and efficiency of program to equip trainees with necessary skills

ATTRIBUTES REQUIRED OTHER THAN KNOWLEDGE

Patient Care	Evaluation of Patient Care	Professionalism	Interpersonal and Communication Skills	Practice Based Learning Improvement	Evaluation of Medical Knowledge
Obtain a complete history and recognize common abnormal physical findings.	Completeness and accuracy of medical interviews and physical examinations.	The resident should continue to develop his/her ethical behavior, and must show the humanistic qualities of respect, compassion, integrity and honesty.	The resident should learn when to call a sub-specialist for evaluation and management of a patient.	The resident should use feedback and self-evaluation in order to improve performance.	The resident's ability to answer directed questions and to participate in attending rounds.
Construct a master problem list, a working diagnosis, and a group of differential diagnoses	Thoroughness of the review of the available medical data on each patient.	The resident must be willing to acknowledge errors and determine how to avoid future similar mistakes.	The resident should be able to clearly present a case to the attending staff in an organized and thorough manner.	The resident should read pertinent required material and articles provided to enhance learning.	The resident's presentation of patient history and physical exam, where attention is given to differential diagnosis and pathophysiology.
Be familiar with different diagnostic tools such as the electronic thermometer, sphygmomanometer, ophthalmoscope, EKG machine, pulse oximetry, and defibrillator.	Performance of appropriate maneuvers and procedures on patients.	The resident must be responsible and reliable at all times.	The resident must be able to establish rapport with a patient and listen to the patient's complaints to promote the patient's welfare.	The resident should use the medical literature search tools in the library to find appropriate articles related to interesting cases.	When time permits, residents may be assigned short topics to present at attending grounds. These will be examined for completeness, accuracy, organization and the residents understanding of the topic.
Become familiar with the concept of pre-test and post-test probabilities of disease.	Accuracy and thoroughness of patient assessments	The resident must always consider the needs of patients, families, colleagues, and support staff.	The resident should provide effective education and counseling for patients.	The resident should use information provided by senior residents and attendings from rounds and consultations to improve performance and enhance learning	The resident's ability to apply the information learned from attending round sessions to the patient care setting
Be able to perform	Appropriateness	The resident must	The resident must		The residents

various clinical procedures such as venipuncture, thoracentesis, paracentesis, lumbar puncture, arthrocentesis, skin punch-biopsy, endotracheal intubation, and central line placement. Residents should know indications of potential complications of each of these procedures.	of diagnostic and therapeutic decisions.	maintain a professional appearance at all times.	write organized legible notes.		interest level in learning.
Understand how to improve patient/physician relationships in a professional way. Residents should be compassionate, but humble and honest, not only with their patients, but also with their co-workers.	Soundness of medical judgment.		The resident must communicate any patient problems to the attending staff in a timely fashion		
Residents are encouraged to develop leadership in teaching and supervising interns and medical students.	Consideration of patient preferences in making therapeutic decisions.				
Actively participate in all phases of patient care. Residents are encouraged to read on related topics,to share new learning with their colleagues and to keep their fund of knowledge up-to-date.	Completeness of medical charting.				
Learn to use the computer for literature searches, to read and analyze scientific articles.			.		.

SUGGESTED READINGS:

1. Appropriate sections in Harrison's Principles of Internal Medicine , McGraw Hill Publisher. PGTs should focus reading in particular sections that directly relate to the problems of their patients.
2. Appropriate sections in Cecil's Textbook of Medicine, W.B. Saunders Publisher. PGTs should focus reading in particular to sections that directly relate to the problems of their patients.
3. Pertinent sections of MKSAP booklets.
4. Principles of Geriatric Medicine and Gerontology.
5. The PGT is encouraged to read current medical literature particularly articles that pertain to current patient problems. Examples of appropriate current medical literature are the New England Journal of Medicine, Annals of Internal Medicine, Archives of Internal Medicine and Journal of the American Medical Association.

CRITICAL CARE UNIT(INTENSIVE CARE UNIT – ICU) & EMERGENCY MEDICINE EDUCATIONAL PURPOSE:

- The goal of the Critical Care faculty is to train the general internist to evaluate and treat critically ill patients, use consultants and paramedical personnel effectively, and stress sensitive, compassionate management of patients and their families.
- Training in emergency medicine and critical care is crucial for the general internist.
- Recognition/prioritization medical emergencies is the basic knowledge that should be acquired by the internist
- Important aspects of this training include: identifying patients who are candidates for intensive care, the bedside approach to the critically-ill patient, knowledge of algorithms for diagnosis and management of common problems in the ICU, death and resuscitation issues, interaction with families

CONTENT OF REQUIRED KNOWLEDGE:

1. Understand blood gas results and respond appropriately.
2. Understand cardiovascular hemodynamics in a wide range of disease states.
3. Management of congestive heart failure and cardiogenic shock.
4. Basics of conventional mechanical ventilation.
5. Nutritional support of the critically ill.
6. Management of acute myocardial ischemia.
7. Acute renal failure - diagnosis and treatment.
8. Acute endocrinologic emergencies.
9. Acute lung injury.
10. Sepsis and the sepsis syndrome.
11. Acute treatment of cardiac arrhythmias.
12. Management of acute gastrointestinal bleeding.
13. Management of common neurologic emergencies.
14. Management of common toxicologic emergencies

SKILLS AND PROCEDURES:

- Asthma management
- Evaluation of chest pain
- Evaluation of shortness of breath
- Airway management/tracheostomy Barotrauma
- Mechanical ventilation: indications, initial set-up, trouble shooting, weaning
- Critical care nutrition: indications, disease-specific nutrition, writing TPN orders
- Management of Ob/Gynae emergencies
- Oxygen transport: physiology, alterations in the critically-ill
- Arterial blood gases: approach to analysis, common alterations
- Hemodynamics: physiology, PA catheter, hemodynamic waveforms, trouble-shooting
- Critical care pharmacology: pressors / inotropes, antibiotic dosing, drug dosing in ARF
- Shock: pathophysiology, approach to resuscitation
- Fluid and electrolyte disturbances: sodium, potassium, magnesium, calcium
- Acute renal failure: approach differential diagnosis, management
- Coma: pathophysiology, neurological exam, differential diagnosis
- Wound care
- Splinting techniques
- Ophthalmologic emergency management
- Multiple organ dysfunction syndrome
- Acute CHF
- Ethical issues in the ICU
- Management of environmental emergencies
- Basic toxicology principles
- Sepsis prevention in the ICU
- Arterial line insertion
- Central venous catheterization
- Pulmonary artery catheterization
- Assistance in endotracheal intubation
- Cardiopulmonary resuscitation
- Ordering and rapid interpretation of laboratory tests

Attributes Required Other Than Knowledge

Patient Care	Practice Based Learning Improvement	Professionalism
• Trainees will learn to obtain a logical, chronological history from critically ill patients and their families and to do an effective physical examination in this challenging milieu. Use of information from old charts and private physicians is stressed. • Residents will learn to integrate physiological parameters and laboratory data with the clinical history and physical exam to make clinical diagnostic and management decisions. • Residents will learn the appropriate use of daily progress notes in patient follow-up, and the need for frequent reevaluation of the unstable patient.	• The resident should use feedback and self-evaluation in order to improve performance. • The resident should read the required material and articles provided to enhance learning. • The resident should use the medical literature search tools in the library to find appropriate articles related to interesting cases.	• The resident should continue to develop his/her ethical behavior and the humanistic qualities of respect, compassion, integrity, and honesty. In the ICU, these goals are met in several ways: • Sensitive handling of a do-not resuscitate order. • Respect and compassion for the depersonalized, intubated, non-communicative patient. • Appropriate use of consultants and paramedical personnel. • Compassionate handling of families and development of rapport with them. • Residents should learn to ask permission for an autopsy in a forthright, non-threatening way and should be available to family members to discuss autopsy findings. • The resident must be willing to acknowledge errors and determine how to avoid future similar mistakes. • The resident must be responsible and reliable at all times. • The resident must always consider the needs of patients, families, colleagues, and support staff. • The resident must maintain a professional appearance at all times.

TEACHING STRATEGIES

A. Formal presentation of the new admissions.
B. ICU Rounds
C. Diagnostic and treatment strategies are discussed at the bedside.
D. Didactic Lectures
E. Reading assignments
F. literature searches
G. Noon conferences
H. Skill teaching in ICU & emergency settings
I. Skill teaching in skill laboratory

EVALUATION/FEEDBACK

- At the midway point of the rotation, residents are given feedback (informally) on their performance to date. Areas and methods of improvement are suggested. A formal evaluation and verbal discussion with the resident is to be done at the end of the rotation.
- 360 degree evaluation to judge the professionalism, ethics
- A formal evaluation and verbal discussion with the PGT is to be done at the end of the rotation / PGTs are encouraged to discuss with the supervisor, co- supervisor and program director/Dean their learning experiences, difficulties or conflicts.
- Evaluation of training program by trainees pertinent to effectiveness and efficiency of program to equip trainees with necessary skills

SUGGESTED READINGS:

- Paul L. Marino, The ICU Book, 3rd edition.
- Marin H. Kollef, The Washington Manual of Critical Care.
- ATS website http://www.thoracic.org/education/career-development/residents/ats-reading-list/
- Antonelli M et.al. “Year in review in Intensive Care Medicine 2009: 1. Pneumonia and infections, sepsis, outcome, acute renal failure and acid base, nutrition, and glycaemic control” Intensive Care Medicine 2010; 36:196-209 (available through UNM HSC library ejournal)

CORONARY CARE UNIT

EDUCATIONAL PURPOSE:

The goal of the Coronary Care faculty is to train the general internist to evaluate and treat critically ill cardiac patients, use consultants and paramedical personnel effectively, and stress sensitive, compassionate management of patients and their families.

CONTENT OF REQUIRED KNOWLEDGE:

- Understand blood gas results and respond appropriately.
- Understand cardiovascular hemodynamics in a wide range of disease states.
- Management of congestive heart failure and cardiogenic shock.
- Basics of conventional mechanical ventilation.
- Nutritional support of the critically ill.
- Management of acute myocardial ischemia.
- Acute renal failure-diagnosis and treatment.
- Acute treatment of cardiac arrhythmias.

PROCEDURAL SKILLS:

- Cardiopulmonary resuscitation
- Endotracheal intubation
- Central venous access
- Hemodynamic monitoring (Pulmonary Artery Catheterization)
- Thoracentesis
- Arterial cannulation
- Placement of a temporary transvenous and transcutaneous pacemaker

ATTRIBUTES REQUIRED OTHER THAN KNOWLEDGE

Patient Care	Practice Based Learning Improvement	Professionalism

• Trainees will learn to obtain a logical, chronological history from critically ill patients and their families and to do an effective physical examination in this challenging milieu. Use of information from old charts and private physicians is stressed. • Residents will learn to integrate physiological parameters and laboratory data with the clinical history and physical exam to make clinical diagnostic and management decisions. • Residents will learn the appropriate use of daily progress notes in patient follow-up, and the need for frequent reevaluation of the unstable patient.	• The resident should use feedback and self-evaluation in order to improve performance. • The resident should read the required material and articles provided to enhance learning. • The resident should use the medical literature search tools in the library to find appropriate articles related to interesting cases.	• The resident should continue to develop his/her ethical behavior and the humanistic qualities of respect, compassion, integrity, and honesty. In the CCU, these goals are met in several ways: • Sensitive handling of a do-not resuscitate order. • Respect and compassion for the depersonalized, intubated, non-communicative patient. • Appropriate use of consultants and paramedical personnel. • Compassionate handling of families and development of rapport with them. • Residents should learn to ask permission for an autopsy in a forthright, non-threatening way and should be available to family members to discuss autopsy findings. • The resident must be willing to acknowledge errors and determine how to avoid future similar mistakes. • The resident must be responsible and reliable at all times. • The resident must always consider the needs of patient's families, colleagues, and support staff. • The resident must maintain a professional appearance at all times.

TEACHING STRATEGIES

- CCU resident will attend EKG readings
- Formal presentation of the new admissions
- Diagnostic and treatment strategies are discussed at the bedside.

- Didactic lectures
- Reading assignments
- literature searches
- interactive seminars
- grand rounds
- problem based learning
- case based learning
- skill teaching in ICU settings
- journal club meetings
- clinic pathological conferences
- skill teaching in skill laboratory

EVALUATION/FEEDBACK

- Monthly evaluations by faculty of residents and by residents of faculty are submitted. Resident evaluations are written with input from the nursing staff, patients or families as regards specific attitudes towards the critically ill patients.
- Faculty supervises most of the daytime procedures done in the CCU and evaluation and feedback here is immediate and ongoing
- At the midway point of the rotation, residents are given feedback (informally) on their performance to date. Areas and methods of improvement are suggested
- A formal evaluation and verbal discussion with the resident is to be done at the end of the rotation.

SUGGESTED READINGS:

1. Coronary Care Manual 2e – Review, February 11, 2011 by Edward Burns
2. Coronary Care Manual 2nd Edition by Peter Thompson, Churchill Livingstone Australia 2010
3. Management of the Patient in the Coronary Care Unit 1st Edition by Mehdi H. Shishehbor DO MPH (Editor), Thomas H. Wang MD (Editor), Arman T. Askari MD (Editor), Marc S. Penn MD PhD (Editor), Eric J. Topol MD (Editor), lippincott, williams&wilkans

AMBULATORY MEDICINE

EDUCATIONAL PURPOSE

- To provide the resident guidance and supervision as they develop a timely clinical approach to the patient in the outpatient setting. This would include the ability to formulate differential diagnoses

based on the patient's specific complaints, the art of effective and appropriate communication with patients and other members of the health care delivery team.
- To promote and teach the principles of Preventive Medicine, primary and secondary prevention in screening of asymptomatic adults.

Content of required knowledge

- **Diabetes** Classification, pathogenesis, diagnosis, management, comprehensive preventive care, management and identification of complications in accordance with American Diabetes Association ADA guidelines.
- **Lipid Disorders** Pathogenesis, diagnosis, screening, therapy and monitoring of lipid disorders in accordance with the ATP III guidelines.
- **Anticoagulation management** Pathogenesis, INR goal achievement, indications, length of treatment, complications of anticoagulation therapy in accordance with the most recent ACCP Consensus Conference on Antithrombotic Therapy (CHEST guidelines).
- **Hypertension** Diagnosis, classification. Identification of screening interventions for secondary hypertension, management and pathogenesis. Understand the metabolic syndrome and causes of resistant hypertension in accordance with JNC 7 guidelines.
- **Congestive heart failure** Pathogenesis, classification, diagnosis, management and prognostication in accordance with ACC guidelines.
- **Osteoporosis** Pathogenesis, diagnosis, causes of secondary osteoporosis, and management in accordance with National standards.
- **Osteoarthritis** Pathogenesis, diagnosis and management in accordance with National Standards.
- **Headache** Pathogenesis, diagnosis and management.

ATTRIBUTES REQUIRED OTHER THAN KNOWLEDGE

Professionalism	Interpersonal and Communication Skills	Practice Based Learning Improvement	Evaluation of Medical Knowledge

• The resident should continue to develop his/her ethical behavior and must show the humanistic qualities of respect, compassion, integrity, and honesty. • The resident must be willing to acknowledge errors and determine how to avoid future similar mistakes. • The resident must be responsible and reliable at all times. • The resident must always consider the needs of patients, families, colleagues, and support staff. • The resident must maintain a professional appearance at all times.	• The resident should learn when to call a subspecialist for evaluation and management of a patient. • The resident should be able to clearly present the consultation cases to the staff in an organized and thorough manner. • The resident must be able to establish a rapport with the patients and listen to the patient's complaints to promote the patient's welfare. • The resident should provide effective education and counseling for patients. • The resident must write organized and legible notes. • The resident must communicate any patient problems to the staff in a timely fashion. • The resident will demonstrate empathy, compassion, patience and concern for the patient in relation to their medical complaints. • The resident will learn how to deal with psychosocial issues including depression, poverty and family abuse on an outpatient basis. • The resident will learn how to communicate in a clear, concise and polite manner with physicians, patients, nurses and other healthcare providers. • The resident will listen carefully to patient complaints and determine the appropriate course of action for those complaints which occasionally may require no more than reassurance and understanding. • The resident will build on the attitudes developed in the ambulatory clinic to foster the belief in working cooperatively with physicians from other fields as well as other health professionals for the benefit of the patient. • The resident will gain an appreciation for multifaceted differences in approach that various healthcare practitioners have in the outpatient setting. They will learn to respect these differences and work with other healthcare professionals for the common good of the patient.	The resident should use feedback and self-evaluation in order to improve performance. The resident should read the required material and articles provided to enhance learning	• The resident's ability to answer directed questions and participate in didactic sessions. • The resident's ability to apply the information learned in the resources to the patient care setting. • The residents' performance on multiple choice examinations by the end of the rotation. .

TEACHING STRATEGIES:

- Most of the teaching is done through experience of the PGTs at General Care Clinic, Urgent Care Clinics and Subspecialty clinics.
- The Urgent Care clinics consist of patients that are referred for evaluation from the Emergency department, walk-in patients with various complaints and existing patients who need timely attention. Occasionally, patients are referred to these clinics for outpatient preoperative evaluation.

- The Subspecialty clinics that the residents will participate in include HIV clinic, Pulmonary clinic, Hematology/Oncology clinic, GI clinic, Diabetes and Endocrine clinics, Nephrology clinic, Cardiology clinic and Rheumatology clinic. All residents in these clinics are supervised by faculty.
- General and Urgent Care clinics are supervised by the General Medicine faculty. This faculty will review and discuss each case with the clinic residents. The General Medicine faculty supervises no more than four residents.
- General Medicine staff will provide didactic guidance during case reviews that is in accordance with international guidelines for the management of hypertension, diabetes, cholesterol management and congestive heart failure, osteoporosis, osteoarthritis and anticoagulation.
- Bedside teaching
- Residents will be provided with website resources for self-directed learning.

EVALUATION/FEEDBACK:

- 360^{0} evaluation of the resident to judge professionalism and ethics
- The faculty will fill out the standard evaluation forms for workplace based evaluation of the resident.
- The residents will fill out an evaluation of the clinic rotation at the end of the month.
- Any constructive criticism, improvements, or suggestions to further enhance the training in general internal medicine is welcome at any time.
- The resident should receive frequent (generally daily) feedback in regards to his or her performance during the ambulatory medicine rotation.
- The faculty is encouraged to use the "early concern" and "praise card" throughout the rotation.
- A formal evaluation and verbal discussion with the resident is to be done at the end of the rotation.

SUGGESTED READINGS:

1. Residents are encouraged to read appropriate textbook material that is germane to the types of medical problems that they see in clinic. Residents that rotate in the subspecialty clinics may be given additional readings by the respective subspecialist in that clinic.
2. MKSAP booklet on Primary Care
3. Primary Care Medicine. Noble, Greene, et at 2001 latest edition
4. ACP teaching series videos (skin biopsy, effective communication, arthrocentesis technique).
5. U.S. Preventive Task Force
6. **Medical Literature:** A collection of updated review articles will be available which address basic areas of general ambulatory medicine. The resident is encouraged to read as many of these articles as possible.
7. **Pathology:** Abnormal hematologic peripheral smears should be reviewed by the resident and staff generalist with a pathologist when the review is germane to clinical decision making and the establishment of a clear diagnosis.

CARDIOLOGY

EDUCATIONAL PURPOSE

To give the PGTs formal intensive instruction, clinical experience, and the opportunity to acquire expertise in the evaluation and management of cardiovascular disorders.

CONTENT OF REQUIRED KNOWLEDGE:

1. The general internist should be able to provide primary and secondary preventive care and initially manage the full range of cardiovascular disorders.
2. The need for additional competencies in cardiovascular disease will depend on the availability of a cardiologist in the primary practice setting.
3. In some communities, the general internist may be responsible for management of more complex cardiovascular disorders that require intensive hemodynamic monitoring (for example, balloon-tipped pulmonary artery catheters) in the intensive care unit.

COMMON CLINICAL DISORDERS:

- Is Sarah document key formatting garden does amenable opinion cl

PROCEDURE SKILLS

- Advanced cardiac life support
- Insertion of balloon-tipped pulmonary artery catheter (optional)
- Insertion of temporary pacemaker (optional)

INTERPRETATION OF CLINICAL AND LABORATORY TESTS

- Ambulatory ECG monitoring
- Echocardiography
- Electrophysiology testing
- Left ventricular catheterization and coronary angiography
- Nuclear scan wall motion study
- Right ventricular catheterization (including flotation catheter)
- Stress electrocardiography and thallium myocardial perfusion scan
- Tilt-table physiology study
- Cardiac markers

TEACHING STRATEGIES:

- Didactic lectures
- Outpatient evaluation at cardiology clinic
- bedside teaching rounds
- learning through monitoring of the stress tests
- Exposure to Echocardiograms
- Exposure to Nuclear cardiology studies
- coach-and-pupil method for daily interpretation of ECGs
- Didactic lectures
- Seminars
- Problem based learning
- Case based learning
- Clinic pathological conferences

- Teaching skills in ward settings and skill laboratory

ASSESSMENT:

- OSCE
- MCQs
- SEQs
- Long case
- Short case

EVALUATION/FEEDBACK

- 360 degree evaluation to judge the professionalism, ethics
- A formal evaluation and verbal discussion with the PGT is to be done at the end of the rotation / PGTs are encouraged to discuss with the supervisor, co- supervisor and program director/Dean their learning experiences, difficulties or conflicts.
- Evaluation of training program by trainees pertinent to effectiveness and efficiency of program to equip trainees with necessary skills

ATTRIBUTES REQUIRED OTHER THAN KNOWLEDGE

Practice and Procedural Skills	**Attitudes, Values and Habits**	**Professionalism**	**Interpersonal and Communication Skills**	**Practice Based Learning Improvement**	**Evaluation of Medical Knowledge**
• Development of proficiency in examination of the cardiovascular system, in general and cardiac auscultation, in particular • Preoperative evaluation of cardiac risk in-patients undergoing non-cardiac surgery • Preoperative evaluation of cardiac risk in-patients undergoing non-cardiac surgery • The appropriate way to answer cardiac consultations • The appropriate follow-up, including use of substantive progress notes, of patients who have been seen in consultation. • Out-patient cardiac care. • Differential diagnosis of chest pain	• Keeping the patient and family informed on the clinical status of the patient, results of tests, etc. • Frequent, direct communication with the physician who requested the consultation. • Review of previous medical records and extraction of information relevant to the patient's cardiovascular status. Other sources of information may be used, when pertinent • Understanding that patients have the right to either accepts or decline recommendations made by the physician • Education of the patient	• The PGT should continue to develop his/her ethical behavior and the humanistic qualities of respect, compassion, integrity, and honesty. • The PGT must be willing to acknowledge errors and determine how to avoid future similar mistakes. • The PGT must be responsible and reliable	• The PGT should learn when to call a subspecialist for evaluation and management of a patient with a cardiovascular disease. • The PGT should be able to clearly present the consultation cases to the staff in an organized and thorough manner • The PGT must be able to establish a rapport with the patients and listens to the patient's	• The PGT should use feedback and self-evaluation in order to improve performance • The PGT should read the required material and articles provided to enhance learning • The PGT should use the medical literature search tools in the library to find appropriate articles related to interesti	• The PGT's ability to answer directed questions and to participate in the didactic sessions. • The PGT's presentation of assigned short topics. These will be examined for their completeness, accuracy, organization, and the PGTs' understanding of the topic. • The PGT's ability to apply the information

		at all times. • The PGT must always consider the needs of patients, families, colleagues, and support staff. • The PGT must maintain a professional appearance at all times	complaints to promote the patient's welfare. • The PGT should provide effective education and counseling for patients. • The PGT must write organized and legible notes • The PGT must communicate any patient problems to the staff in a timely fashion	ng cases.	learned in the didactic sessions to the patient care setting. • The PGT's interest level in learning.

SUGGESTED READINGS:

1. Section on cardiovascular disease in Harrison's Principles of Internal Medicine , McGraw-Hill publisher
2. Section on cardiovascular disease in Cecil's Textbook of Medicine, WB Saunders Publisher.
3. MKSAP booklet on Cardiology
4. A collection of updated review articles references will also be provided which address basic areas of cardiology. The PGT is strongly encouraged to read as many of these articles as possible.

DERMATOLOGY

EDUCATIONAL PURPOSE:

To give the residents formal intensive instruction, clinical experience, and the opportunity to acquire expertise in the evaluation and management of cutaneous disorders.

CONTENT OF REQUIRED KNOWLEDGE:

1. Understanding the morphology, differential diagnosis and management of disorders of the skin, mucous membranes, and adnexal structures, including inflammatory, infectious, neoplastic, metabolic, congenital, and structural disorders.
2. Competence in medical and surgical interventions and dermatopathologyare important facets.
3. The general internist should have a general knowledge of the major diseases and tumors of the skin. He or she should be proficient at examining the skin; describing findings; and recognizing skin, signs of systemic diseases, normal findings (including benign growths of the skin), and common skin malignancies.
4. The general internist should be able to diagnose and manage a variety of common skin conditions and make referrals where appropriate.
5. These objectives will be taught through the didactic sessions and at bedside teaching as they relate to specific patients in the clinic and on the consult service:

The resident should learn the pathogenesis, diagnosis, and treatment of: Acne, Rosacea, Contact dermatitis, Atopic Dermatitis, Nummular eczema, Dyshidrotic eczema, Psoriasis, Seborrheic dermatitis, Pityriasis Rosea, Warts, Molluscumcontagiosum, Herpes Simplex, Herpes Zoster, Impetigo, Folliculitis, Furuncles, Erythrasma, Tinea infections, Candida infections, Pityriasis Versicolor, Scabies, Cutaneous reaction to flea bites, Seborrheic keratosis, Keratoacanthoma, Moles, Blue nevus, Cherry angioma, Spider angioma, Pyogenic granuloma, Dermatofibroma, Keloids, Skin tags, Epidermoid cysts, Trichilemmal cysts, Milium, Digital myxoid cyst, alopecia areata, Androgenic alopecia, Sun burn, dermatoheliosis, Solar Lentigo, Solar keratosis, Phototoxic reaction, Photoallergic reaction, Polymorphous Light Eruption, Lichen Planus, Granuloma annulare, Infectious exanthema, Rocky Mountain Spotted Fever, Rubella, Measles, Scarlet fever, Varicella, Sporotrichosis, Leprosy, Tuberculosis, Leishmaniasis, Lyme disease, Cellulitis, Gonorrhea, Syphilis, Chancroid, Genital warts, Genital Herpes, Kaposi's Sarcoma, Erythroderma, Urticaria, Erythema multiforme, Erythema Nodosum, Lupus, Vasculitis, Sarcoidosis, Xanthelasma, Exanthematous Drug eruptions, Fixed drug eruptions, Vitiligo, Melasma, Melanoma, Basal Cell Carcinoma, Squamous Cell Carcinoma, Paget's disease.

COMMON CLINICAL PRESENTATIONS

- Abnormalities of pigmentation
- Eruptions (eczematous, follicular, papulovesicular, vesicular, vesiculobullous)
- Hair loss
- Hirsutism
- Intertrigo
- Leg ulcer
- Mucous membrane ulceration

- Nail infections and deformities
- Pigmented lesion
- Pruritus
- Purpura
- Skin papule or nodule
- Verrucous lesion

PROCEDURE SKILLS

- Application of chemical destructive agents for skin lesions e.g., warts and molluscum, condyloma
- Incision, drainage, and aspiration of fluctuant lesions for diagnosis or therapy
- Scraping of skin (for potassium hydroxide, mite examination)
- Skin biopsy
- Cryotherapy
- Primary Interpretation of Tests
- Microscopic examination for scabies, nits, etc.
- Tzanck smear
- Ordering and Understanding Tests
- Dark-field microscopy
- Fungal culture
- Skin biopsy

ATTRIBUTES REQUIRED OTHER THAN KNOWLEDGE:

Professionalism	Interpersonal and Communication Skills	Practice Based Learning Improvement	Evaluation of Medical Knowledge
• The resident should continue to develop his/her ethical behavior and the humanistic qualities of respect, compassion, integrity, and honesty. • The resident must be willing to acknowledge errors and determine how to avoid future similar mistakes. • The resident must be responsible and reliable at all times. • The resident must always consider the needs of patients, families, colleagues, and support staff. • The resident must maintain a professional appearance at all times.	• The resident should learn when to call a sub specialist for evaluation and management of a patient with a dermatologic disease. • The resident should be able to clearly present the consultation cases to the staff in an organized and thorough manner • The resident must be able to establish a rapport with the patients and listens to the patient's complaints to promote the patient's welfare. • The resident should provide effective education and counseling for patients. • The resident must write organized and legible notes. • The resident must communicate any patient problems to the staff in a timely fashion.	• The resident should use feedback and self-evaluation in order to improve performance. • The resident should read the required material and articles provided to enhance learning. • The resident should use the medical literature search tools in the library to find appropriate articles related to interesting cases.	• The resident's ability to answer directed questions and to participate in the didactic sessions. • The resident's presentation of assigned short topics. These will be examined for their completeness, accuracy, organization, and the resident's understanding of the topic. • The resident's ability to apply the information learned in the didactic sessions to the patient care setting. • The resident's interest level in learning. • The resident will take a pre and post test written and color slide exam. Improvement from one end of the rotation to the other should be realized.

TEACHING STRATEGIES:

- Resident will see a wide variety of patients from various ages, socioeconomic, educational, and cultural backgrounds at dermatology clinic.

- Outpatients will be evaluated by the resident, and then discussed and seen with the dermatologist.
- All dermatology inpatient consults will be seen and discussed with the dermatologist.
- Weekly didactic teaching lectures
- The residents will be responsible for reviewing a current journal review article on a dermatology topic.
- Can be asked to do some simple research on a dermatology topic.
- Short presentations on the given dermatology topics.
- Clinico pathological conferences
- Skill teaching in ward settings and procedure rooms
- Journal club meeting'
- Case based learning
- Problem based learning

ASSESSMENT:

- OSCPE
- MCQs
- SEQs
- Long case
- Short case

EVALUATION/FEEDBACK:

- 360 degree evaluation to judge the professionalism, ethics
- The faculty will fill out the standard evaluation form using the criteria for evaluations of the resident in the required competencies related to dermatology.
- The residents will fill out an evaluation of the dermatology rotation at the end of the month. Any constructive criticism, improvements, or suggestions to further enhance the training in dermatology are welcome at any time.
- The resident should receive frequent (generally daily) feedback in regards to his or her performance during the dermatology rotation.
- The resident will be informed about the results of the evaluation process, and input will be requested from the resident in regards to his or her evaluation of the dermatology rotation.
- The faculty is encouraged to use the "early concern" and "praise card" throughout the rotation.
- A formal evaluation and verbal discussion with the resident is to be done at the end of the rotation.

SUGGESTED READINGS:

1. Mandatory Reading: Fitzpatrick T. *Color Atlas and Synopsis of Clinical Dermatology*
2. MKSAP booklet on Dermatology

3. Medical Literature: A collection of updated review articles will also be provided which address basic areas of dermatology. The resident is strongly encouraged to read as many of these articles as possible.

ENDOCRINOLOGY

EDUCATIONAL PURPOSE:

To give the residents formal intensive instruction, clinical experience, and the opportunity to acquire expertise in the evaluation and management of endocrine disorders.

CONTENT OF REQUIRED KNOWLEDGE:

These objectives will be taught through the didactic sessions and at bedside teaching as they relate to specific patients in the clinic and on the consult service.

1. The principal endocrine problems handled by the general internist include goiter, thyroid nodules, thyroid dysfunction, diabetes mellitus, hyper- and hypocalcemia, adrenal cortex hyper- and hypofunction, endocrine hypertension, gonadal disorders, hyper- and hyponatremia, certain manifestations of pituitary tumors, disorders of mineral metabolism, and hyperlipidemias.
2. Recognize Type 1 from Type 2 DM
3. Plan dietary therapy, oral hypoglycemic agents and insulin therapy for all diabetics, especially Type 2 DM patients
4. Plan and advice recommendations for weight loss
5. Understand the concept of tight control, standards of care and targets of control for both Type 1 and Type 2 DM patients
6. Learn the management of acute decompensation of diabetes, i.e. DKA, hyperosmolar state.
7. Learn how to use a multidisciplinary team approach to diabetes management (including role of cardiology, nephrology, ophthalmology and Podiatry).
8. Learn to interpret thyroid function tests, thyroid imaging and to initiate and follow patients on thyroid hormone replacement therapy.
9. Diagnosis, evaluation, differential diagnosis and management of overt and subclinical hyperthyroidism and hypothyroidism, thyroid storm and low uptake versus high uptake thyrotoxicosis.
10. Approach to thyroid nodules and thyroid cancer
11. Evaluate and develop treatment strategies for Pituitary disorders – pituitary tumors and hypopituitarism, diagnosis, difference between the various etiologies and replacement hormonal therapies.
12. Learn to approach adrenal diseases including Cushing's syndrome and adrenal insufficiency focus on acute and chronic adrenal insufficiency – diagnosis and management.
13. Evaluation, D/D and management of Hypercalcemia (focus on primary hyperparathyroidism) and Hypocalcemia, Osteoporosis, Osteopenia, Vitamin D deficiency.
14. Endocrine causes of secondary hypertension- Cost efficient evaluation and management.
15. Learn to recognize and treat Poly endocrine autoimmune syndromes.
16. Evaluate and treat male and female hypogonadism (focus on testosterone replacement Therapy.
17. HRT in females and related reproductive endocrine disorders.
18. Approach to endocrine incidentalomas – (pituitary, adrenal and thyroid with a focus on adrenal incidentalomas).
19. The general internist must be able to evaluate and manage common endocrine disorders and refer appropriately. He or she must also be able to evaluate and identify the endocrinologic

implications of abnormal serum electrolytes, hypertension, fatigue, and other nonspecific presentations.

20. The general internist plays a key role in managing endocrine emergencies, particularly those encountered in the intensive care unit, including diabetic ketoacidosis and hyperosmolar non ketotic stupor, severe hyper- and hypocalcemia and Addisonian crisis.

COMMON CLINICAL DISORDERS

- Pathophysiology of Type 1 & 2 diabetes
- Diagnostic criteria for Diabetes, Differentiate Type I vs. Type II
- Standards of care for a patient with Diabetes
- Targets of care for a patient with Diabetes
- Metabolic syndromes
- Importance & treatment of Metabolic syndrome
- Life style modifications in metabolic syndrome and diabetes
- Classes of oral anti hypoglycemic agents used and their mechanism of action. indications and contraindications for each class and side effects Insulin management in Type 1 and 2 DM
- Types of insulin available today (Rapid, Short, Intermediate, Basal, Premixed insulin preparations)
- Indications, contraindications, complications associated with insulin use
- Insulin protocols used in ICU setting including IV insulin therapy
- Acute diabetes complications, diagnosis and management
- Hyperlipidemia
- Combination therapy to treat diabetic dyslipidemia
- Thyroid function tests in diagnosing various thyroid dysfunction states.
- Interpretation of TSH, FT4, T3, T7, FTI, T3RU, Thyroglobulin
- Role of thyroid scan and radioactive iodine uptake – indications and contraindications for use
- Thyroid imaging – when to use it (ultrasound, CT scan, MRI. Role of PET scan)
- Hyperthyroidism; etiology, pathophysiology, clinical features, diagnosis and management
- Differentiate hyperthyroidism from thyrotoxicosis
- Differential diagnosis of hyperthyroidism (graves' disease vs toxic MNG, single hot nodule, thyroiditis etc)
- Thyroid hormone therapy
- Hypothyroidism: primary vs secondary hypothyroidism
- Diagnosis and management
- Thyrotoxic storm and myxedema coma
- Euthyroid sick syndrome
- Approach to thyroid nodules and thyroid cancer
- Endocrine hypertension
- Management – indications for surgery vs medical management
- Phaeochromocytoma:
- Approach to adrenal diseases
- Adrenal insufficiency
- Cushing's disease
- Hypocalcaemia and hypercalcaemia
- Osteoporosis, osteopenia, vitamin D deficiency

- Incidentalomas:
- Hypopituitarism including pituitary tumors:
- Prolactinomas and Acromegaly
- Hirsutism
- Male and Female Hypogonadism
- Testosterone replacement therapy in males
- Update on the HRT in females
- Polyendocrine autoimmune syndromes

COMMON CLINICAL PRESENTATIONS

- Asthenia
- Blood lipid disorders
- Breast discharge
- Change in menstrual, gonadal/sexual function
- Diarrhea
- Disorders of pigmentation
- Goiter (diffuse, nodular)
- Hirsutism
- Hypertension refractory to primary therapy
- Hypotension
- Incidentally discovered abnormalities in serum electrolytes, calcium, phosphate, or glucose
- Mental status changes
- Osteopenia
- Polyuria, polydipsia
- Signs and symptoms of osteopenia
- Symptoms of hyper- and hypoglycemia
- Symptoms of hypermetabolism
- Symptoms of hypometabolism
- Urinary tract stone
- Weight gain, obesity Procedure Skills
- Dexamethasone suppression test (overnight)
- Home blood glucose monitoring
- ACTH stimulation test

ORDERING AND UNDERSTANDING TESTS

- Bone mineral analysis (densitometry)

- Fasting and standardized postprandial serum glucose concentrations
- Glycohemoglobin or serum fructosamine concentration
- Imaging studies of the sellaturcica
- Microalbuminuria
- Serum alkaline phosphatase activity (for Paget's disease of bone)
- Serum and urine ketone concentrations (quantitative or qualitative)
- Serum and urine osmolalities
- Serum gonadotropin concentrations (follicle-stimulating hormone, luteinizing hormone)
- Serum lipid profile
- Serum phosphate concentration
- Serum prolactin concentration
- Serum testosterone concentration
- Serum thyroid function tests
- Thyroid scanning and ultrasound
- Urinary calcium, phosphate, uric acid excretion
- Urinary sodium, potassium excretion
- Urine metanephrine, VMA (vanillylmandelic acid), and total catecholamine levels

ATTRIBUTES REQUIRED OTHER THAN KNOWLEDGE:

Patient care	Evaluation of Patient Care	Professionalism	Interpersonal and Communication Skills	Practice Based Learning Improvement	Evaluation of Medical Knowledge
• Recognize symptoms of hyperglycemia and hypoglycemia. Seek pertinent physical exam and laboratory information to identify systemic complications that occur as a result of diabetes such as diabetic retinopathy, neuropathy, nephropathy, CAD, or gastroparesis. • Become familiar with the nutritional treatment of diabetes, aspects of home glucose monitoring, and the adjustments of hypoglycemic	• Completeness and accuracy of medical interviews and physical examinations. • Thoroughness of the review of the available medical data on each patient. • Performance of appropriate maneuvers and procedures on patients. • Accuracy and thoroughness of patient assessments. • Appropriateness of diagnostic and therapeutic decisions. • Soundness of medical judgment. • Consideration of patient preferences in making therapeutic decisions. • Completeness of medical charting.	• The resident should continue to develop his/her ethical behavior and the humanistic qualities of respect, compassion, integrity, and honesty. • The resident must be willing to acknowledge	• The resident should learn when to call a subspecialist for evaluation and management of a patient with an endocrine disease. • The resident should be able to clearly present the consultation cases to the staff in an organized and thorough manner. • The resident must be able to establish a rapport with the patients and listens to the patient's	The resident should use feedback and self-evaluation in order to improve performance. The resident should read the required material and articles provided to enhance learning. The resident should use the medical literature search tools in the library to find appropriate articles related to interesting cases.	• The resident's ability to answer directed questions and to participate in the didactic sessions. • The resident's presentation of assigned short topics. These will be examined for their compl

therapy required in association with abnormal glucose levels, exercise, concurrent illness, surgical procedures, etc. • The resident will be taught to do an appropriate and thorough foot exam of diabetic patients, including the use of the monofilament for neuropathy testing. • Identify signs and symptoms of thyrotoxicoses and hypothyroidism. The resident will be taught perform an		errors and determine how to avoid future similar mistakes. • The resident must be responsible and reliable at all times. • The resident must always consider the needs of patients, families, colleagues, and support staff. • The resident must maintain a professional appearance at all times.	complaints to promote the patient's welfare. • The resident should provide effective education and counseling for patients. • The resident must write organized and legible notes.		eteness, accuracy, organization, and the resident's understanding of the topic. • The resident's ability to apply the information learned in the didactic sessions to the patient care setting. • The resident's

adequate examination of the thyroid gland and this will be specifically demonstrated during this rotation. • The resident may observe or have the technique of fine needle aspiration for sampling thyroid nodules explained if none are done during the month. • Identify signs and symptoms of lipid disorders and their management, including the use of the National Cholesterol Education Program guidelines for treatment. • Identify signs and symptoms of adrenal disorders and their management, including the use of the cosyntropin stimulation test. • Identify signs and symptoms of pituitary disorders and their management. • Identify signs			• The resident must communicate any patient problems to the staff in a timely fashion.		interest level in learning.

and sympto ms of bone and calcium disorder s and their manage ment includin g interpre tation of bone density tests. • Identify signs and symptoms of gonadal disorders and their management.					

TEACHING STRATEGIES:

- The resident will receive individual instruction by the endocrine specialist through seeing patients in the endocrine outpatient clinics, the consult service and didactic teaching sessions
- The resident will see patients referred from the general medicine clinics and this will allow the resident to see a wide variety of patients from various ages, socioeconomic, educational, and cultural backgrounds.
- Each outpatient will be evaluated by the resident, and then discussed and seen with the staff endocrinologist.
- The resident must complete a thorough progress note on every outpatient and this must be countersigned by the staff endocrinologist.
- All endocrinology inpatient consults will be seen and consultation notes completed by the resident, the cases must be discussed with the endocrinology faculty who will then see the patient with the resident, do bedside teaching rounds, and complete the consultation note.
- Didactic teaching lectures
- The residents will be responsible for reviewing 2-3 general endocrine topics for the month and giving short presentations on these topics
- Clinico pathological conferences
- Journal club meetings
- Problem based learning
- Case based learning
- Interactive seminars

ASSESSMENT:

- OSCE
- MCQs
- SEQs
- Long case
- Short case

EVALUATION/FEEDBACK:

- 360 degree evaluation to judge the professionalism, ethics
- The faculty will fill out the standard evaluation form using the criteria for evaluations as delineated above to grade the resident in the required competencies as related to endocrinology.
- The residents will fill out an evaluation of the endocrine rotation at the end of the month.

- Any constructive criticism, improvements, or suggestions to further enhance the training in endocrinology are welcome at any time.
- The resident should receive frequent (generally daily) feedback in regards to his or her performance during the endocrinology rotation. The resident will be informed about the results of the evaluation process, and input will be requested from the resident in regards to his or her evaluation of the endocrinology rotation.

- The faculty is encouraged to use the "early concern" and "praise card" throughout the rotation.
- A formal evaluation and verbal discussion with the resident is to be done at the end of the rotation.

Suggested readings:

1. Section on endocrine-metabolic disease in Harrison's Principles ofInternal Medicine, McGraw-Hill publisher
2. Section on endocrine-metabolic disease in Cecil's Textbook ofMedicine, WB Saunders Publisher
3. MKSAP booklet on Endocrinology
4. **Medical literature:**A collection of updated review articles will also be provided which address basic areas of endocrinology. The resident is strongly encouraged to read as many of these articles as possible.
5. **Pathology :**All FNA's and surgical specimens will be reviewed by the resident and staff endocrinologist with a pathologist.

A. GASTROENTEROLOGY

Educational Purpose:

To give the residents formal instruction, clinical experience, and opportunities to acquire expertise in the evaluation and management of gastroenterological disorders.

CONTENT OF REQUIRED KNOWLEDGE:the major objectives are as following

1. To provide Residents with opportunities to evaluate and manage patients with a wide variety of digestive disorders in an inpatient and outpatient setting. The Resident will act, under the supervision of the attending gastroenterologist, as a consultant to other clinical services.
2. To give Residents opportunities to learn about various aspects of a broad range of GI, liver and pancreatic disorders, with emphasis on the more common disorders.
3. To provide Residents with opportunities to learn the indications, contraindications, complications, limitations and alternatives for GI procedures.
4. Additional areas include knowledge of nutrition and nutritional deficiencies, and screening and prevention, particularly for colorectal cancer. The general internist should have a wide range of competency in gastroenterology and should be able to provide primary and in some cases secondary preventive care, evaluate a broad array of gastrointestinal symptoms, and manage many gastrointestinal disorders.

Common Clinical Disorders

- Malabsorptive/Nutritional disorders
- Inflammatory Bowel Disease
- Irritable Bowel Syndrome
- Peptic Ulcer Diseases
- Malignancies of the Digestive System
- GI disorders and pregnancy
- Gastrointestinal Emergencies
- Indications/complications of GI procedures
- Viral hepatitis
- Chronic liver disease and Cirrhosis
- GI motility disorders
- Biliary disorders
- Pancreatic disorders
- Common Clinical Presentations
- Abdominal distention
- Abdominal pain
- Abnormal liver function test
- Anorectal discomfort, bleeding, or pruritus
- Anorexia, weight loss
- Ascites
- Constipation

- Diarrhea
- Excess intestinal gas
- Fecal incontinence
- Food intolerance
- Gastrointestinal bleeding
- Heartburn
- Hematemesis
- Indigestion
- Iron-deficiency anemia
- Jaundice
- Liver failure
- Malnutrition
- Melena
- Nausea, vomiting
- Non-cardiac chest pain
- Swallowing dysfunction
- **Procedure Skills**
- Flexible sigmoidoscopy
- Paracentesis
- Placement of nasogastric tube
- Sengstaken-Blakemore tube (optional)
- **Primary Interpretation of Tests**
- Fecal leukocytes
- Test for occult blood
- **Ordering and Understanding tests**
- 24-Hour esophageal motility studies and pH monitoring
- Assays for Helicobacter pylori
- Biopsy of the gastrointestinal mucosa
- Blood tests for autoimmune, cholestatic, genetic liver diseases
- Upper endoscopy
- Colonoscopy
- Computed tomography, magnetic resonance imaging, ultrasound of the abdomen
- Contrast studies (including upper gastrointestinal series, small-bowel follow through, barium enema)
- Culture of stool for ova, parasites
- D-Xylose absorption test and other small bowel absorption tests
- Endoscopic retrograde cholangio-pancreatography
- Esophageal manometry
- Examination for stool for ova, parasites
- Fecal electrolytes
- Fecal osmolality
- Interpretation of fecal occult blood tests.
- Gall bladder radionuclide scan
- Gastric acid analysis, serum gastrin level, secretin stimulation test
- Viral hepatitis serology

- Lactose and hydrogen breath tests
- Laparoscopy
- Laxative screen
- Liver biopsy
- Paracentesis and interpretation of ascitic fluid analysis
- Mesenteric arteriography
- Percutaneous transhepatic cholangiography
- Qualitative and quantitative stool fat
- Scans of gastric emptying
- Serum B12 and Schilling tests

ATTRIBUTES REQUIRED OTHER THAN KNOWLEDGE:

Professionalism	**Interpersonal and Communication Skills**	**Practice Based Learning Improvement**	**Evaluatio Knowledg**
• Respect for the risks and benefits of diagnostic and therapeutic Procedures. • Prudent, cost-effective and judicious use of special instruments, test • and therapy in the diagnosis and management of gastroenterologicdisorders. • Appropriate method of calling gastroenterology consults. • Need for continually reading current literature on gastroenterology–liver diseases to stay current in terms of diagnosis and treatment of diseases	• The ability to ask gastroenterology consultants a precise and clear Question. • The development of critical reading skills for the gastroenterology literature. • Ability to give clear patient presentations to consultants and at conferences in gastroenterology.	• The resident should use feedback and self-evaluation in order to improve performance. • The resident should read the required material and articles provided to enhance learning. • The resident should use the medical literature search tools in the library to find appropriate articles related to interesting cases.	• Co wi ph • Pa co wi • Pr res do inc dia co ass su the inc • Mi ses me res • Th ou ga the

TEACHING STRATEGIES:

- Patients with gastrointestinal disorders and clinical problems are seen by residents during their

internal medicine ward rotations, gastroenterology consult service rotation, and in the outpatient clinics.

- Gastroenterology faculty provides didactic teaching.
- Grand teaching rounds.
- Residents participate in outpatient care at the weekly gastroenterology clinic.
- Residents become familiar with diagnostic and therapeutic upper endoscopy, colonoscopy, ERCP, capsule endoscopy, liver biopsy, and esophageal motility studies in our modern endoscopy unit and radiology department.
- Teaching skills in the procedure rooms and skill laboratory
- Didactic lectures
- Interactive Seminars
- Problem based learning
- Case based learning
- Clinic pathological conferences

ASSESSMENT:

- OSCE
- MCQs
- SEQs
- Long case
- Short case

EVALUATION/FEEDBACK:

1. **Resident Evaluation:** The faculty will fill out the standard evaluation form using the criteria for required competencies as related to gastroenterology.
2. **Program Evaluation**
    i. The residents will fill out an evaluation of the gastroenterology rotation at the end of the month.
    ii. Any constructive criticism, improvements, or suggestions to further enhance the training in gastroenterology are welcome at any time.
3. Residents will receive feedback with respect to achieving the desired level of proficiency and working out ways in which they can enhance their performance when the desired level of proficiency has not been achieved.
4. The faculty is encouraged to use the "early concern" and "praise card" throughout the rotation.
5. A formal evaluation and verbal discussion with the resident is to be done at the end of the rotation.

SUGGESTED READINGS:

1. Allied hospitals of Rawalpindi Medical University have large patient populations with a broad spectrum of gastrointestinal and liver diseases.
2. Pathology and Radiology department of Allied hospitals of Rawalpindi Medical University have excellent diagnostic testing services available.
3. Medical Literature: Articles related to major topics will also be made available.
4. The resident will be oriented to the major textbooks and journals in gastroenterology and hepatology available in Rawalpindi Medical University.

B. GENERAL MEDICINE CONSULT SERVICE

Educational Purpose:

A. To provide internal medicine residents with the required knowledge base, patient care skills, interpersonal and communication skills, professionalism training and practice-based learning skills to function effectively as a consultant to all other medical specialties.

B. To perform a comprehensive preoperative evaluation and optimal postoperative follow up of patients for non-cardiac surgery using a systematic approach based on clinical practice guidelines and other pertinent current literature.

CONTENT OF REQUIRED KNOWLEDGE:

A. Access and critically evaluate the medical literature relevant to the cases seen on the service.

B. Review articles on core topics required during the rotation addressing:
   1. Fundamentals of the Medical Consultation
   2. Perioperative Cardiac Risk Assessment and Testing
   3. Perioperative Deep Vein Thrombosis Prophylaxis and Perioperative Anticoagulation Management
   4. Perioperative Diabetes Management

C. Expand the resident's knowledge base in consultative medicine focusing specifically on perioperative care, psychiatry, pregnancy, and neurology.

ATTRIBUTES REQUIRED OTHER THAN KNOWLEDGE:

Patient care	**Professionalism**	**Interpersonal and Communication Skills**	**Practi Impro**
• Competently interview and examine patients about to undergo an operative procedure or referral by a non-internal medicine service for evaluation of a medical condition. • Obtain all other necessary medical information by chart review and review of all other available data. • Make informed recommendations about diagnostic and therapeutic options and interventions based on clinical judgment, scientific	• Establish a professional patient-physician, physician-family and physician-physician relationships. Respond sensitively to gender, age, culture, religion, socioeconomic status, and beliefs of patients and professional colleagues.	• Communicate effectively with patients and families on the consultative service. • Communicate promptly, concisely, and respectfully both verbally and through the written record with all other physicians and providers involved in the care of the patient. • Promptly and	•

evidence, and patient preference. • Competently and efficiently manage all perioperative and general medical problems as requested by the consulting physician.	• Follow HIPPA rules on confidentiality, scientific integrity, and informed consent. • Provide clear medical record documentation is expected to avoid all chart conflicts. • Clearly and respectfully communicate and explain recommendations and plan of care to consulting physician and staff.	professionally answer all questions raised by the consulting physician. • Encourage further consultation by eagerness, promptness, helpfulness, and competence. • Assure smooth delegation of patient care responsibilities during outpatient clinic duties.	• •

TEACHING STRATEGIES:

- Self-directed learning
- Problem based learning
- Didactic lectures
- Case based learning
- Interactive seminars

ASSESSMENT:

- OSCE
- MCQs
- SEQs
- Long case
- Short case

EVALUATION/FEEDBACK:

- 360 degree evaluation to judge the professionalism, ethics
- All Residents in the Department of Internal Medicine receive formal evaluation on standardized evaluation and feedback forms during the rotation
- Resident and faculty should schedule a face to face discussion of the learning experience on the consultation service.

SUGGESTED READINGS:Essential reading material on core topics with the purpose to fulfill the objective of basic medical knowledge will be provided to develop the basis of an effective Internal Medicine consultant. Core topics are:

1. ***Fundamentals of the Medical Consultation***

   Perioperative risk assessment and medical management of medical conditions entails balancing estimated risk against expected benefits of the surgery. Beyond the teaching of clinical and technical skills to solve the problem the objective of this section is to outline the ethical principles to establish an adequate relationship with patient and consulting physicians.

2. Review of two chapters from the book "Medical Consultation: The Internist on Surgical, Obstetric, and Psychiatric Services" by Richard J. Gross and William Kammerer is encouraged to better understand the role of the Internist as a consultant and to clearly define the ethical principles to follow.

3. ***Perioperative Cardiac Risk Assessment and Testing***

   The goal is to provide an evidence based strategy to follow during for the perioperative cardiac risk assessment and management. This goal has the purpose of teaching residents the significance of preoperative testing and perioperative intervention of patients with ischemic and non-ischemic heart disease.

4. Residents are expected to develop competency in five specific areas including perioperative evaluation and management of ischemic

heart disease, hypertension, congestive heart failure, arrhythmias and valvular heart disease.

5. ***Perioperative Deep Vein Thrombosis Prophylaxis and Perioperative Anticoagulation Management:*** The main objective is to provide residents with the tools to choose an optimal strategy to minimize perioperative risk for embolic disease due to coagulopathy or bleeding due to intervention.
6. ***Perioperative Diabetes Management:*** A common reason for consultation is perioperative management of diabetes. The objective of the review of suggested literature is to reinforce the concept of tight blood glucose control in the perioperative and in hospital setting to minimize short and long term mortality, morbidity and length of stay.
7. ***Other topics recommended for self-study***

- Perioperative management of patients with neurologic disease.
- Perioperative evaluation and management of pulmonary complications.
- Perioperative management of patients with end stage renal disease.
- Perioperative assessment and management of patients with psychiatric disorders.

Perioperative evaluation of patients with liver diseases

C. ***NEUROLOGY***

Educational Purpose:

To give residents formal instruction, clinical experience, and the opportunity to acquire expertise necessary to evaluate and manage neurological diseases.

General objectives of Neurology course:

At the end of the Neurology course the resident should have achieved the following objectives:

1. The general internist should possess a broad range of competency in neurology and the knowledge should encompass the prevention and management of disorders of the central and peripheral nervous systems.
2. Knowledge of therapeutics, surgical and medical and primary and secondary prevention of neurologic diseases and should be familiar with the presenting

features, diagnosis, and treatment of common neurologic disorders and other conditions, such as headache, caused by non-neural dysfunction

3. Interpreting the significance of neurological symptoms.
4. He or she should be able to perform and interpret a detailed neurologic examination.
5. Interpreting the signs obtained in the examination
6. Localization of diseases process in the nervous system
7. Integration of symptoms and signs into neurological syndromes and recognizing neurological illnesses
8. Making a differential diagnosis
9. Learning the basis of neuroimaging (CT scan, MRI), and electrodiagnostic studies (EEG's and EMG's)
10. Utilizing laboratory data to complete topographic and etiologic diagnoses
11. Defining pathophysiologic mechanisms of disease processes
12. Formulating plan for investigation and management
13. Assessing prognosis
14. Understanding main neurological manifestations of systemic diseases
15. Identifying emergencies and need for expert assistance
16. The general internist may encounter neurologic disorders in various settings, including ambulatory care, hospital, long-term care, and home care.
17. In communities where a neurologist is not available, the general internist may be a consultant for some complex neurologic disorders (for example, control of status epilepticus).

CONTENT OF REQUIRED KNOWLEDGE*:*

Common Clinical Disorders:

- Headache
- Facial Pain
- Inflammatory meningeal and encephalitic lesions
- Epilepsy
- Syncope and Dysautonomia
- Sensory Disturbances
- Weakness and Paralysis
- Transient Ischemic Attacks
- Stroke
- Intracranial and Spinal Space-Occupying Lesions.
- Nonmetastatic Neurologic Complications of Malignant Disease.
- PseudotumorCerebri
- Selected Neurocutaneous Diseases
- Movement Disorders
- Dementia

- Multiple Sclerosis
- Vitamin E Deficiency
- Spasticity
- Myelopathies in AIDS
- Myelopathy of Human T Cell Leukemia Virus
- Subacute Combined Degeneration of the Spinal Cord.
- Wernicke's Encephalopathy
- Stupor and Coma
- Head Injury
- Spinal Trauma
- Syringomyelia
- Motor Neuron Diseases
- Peripheral Neuropathies
- Discogenic Neck Pain
- Brachial and Lumbar Plexus Lesions
- Disorders of Neuromuscular Transmission
- Myopathic Disorders
- Periodic Paralysis Syndrome

Common Clinical Presentations

- Abnormal speech
- Abnormal vision
- Altered sensation
- Confusion
- Disturbed gait or coordination
- Dizziness, vertigo
- Headache
- Hearing loss
- Localized pain syndromes: Facial pain, radiculopathy
- Loss of consciousness
- Memory impairment
- Seizure
- Sleep disorder
- Tremor
- Weakness/paresis (generalized, localized)

Procedure Skills

- Caloric stimulation test
- Tensilon (edrophonium chloride) test (optional)
- Lumbar Puncture

Ordering and Understanding Tests

- Anticonvulsant drug levels
- Carotid Doppler echo scans

- Computed tomography, magnetic resonance imaging of central nervous system
- Digital intravenous angiography
- Electroencephalography, evoked potentials (visual, auditory, sensory)
- Electromyography, nerve conduction studies
- Muscle biopsy
- Myelography
- Screen for toxins, heavy metals
- Sleep study

ATTRIBUTES REQUIRED OTHER THAN KNOWLEDGE:

System based learning	Professionalism	Interpersonal and Communication Skills	Practice Based Learning Improvement
• Residents should gain insight into and appreciation of the psychosocial effects of chronic illness. • Residents should enhance their utilization of communication with many health services and professionals such as nutritionists, nurse clinicians, physician assistants, social workers podiatrist, ophthalmologist, physical therapist, surgeon, radiologist and nuclear medicine specialist. • Residents should learn the importance of preventive medicine in	• Development of ethical behavior and humanistic qualities of respect, compassion, integrity, and honesty • Willing to acknowledge errors and determine how to prevent them in the future • Responsibility and reliability at all times • Consideratio n of needs from patients,	• Residents should be able to decide when to call another specialist for evaluation and management on a patient with a neurological disease. • Residents should be able to clearly present the problem to the consultant and ask a precise question to the consultant. • Residents should continue to develop their ethical behavior and the humanistic qualities of respect, compassion, empathy, and rapport with patients and family to	• Use feedbac and s evaluat to improv perform ce • Read require materia from textboo journals and handou • Use medica literatu search tools the libr and through on-line find appropr

routine health care and specifically in the area of neurological disease management. • Residents should be knowledgeable on the use of cost effective medicine • Residents will assist in development of systems of improvements to correct identified problems.	families, colleagues and support staff • Professional appearance at all times	promote the patient's welfare. • Residents should provide effective education and counseling to patients. • Residents must write organized and legible notes. • Residents must communicate to the staff in a timely fashion any problem or conflict that arouse during interaction with the patients.	e artic that ap to interest cases.

TEACHING STRATEGIES:

- Residents will evaluate outpatients and will discuss findings with neurologists. Residents must complete a thorough progress note on every outpatient and this must be countersigned by the neurology faculty or professor in charge.
- Residents will provide indigent care and will examine patients referred to Neurology from other departments. This will allow the residents to see a wide variety of patients from various ages, social economic, educational, and cultural backgrounds.
- Residents will see the inpatient consults, and gather information from chart, radiology and laboratory reports. Residents then will discuss all this information with the staff neurologists as part of the bedside teaching round.
- Residents will follow their assignedadmitted patients as their own until patients are released.
- Didactic lectures
- Case based learning
- Problem based learning
- Interactive seminars
- Small group discussion
- Clinico- pathological conference
- Neurology Grand Round given by visiting professors.

- Shortpresentation by the residents on one general Neurology topic per week.
- Follow up clinics
- Other responsibilities include providing continuity of care for Neurology clinic patients seen by prior clinic residents. This consists of returning phone calls and reviewing patient lab. work. Any questions concerning this care will be discussed with the Neurology staff.

ASSESSMENT:

- OSCE
- MCQs
- SEQs
- Long case
- Short case

EVALUATION/FEEDBACK:

A. **Residents Evaluation:**
   - 360 degree evaluation to judge the professionalism and ethics
   - The Faculty will fill out the standard Evaluation Form using the criteria for evaluations to grade the residents' performance in required competencies.

B. **Program Evaluation:** The residents will fill out an evaluation of the Neurology rotation at the end of the month. This will include constructive criticism for improvement; or suggestions to further enhance training.

Suggested readings:

i. Gilmans, Newman SW: Maner and Gatz's Essentials of clinical neuroanatomy and neurophysiology. Philadelphia FA Davis Co. 1994.
ii. Adams RD, Victor M: Principles of Neurology, current edition. McGraw-Hill Publisher.

iii. Section on Neurology in Harrison's Principles of Internal Medicine; McGrew–Hill, Publisher.
iv. Section on Neurology in Cecil's Textbook of Medicine, WB Saunders, Publisher.
v. The Neurologic Examination. Russell De Yong, current edition.
vi. Patten J. Neurological differential diagnosis. Springer, Publisher, 1995
vii. Patten and Posner, Stupor and coma. Current edition.
viii. Medical Literature: A collection of updated review articles will also be provided which address all basic areas of Neurology. Residents are strongly encouraged to read as many of these articles as possible. In addition residents are encouraged to read basic neurological journals such as Neurology, Archives of Neurology and Annals of Neurology.
ix. Neuroimaging: There shall a formal instruction to interpret of neuroimaging techniques.

D. PSYCHIATRY

Educational Purpose:

To give residents formal instruction, clinical experience, and the opportunity to acquire expertise necessary to evaluate and manage some psychiatric diseases commonly seen in Internal Medicine patients and to know when to request consultation services.

General objectives of the psychiatry course:

1. Understanding of the prevention and treatment of mental disorders and associated emotional, behavioral and stress-related problems.
2. Given a patient with a chief complaint residents will: a) perform a focused history, b) request appropriate diagnostic tests, c) formulate a set of working diagnoses, d) formulate appropriate treatment plans including referrals.
3. In general internal medicine practice, management of risk factors for mental disorders and early diagnosis and intervention for established disease (primary and secondary prevention) are important elements.
4. The general internist should have a wide range of competency in psychiatric disease, particularly as it is encountered in outpatient settings and should be able to diagnose symptoms and use pharmacotherapy, behavioral modification, and counseling to provide primary and secondary preventive care and initially manage many mental disorders.
5. Patients hospitalized for general medical problems and those in the intensive care unit may have significant psychiatric comorbidity that contributes to general medical morbidity and length of stay. In these and all other settings, the general internist must be able to evaluate and manage psychiatric co morbidity effectively with appropriate specialty consultation.

6. The range of competencies expected of a general internist will depend on the availability of psychiatrists in the primary practice setting. Refractory cases and patients with mental disorders requiring psychotherapeutic interventions will generally be referred to a psychiatric hospitalization.
7. Demonstrate appropriate approaches to the execution of a psychiatric consultation.
8. Quickly develop a therapeutic alliance with medically ill patients.
9. Evaluate for psychopathologic processes in patients with concomitant medical and surgical conditions.
10. Advice and guide consultees about the role of psychosocial factor in medical disease and the effect of medications on the patient are presenting symptoms.

11. Demonstrate the use of the liaison process to increase awareness of the psychiatric issues of the medically and surgically ill among non-psychiatrist staff.
12. Understand the impact of illness, hospitalization and medical care on the psychological functioning of patients.
13. Understand the role of psychiatric, psychological and behavioral factors in the pathogenesis of medical disorders.
14. Develop a fund of knowledge about psychiatric issues pertaining to medical patients through didactic means including teaching rounds, selected readings and seminars.
15. Discuss the liaison process and its utility within the hospital setting.
16. Understand the use of psychotropic medications and ECT in medical/surgical patients, including physiological effects, contraindications, drug interactions, and dosing concerns.
17. Understand the use of non-organic treatments, including brief psychotherapy, behavioral management techniques, family interventions and psychoeducation.

CONTENT OF REQUIRED KNOWLEDGE:

Common Clinical Disorders

- Psychiatric assessment of common psychiatric disorders.
- Substance use disorders.
- Delirium, dementia and other cognitive disorders
- Geriatric psychiatric disorders
- Psychiatric problems associated with hospitalization and medical and surgical disorders
- Common Clinical Presentations
- Agitation or excitement

- Anxiety
- Confusion
- Delusions or bizarre beliefs
- Depressed or sad mood
- Fatigue
- Hallucinations
- Insomnia
- Memory loss
- Poor hygiene or self-care
- Strange speech or behavior
- Suicide risk
- Suspiciousness or feelings of persecution
- Unexplained changes in personality or performance
- Unexplained physical symptoms suggesting somatization

Procedure Skills

- Depression inventory
- Mental status examination, including standardized cognitive examinations when indicated
- Ordering and Understanding Tests
- Electroencephalography
- Neuropsychological evaluation

ATTRIBUTES REQUIRED OTHER THAN KNOWLEDGE:

System based learning	**Professionalism**	**Interpersonal and Communication Skills**	**Practice Based Learning Improvement**
• Residents should enhance their utilization of communication with many health services and professionals such as nutritionists, nurse clinicians, physician assistants, social workers podiatrist, ophthalmologist, physical therapist, surgeon,	• Development of ethical behavior and humanistic qualities of respect, compassion, integrity, and honesty	• Residents must write organized and legible notes. • Residents must communic	• Use feedbac and sel evaluation t improve performance • Read th required material fro

radiologist and nuclear medicine specialist. • Residents should learn the importance of preventive medicine in routine health care and specifically in the area of psychiatric disease management. • Residents should be knowledgeable on the use of cost effective medicine. • Residents will assist in development of systems of improvements to correct identified problems	• Willing to acknowledge errors and determine how to prevent them in the future • Responsibility and reliability at all times Consideration of needs from patients, families, colleagues and support staff • Professional appearance at all times	ate to the staff in a timely fashion any problem or conflict that arises during interaction with the patients.	textbook, journals ar handouts • Use medical literature search tools at the library and through on-line to find appropriate articles that apply to interesting cases.

TEACHING STRATEGIES:

1. Residents will provide indigent care and will examine patients referred to Psychiatry from other departments. This will allow the residents to see a wide variety of patients from various ages, social economic, educational, and cultural backgrounds.
2. Resident shall see the inpatient, and gather information from chart, radiology and laboratory reports. Residents then will discuss all this information with the staff psychiatrist as part of the bedside teaching rounds.
3. Residents must complete a thorough progress note on every patient, and this must be countersigned by the psychiatry staff member in charge of the rotation.
4. Residents will follow the assigned patients under supervision until the patients are released from the hospital.
5. Residents will be responsible for reviewing one general Psychiatry topic per week and giving a short presentation
6. Resident shall participate in outpatient psychiatric management

7. Grand teaching rounds
8. Didactic lectures
9. Seminars
10. Workshops
11. Problem based learning
12. Case based learning
13. Journal club meeting
14. Self-directed learning

ASSESSMENT:

- OSCE
- MCQs
- SEQs
- Long case
- Short case

EVALUATION/FEEDBACK:

- **Resident Evaluation:**
    - 360 degree evaluation to judge the professionalism and ethics
    - The Faculty will fill out the standard Evaluation Form using the criteria for evaluations as delineated above to grade the residents' performance in each category of competency.

- **Program Evaluation**: The resident will fill out an evaluation of the Psychiatry rotation at the end of the month. This will include constructive criticism for improvement; or suggestions to further enhance training.

- Residents should receive frequent (generally daily) feedback in regards to their performance during the rotation. Residents will be informed about the results of the evaluation process and input will be requested from residents in regards to their evaluation of the Psychiatry rotation.

- There will be a formal evaluation and verbal discussion with the resident at the end of the rotation

SUGGESTED READINGS:

A. Mandatory Reading:

Wise, MG, Rundell, JR: Clinical Manual of Psychosomatic Medicine: A Guide to Consultation-Liaison Psychiatry. American Psychiatric Publishing, Washington, DC. 2005.

B. Suggested Reading:

Stern, TA, Herman, JB, and Slavin, PL: Massachusetts General Hospital Guide to Primary Care Psychiatry, 2nd ed. McGraw-Hill Companies, Inc. New York. 2004.

E. RADIOLOGY

Educational Purpose:

To give residents formal, informal instruction and clinical experience in the evaluation and clinical correlation of the results of various imaging techniques utilized in a modern radiology department.

General objectives for Radiology course:

1. The ability to understand the principles of radiological studies
2. Utilization of imaging techniques in the acutely injured or ill patient
3. Effective evaluation of acute chest and abdominal conditions
4. Therapeutic and diagnostic interventions with imaged guided procedures
5. Basics aspects of medical radiation exposure and protection
6. Physiologic principles of nuclear medicine and functional MRI
7. Newer neuroimaging techniques for cerebral diseases and conditions
8. Awareness and use of the data base that exists in radiology

CONTENT OF REQUIRED KNOWLEDGE:

1. Fundamentals of chest roentgenology
2. Basics of radiology of heart disease
3. Differential diagnoses in cardiac disease
4. Plain film of the abdomen
5. Approach to Small Bowel Disease
6. Differential Diagnoses in GI Disease
7. Differential Diagnoses in MSK Disease
8. Radiological findings of Chest diseases

9. Radiological findings of Liver diseases
10. Radiological findings of Pancreas diseases
11. Radiological findings of Trauma diseases
12. Basics of CT scan, interpretation & diagnosis of common diseases
13. Basics of MRI scan, interpretation & diagnosis of common disease

F. PSYCHIATRY

Educational Purpose:

To give residents formal instruction, clinical experience, and the opportunity to acquire expertise necessary to evaluate and manage some psychiatric diseases commonly seen in Internal Medicine patients and to know when to request consultation services.

General objectives of the psychiatry course:

18. Understanding of the prevention and treatment of mental disorders and associated emotional, behavioral and stress-related problems.
19. Given a patient with a chief complaint residents will: a) perform a focused history, b) request appropriate diagnostic tests, c) formulate a set of working diagnoses, d) formulate appropriate treatment plans including referrals.
20. In general internal medicine practice, management of risk factors for mental disorders and early diagnosis and intervention for established disease (primary and secondary prevention) are important elements.
21. The general internist should have a wide range of competency in psychiatric disease, particularly as it is encountered in outpatient settings and should be able to diagnose symptoms and use pharmacotherapy, behavioral modification, and counseling to provide primary and secondary preventive care and initially manage many mental disorders.
22. Patients hospitalized for general medical problems and those in the intensive care unit may have significant psychiatric comorbidity that contributes to general medical morbidity and length of stay. In these and all other settings, the general internist must be able to evaluate and manage psychiatric co morbidity effectively with appropriate specialty consultation.
23. The range of competencies expected of a general internist will depend on the availability of psychiatrists in the primary practice setting. Refractory cases and patients with mental disorders requiring psychotherapeutic interventions will generally be referred to a psychiatric hospitalization.
24. Demonstrate appropriate approaches to the execution of a psychiatric consultation.
25. Quickly develop a therapeutic alliance with medically ill patients.
26. Evaluate for psychopathologic processes in patients with concomitant medical and surgical conditions.
27. Advice and guide consultees about the role of psychosocial factor in medical disease and the effect of medications on the patient are presenting symptoms.

28. Demonstrate the use of the liaison process to increase awareness of the psychiatric issues of the medically and surgically ill among non-psychiatrist staff.
29. Understand the impact of illness, hospitalization and medical care on the psychological functioning of patients.
30. Understand the role of psychiatric, psychological and behavioral factors in the pathogenesis of medical disorders.
31. Develop a fund of knowledge about psychiatric issues pertaining to medical patients through didactic means including teaching rounds, selected readings and seminars.
32. Discuss the liaison process and its utility within the hospital setting.
33. Understand the use of psychotropic medications and ECT in medical/surgical patients, including physiological effects, contraindications, drug interactions, and dosing concerns.
34. Understand the use of non-organic treatments, including brief psychotherapy, behavioral management techniques, family interventions and psychoeducation.

CONTENT OF REQUIRED KNOWLEDGE:

Common Clinical Disorders

- Psychiatric assessment of common psychiatric disorders.
- Substance use disorders.
- Delirium, dementia and other cognitive disorders
- Geriatric psychiatric disorders
- Psychiatric problems associated with hospitalization and medical and surgical disorders
- Common Clinical Presentations
- Agitation or excitement
- Anxiety
- Confusion
- Delusions or bizarre beliefs
- Depressed or sad mood
- Fatigue
- Hallucinations
- Insomnia
- Memory loss
- Poor hygiene or self-care
- Strange speech or behavior

- Suicide risk
- Suspiciousness or feelings of persecution
- Unexplained changes in personality or performance
- Unexplained physical symptoms suggesting somatization

PROCEDURE SKILLS

- Depression inventory
- Mental status examination, including standardized cognitive examinations when indicated
- Ordering and Understanding Tests
- Electroencephalography
- Neuropsychological evaluation

ATTRIBUTES REQUIRED OTHER THAN KNOWLEDGE:

System based learning	**Professionalism**	**Interpersonal and Communication Skills**	**Practice Based Learning Improvement**
• Residents should enhance their utilization of communication with many health services and professionals such as nutritionists, nurse clinicians, physician assistants, social workers podiatrist, ophthalmologist, physical therapist, surgeon, radiologist and nuclear medicine specialist. • Residents should learn the importance of preventive medicine in routine health care and specifically in the area of psychiatric disease	• Development of ethical behavior and humanistic qualities of respect, compassion, integrity, and honesty • Willing to acknowledge errors and determine how to prevent them in the future • Responsibility and reliability at all times	• Residents must write organized and legible notes. • Residents must communic ate to the staff in a timely fashion any problem or conflict that arises	• Use feedbac and sel evaluation t improve performance • Read th required material fro textbook, journals an handouts • Use medical literature search tools at the library

management. • Residents should be knowledgeable on the use of cost effective medicine. • Residents will assist in development of systems of improvements to correct identified problems	Consideration of needs from patients, families, colleagues and support staff • Professional appearance at all times	during interaction with the patients.	and through on-line to find appropriate articles that apply to interesting cases.

TEACHING STRATEGIES:

15. Residents will provide indigent care and will examine patients referred to Psychiatry from other departments. This will allow the residents to see a wide variety of patients from various ages, social economic, educational, and cultural backgrounds.
16. Resident shall see the inpatient, and gather information from chart, radiology and laboratory reports. Residents then will discuss all this information with the staff psychiatrist as part of the bedside teaching rounds.
17. Residents must complete a thorough progress note on every patient, and this must be countersigned by the psychiatry staff member in charge of the rotation.
18. Residents will follow the assigned patients under supervision until the patients are released from the hospital.
19. Residents will be responsible for reviewing one general Psychiatry topic per week and giving a short presentation
20. Resident shall participate in outpatient psychiatric management
21. Grand teaching rounds
22. Didactic lectures
23. Seminars
24. Workshops
25. Problem based learning
26. Case based learning
27. Journal club meeting
28. Self-directed learning

ASSESSMENT:

- OSCE
- MCQs
- SEQs
- Long case
- Short case

EVALUATION/FEEDBACK:

- **Resident Evaluation:**
    - 360 degree evaluation to judge the professionalism and ethics
    - The Faculty will fill out the standard Evaluation Form using the criteria for evaluations as delineated above to grade the residents' performance in each category of competency.

- **Program Evaluation**: The resident will fill out an evaluation of the Psychiatry rotation at the end of the month. This will include constructive criticism for improvement; or suggestions to further enhance training.

- Residents should receive frequent (generally daily) feedback in regards to their performance during the rotation. Residents will be informed about the results of the evaluation process and input will be requested from residents in regards to their evaluation of the Psychiatry rotation.

- There will be a formal evaluation and verbal discussion with the resident at the end of the rotation

Suggested readings:

C. Mandatory Reading:

Wise, MG, Rundell, JR: Clinical Manual of Psychosomatic Medicine: A Guide to Consultation-Liaison Psychiatry. American Psychiatric Publishing, Washington, DC. 2005.

D. Suggested Reading:

Stern, TA, Herman, JB, and Slavin, PL: Massachusetts General Hospital Guide to Primary Care Psychiatry, 2nd ed. McGraw-Hill Companies, Inc. New York. 2004.

G. RADIOLOGY

Educational Purpose:

To give residents formal, informal instruction and clinical experience in the evaluation and clinical correlation of the results of various imaging techniques utilized in a modern radiology department.

General objectives for Radiology course:

9. The ability to understand the principles of radiological studies
10. Utilization of imaging techniques in the acutely injured or ill patient
11. Effective evaluation of acute chest and abdominal conditions
12. Therapeutic and diagnostic interventions with imaged guided procedures
13. Basics aspects of medical radiation exposure and protection
14. Physiologic principles of nuclear medicine and functional MRI
15. Newer neuroimaging techniques for cerebral diseases and conditions
16. Awareness and use of the data base that exists in radiology

CONTENT OF REQUIRED KNOWLEDGE:

14. Fundamentals of chest roentgenology
15. Basics of radiology of heart disease
16. Differential diagnoses in cardiac disease
17. Plain film of the abdomen
18. Approach to Small Bowel Disease
19. Differential Diagnoses in GI Disease
20. Differential Diagnoses in MSK Disease
21. Radiological findings of Chest diseases
22. Radiological findings of Liver diseases
23. Radiological findings of Pancreas diseases
24. Radiological findings of Trauma diseases
25. Basics of CT scan, interpretation & diagnosis of common diseases
26. Basics of MRI scan, interpretation & diagnosis of common diseases

ATTRIBUTES REQUIRED OTHER THAN KNOWLEDGE:

Patient care	**System Based learning**	**Professionalism**	**Interpersonal Communicatio Skills**
• Recognizing appropriateness of various imaging procedures • Correlating imaging procedures with clinical findings • Appreciate concerns with techniques for performing imaging studies • Recognizing abnormal radiological findings of the commonly-used imaging studies • Proper interpretation of the imaging consultation report	• The resident should improve in the utilization of and communication with many health services professionals; such as technologists, sonographers and other support staff. • The resident should improve in the prudent, cost-effective and judicious use of imaging studies and other diagnostic testing by recognizing the value and limitations of various imaging procedures. • The resident should develop a systematic approach to utilize available imaging techniques to work-up the patients with various clinical findings. • The resident will assist in determining the root cause of any error which is identified and methods for avoiding such problems in the future.	• The resident should continue to develop his/her ethical behavior and the humanistic qualities of respect, compassion, integrity, and honesty. • The resident must be willing to acknowledge errors and determine how to avoid future similar mistakes. • The resident must be responsible and reliable at all times. • The resident must always consider the needs of patients, families,	• The p role radiolog consulta • Obtainir appropri clinical informat needed complet imaging study • Address patients' concerns about radiation imaging procedu • Underst anding technic al limitati ons of imagin

	• The resident will assist in development of systems' improvement if problems are identified.	colleagues, and support staff. • The resident must maintain a professional appearance at all times.	g procedures in certain settings

Suggested Readings

1. Hoffbrand's Essential Haematology, 7th Edition. October 2015, ©2016, Wiley-Blackwell.

H. INFECTIOUS DISEASES

EDUCATIONAL PURPOSE

To train the postgraduate trainees with provision of fundamental information, acquisition of clinical skills so that they are well versed in prevention, assessment and management of infectious diseases.

CONTENT OF REQUIRED KNOWLEDGE

1. PGT should Identify sign and symptoms and management of patients presenting with common infectious diseases
2. PGT should recognize and interpret the importance of certain life styles and life events in the risk for specific infections, including intravenous drug abuse, sexual orientation or behavior, socioeconomic status, travel, animal exposure and environmental exposure
3. PGT should recognize the role of advanced age, diabetes mellitus, renal failure, malnutrition, alcoholism, COPD and cardiovascular disease in development of infections
4. PGT should be able to recommend appropriate antimicrobial therapy in a variety of infectious entities both in community acquired or nosocomial infections.
5. PGT must recognize and understand the natural and pathogenesis of sepsis associated with infections at specific organ system
6. PGT should be aware of microbial virulence factors, host defense mechanisms, epidemiology of infectious diseases and anti-infective therapy principles

Basic Concepts of Clinical Microbiology

1. Appropriate collection and transport of specimen
2. Sterilization and disinfection
3. Microscopy
4. Staining (Gram, AFB and others)
5. Culture media and basic preparation
6. Culture techniques (standard & automated)
7. Bacterial and mycobacterial microbiology
8. Sensitivity testing
9. Parasitology
10. Mycology
11. Molecular diagnostics
12. Virology
13. Safety
14. Quality assurance

MANAGEMENT OF MAJOR INFECTIOUS CLINICAL SYNDROMES

1. Fever evaluation
2. Respiratory tract infections
3. Cardiovascular infections
4. CNS infections
5. Skin and soft tissue infections
6. Gastrointestinal infections, food poisoning and hepatitis
7. Bone and joint infections
8. Diseases of reproductive organs and STDs & AIDS
9. Eye and ENT infections
10. Infections in immune-compromised hosts and burns
11. Transplant infections
12. Nosocomial infections
13. Infections in special hosts
14. Surgical & trauma related infections
15. Zoonoses
16. Viral, bacterial, chlamydial, rickettsial, protozoal and fungal infections

SPECIAL TOPICS

1. Immunization
2. Infection control

3. Risk reduction
4. Outbreak investigation
5. Travel medicine
6. Biological warfare

PROCEDURAL SKILLS

A. Bacteriology
- Perform gram stain
- Inoculation of culture plates

B. Mycobacteriology
- Perform AFB smear

C. Urine Analysis
- Perform urine dipstick

D. Mycology
- Identification of molds and yeasts

E. Serology
- Perform RPR
- Perform MP ICT

INTERPRETATION OF CLINICAL AND LABORATORY PROCEDURES

- Interpret gram stains of blood, sterile fluids and sputum
- Interpret culture plates
- Interpret antimicrobial susceptibility testing (disc diffusion, MIC)
- Interpret API
- Interpret AFB smear
- Interpret AFB cultures
- Interpret serologies
- Interpret RPR
- Interpret MP ICT

TEACHING STRATEGIES

- Didactic lectures
- Bed side teaching
- Case based discussion
- Problem based learning
- Seminars

- Conferences
- Symposiums
- Outpatient evaluation in clinical settings
- Interactive sessions

Assessment

- OSCE
- MCQs
- SEQs
- Long case
- Short case

*Assessment of the trainees will be followed by constructive feedback for improvement of attitude, performance and ability of the trainees

Evaluation / Feedback

- 360 degree evaluation of the trainees to judge the professionalism, ethics, counseling & interpersonal communication skills.
- Mid-rotation evaluation session between the resident and the infectious diseases staff will also be conducted
- Evaluation by formal discussion of trainees with supervisor, co-supervisor and program director by the end of rotation to rule out conflicts of interest and difficulties faced by trainees. The faculty will complete a standard written evaluation form used by the department.
- Evaluation of training program pertinent to effectiveness and efficiency of program in equipping trainees with necessary skills will also be carried out.
- Trainees will frequently be provided with feedback for improvement of their performance.

Attributes requiredother than knowledge, attitude and skills

Systems Based Learning

Attitudes, Values and Habits

Professionalism

Interpersonal and Communication Skills

Practice Based Learning Improvement

Evaluation of Medical Knowledge

- PGT recommend drugs easily available in hospital setting
- PGT should
  understand the issues implicated with the transmission of an infectious agent and the responsibility of the physician to protect uninfected individuals
    - PGT should apply evidence-based, cost-effective strategies for prevention, diagnosis and disease management

- Keeping the patient and family informed on the clinical status of the patient, results of tests, etc.
- Frequent, direct communication with the physician who requested the consultation
- Review of previous medical records and extraction of information relevant to the patient's infectious status. Other sources of information may be used, when pertinent
- Understanding that patients have the right to either accepts or decline recommendations made by the physician
- Education of the patient

- PGT should develop ethical behavior
- Should reflect humanistic qualities of respect, compassion, integrity, and honesty
- PGT should admit his errors and must learn how to avoid them in future
- PGT should be responsible & reliable at all times
- PGT should consider the needs of patients, families, colleagues, and support staff
- PGT should maintain a professional appearance at all times
- PGT should understand how personal and cultural characteristics impact the efforts to control spread of communicable diseases

- PGT should communicate with lab staff to obtain relevant microbiologic data of patients' samples
- PGT should appropriately call a subspecialist for evaluation and management of a patient with infectious disease
- PGT should ask precise questions from infectious diseases consultants
- PGT should arrange the elements of patient's report in a systematic manner to be useful for both patients and consultant
- PGT should establish rapport with patients

- PGT should be able to health educate and counsel the patients
- PGT should write legible and organized consultation notes
- PGT should clearly present problem to the consultants & infectious diseases conferences
- PGT should identify parameters to monitor care
- PGT should maintain currency with patient's clinical progress
- PGT should keep up to date with medical literature related to interesting cases seen in consult service

- PGT should be able to perform procedures and consult adequately the plan of care
- PGT should be able to participate in didactic infectious diseases sessions
- PGT should apply the information learnt in didactic sessions in patient care setting

SUGGESTED READINGS

1. MANDELL, DOUGLAS, AND BENNETT'S PRINCIPLES AND PRACTICE OF INFECTIOUS DISEASES: EXPERT CONSULT PREMIUM EDITION. TWO VOLUMES, 7TH EDITION.
2. BARON'S MEDICAL MICROBIOLOGY / 4TH ED.; 2000
3. BEST PRACTICES IN INFECTION PREVENTION AND CONTROL: AN INTERNATIONAL PERSPECTIVE, 2ND ED.; 2012.
4. THE BLUE BOOK – GUIDELINES FOR THE CONTROL OF INFECTIOUS DISEASES / 2ND ED.; 2011.
5. COHEN & POWDERLY: INFECTIOUS DISEASES, 3RD ED.; 2010. --- CLINICAL KEY
6. INFECTIOUS DISEASES SECTION: THE MERCK MANUAL OF DIAGNOSIS AND THERAPY, 19TH ED., 2011.
7. MICROBIAL THREATS TO HEALTH: EMERGENCE, DETECTION, AND RESPONSE / EDITED BY MARK S. SMOLINSKI, MARGARET A. HAMBURG, AND JOSHUA LEDERBERG, BOARD ON GLOBAL HEALTH; 2003.

I. NEPHROLOGY

EDUCATIONAL PURPOSE

To make postgraduate trainees competent in identification of the problem and provision of care to patients presenting with renal disorders.

CONTENT OF REQUIRED KNOWLEDGE

1. PGT should be able to classify renal failure and stage chronic kidney diseases
2. PGT should understand etiology, pathogenesis and competent enough to clinically present, diagnose and manage the cases of glomerulopathies, tubule-interstitial disorders
3. PGT must be proficient in managing acid-base disorders and fluid / electrolyte imbalances
4. PGT should know principles of dialysis procedure and its complications

RENAL DISORDERS

- Acute renal failure
- Chronic renal failure
- Primary & secondary glomerulopathies
- Tubulo-interstitial disorders
- Obstructive nephropathy (acute & chronic)
- Hereditary nephropathy (Polycystic kidney disease, Alport's syndrome)
- Diabetic nephropathy
- Primary and secondary hypertension
- Lupus nephritis
- Nephritic syndrome
- Acid base disorders
- Fluid & electrolytes imbalances
- Urinalysis
- Kidney biopsy indications
- Acute and chronic dialysis
- Kidney transplantation

PROCEDURAL SKILLS

- placement of temporary hemodialysis catheters

- kidney biopsies
- placement of tunneled hemodialysis catheters
- ultrasonography
- hemodialysis access interventions
- Placement of peritoneal dialysis catheters

INTERPRETATION OF CLINICAL AND LABORATORY PROCEDURES

- Renal Function Tests (RFTs)
- Renal biopsy
- Renal ultrasonography

TEACHING STRATEGIES

- Didactic lectures
- Bed side teaching
- Case based discussion
- Problem based learning
- Seminars
- Conferences
- Symposiums
- Outpatient evaluation in clinical settings / dialysis clinic
- Interactive sessions

Assessment

- OSCE
- MCQs
- SEQs
- Long case
- Short case

*Assessment of the trainees will be followed by constructive feedback for improvement of their attitude, performance and competencies.

Evaluation / Feedback

- 360 degree evaluation of the trainees to judge the professionalism, ethics, counseling & interpersonal communication skills
- Evaluation by formal discussion of trainees with supervisor, co-supervisor and program director by the end of rotation to rule out conflicts of interest and

difficulties faced by trainees

- Evaluation of training program pertinent to effectiveness and efficiency of program in equipping trainees with necessary skills will also be done.
- Trainees will frequently be provided with feedback for improvement of their performance.

Attributes required other than knowledge

Systems Based Learning	Attitudes, Values and Habits	Professionalism	Interpersonal Communicatio Skills
• PGT should improve in the utilization of and communication with many health services and professionals such as nutritionists, nurses, therapists, surgeons and administrative staff. • PGT should improve in the use of cost effective medicine • PGT should recommend drugs available in hospital setting • PGT should assist in determining the root cause of any error which is identified and	• Keeping the patient and family informed on the clinical status of the patient, results of tests, etc. • Frequent, direct communication with the physician who requested the consultation • Review of previous medical records and extraction of information relevant to the patient's renal status. Other sources of information may be used, when pertinent • Understanding that patients have the right to either accepts or decline recommendations made by the physician • Education of the	• PGT should understand the ethical conflict between care of an individual and welfare of the community • PGT should understand the ethical conflicts pertinent to antimicrobia l therapy, vaccination and preventive measures • PGT should acknowledge medical errors and should learn how to avoid mistakes in future • PGT should be	• PGT sho learn wh to call a subspeci to manag patient w renal dis • PGT sho clearly present t cases to in organ way • PGT sho be able t establish rapport w patients • PGT sho listen to patient's complai for patie welfare • PGT sho effective educate counsel patients • PGT sho not dow

methods for avoiding such problems in the future • PGT must assist in development of systems' improvement if problems are identified	patient	responsible and timely in consulting with staff & patients • PGT should have professional appearance at all times	complaints of patients in organized manner • PGT should timely communicat e pt's problem to the staff	

Suggested Readings

1. Murray Longmore. Oxford Handbook of Clinical Medicine and Oxford Assess and Progress: Clinical Medicine Pack. 2014.
2. Douglas C.Eaton. John Pooler. Vanders Renal Physioloyg, 8th Edition. Lange.
3. Michael J. Field, Carol Pollock, David Harris. The Renal System: Systems of the body series. 2nd Edition. Churchill Livingstone.
4. Richard A. Preston. Acid Base, fluids and electrolytes made ridiculously simple. 2nd Edition. 2010.

J. PULMONARY AND CRITICAL CARE MEDICINE

EDUCATIONAL PURPOSE

To give a broad view of pulmonary diseases to postgraduate trainees to facilitate them in diagnosing and managing acute and chronic pulmonary diseases and when to pursue pulmonary subspecialty consultations.

CONTENT OF REQUIRED KNOWLEDGE

1. PGT should be able to recognize signs and symptoms, diagnose and manage all common pulmonary infections, TB, COPD.
2. PGT should be proficient enough to diagnose and manage pulmonary vascular diseases and respiratory failure.
3. PGT should seek pertinent physical exam, laboratory information, and radiographic studies to rule out malignancies of pleura and mediastinum including pneumothorax and empyema.

PULMONARY DISORDERS

- Pulmonary infections, including fungal infections, and those in the immuno-compromised host

- Tuberculosis
- Obstructive lung diseases including asthma, bronchitis, emphysema and bronchiectasis
- Malignant diseases of the lung, pleura and mediastinum, both primary and metastatic
- Pulmonary vascular diseases (Pulmonary embolism)
- Pleuro-pulmonary manifestations of systemic diseases
- Respiratory failure (Respiratory Distress Syndrome)
- Occupational and environmental lung disease
- Diffuse interstitial lung disease
- Disorders of the pleura and mediastinum, including pneumothorax and empyema
- Sleep-induced disorders of breathing

PROCEDURAL SKILLS

- Thoracentesis
- Bronchoscopy
- Chest intubation
- Needle biopsy of pleura

INTERPRETATION OF CLINICAL AND LABORATORY PROCEDURES

- Pulmonary Function Tests
- Thoracentesis
- Needle biopsy of pleura
- Bronchoscopy
- Chest intubation

TEACHING STRATEGIES

- Didactic lectures
- Bed side teaching
- Case based discussion
- Problem based learning
- Seminars
- Conferences
- Symposiums
- Outpatient evaluation in pulmonary outpatient clinic / TB clinic
- Interactive sessions

Assessment

- OSCE
- MCQs
- SEQs
- Long case
- Short case

*Assessment of the trainees will be followed by constructive feedback for improvement of their attitude, performance and competencies.

Evaluation / Feedback

- 360 degree evaluation of the trainees to judge the professionalism, ethics, counseling & interpersonal communication skills
- Evaluation by formal discussion of trainees with supervisor, co-supervisor and program director by the end of rotation to rule out conflicts of interest and difficulties faced by trainees
- Evaluation of training program pertinent to effectiveness and efficiency of program in equipping trainees with necessary skills
- Trainees will frequently be provided with feedback for improvement of their performance.

Attributes required other than knowledge

Systems Based Learning	Attitudes, Values and Habits	Professionalism	Interpersonal Communicatio Skills
• PGT should improve in the utilization of and communication with many health services and professionals such as the radiologist, surgeon, and pathologist • PGT should improve in the use	• Keeping the patient and family informed on the clinical status of the patient, results of tests, etc. • Frequent, direct communication with the physician who requested the consultation • Review of	• PGT should understand the ethical conflict between care of an individual and welfare of the community • PGT should understand	• PGT sho learn wh to call a subspeci to manag patient w endocrin disease. • PGT sho clearly present t cases to

of cost effective medicine • PGT should recommend drugs available in hospital setting • PGT should assist in determining the root cause of any error which is identified and methods for avoiding such problems in the future • PGT must assist in development of systems' improvement if problems are identified	previous medical records and extraction of information relevant to the patient's pulmonary status. Other sources of information may be used, when pertinent • Understanding that patients have the right to either accepts or decline recommendations made by the physician • Familiar with how to deal with difficulties of disease management within different age groups, socio-economic status, educational & cultural backgrounds • Education of the patient	the ethical conflicts pertinent to antimicrobial therapy, vaccination and preventive measures • PGT should acknowledge medical errors and should learn how to avoid mistakes in future • PGT should be responsible and timely in consulting with staff & patients • PGT should have professional appearance at all times • PGT should	in organized way • PGT should be able to establish rapport with patients • PGT should listen to the patient's complaints for patient's welfare • PGT should effectively educate & counsel patients • PGT should not down all complaints of patients in organized manner • PGT should timely communicate pt's problem to the staff	•

Suggested Readings

1. John B. West, Andrew M. Luks. West's respiratory physiology: The Essentials. 10th Edition. Wolters Kluver.
2. Dinah Bradley. Foreword by Dr. Mike Thomas. Hyperventilation syndrome. Breathing Pattern Disorder. 2012. London. United Kingdom.
3. Lynelle N.B. Pierce. Management of Mechanically Ventilated Patient. 2nd Edition. 2006. Elsevier.

K. RHEUMATOLOGY

EDUCATIONAL PURPOSE

To provide the postgraduate trainees with intensive instruction, clinical experience, and the opportunity to be proficient in evaluation and management of rheumatologic disorders.

CONTENT OF REQUIRED KNOWLEDGE

1. PGT should be able to recognize clinical manifestations, diagnose and manage cases of osteoarthritis, rheumatoid arthritis, SLE, other inflammatory and metabolic myopathies.

2. PGT should be competent enough to diagnose and manage scleroderma, fibromyalgia and soft tissue rheumatism.

Rheumatologic Diseases

- Acute Monoarticular arthritis
- Osteoarthritis
- Rheumatoid arthritis
- Systemic lupus erythematosus (SLE)
- Scleroderma
- Anti-phospholipid syndrome
- Other inflammatory and metabolic myopathies
- Seronegative arthropathies
- Crystal induced arthritis (Gout)
- Vasculitis
- Fibromyalgia and soft tissue rheumatism (tennis elbow)

PROCEDURAL SKILLS

- soft tissue and joint injections
- spinal injections for relief of back pain
- biopsy procedures such synovial or muscle biopsies
- musculoskeletal ultrasound
- synovial fluid aspirations
- synovial biopsy
- arthrocentesis
- trigger point injections

INTERPRETATION OF CLINICAL AND LABORATORY PROCEDURES

- X-ray and other imaging techniques
- Lab tests
- soft tissue and joint injections
- spinal injections for relief of back pain
- biopsy procedures such synovial or muscle biopsies
- musculoskeletal ultrasound
- synovial fluid aspirations
- synovial biopsy

TEACHING STRATEGIES

- Didactic lectures
- Bed side teaching
- Case based discussion
- Problem based learning
- Seminars
- Conferences
- Symposiums
- Outpatient evaluation in clinical settings
- Interactive sessions

Assessment

- OSCE
- MCQs
- SEQs
- Long case
- Short case

*Assessment of the trainees will be followed by constructive feedback for improvement of their attitude, performance and competencies.

Evaluation / Feedback

- 360 degree evaluation of the trainees to grade the trainees in each of the six competencies as related to rheumatology.
- Evaluation by formal discussion of trainees with supervisor, co-supervisor and program director by the end of rotation to rule out conflicts of interest and difficulties faced by trainees
- Evaluation of training program pertinent to effectiveness and efficiency of program in equipping trainees with necessary skills

- Trainees will frequently be provided with feedback for improvement of their performance.

Attributes required other than knowledge

Systems Based Learning	Attitudes, Values and Habits	Professionalism	Interpersonal Communicatio Skills
• PGT should improve in the utilization of and communication with many health services and professionals such as the radiologist, surgeon, and pathologist • PGT should recommend drugs available in hospital setting • Bed bureau should be informed for bed issues. • PGT should improve in the use of cost effective medicine • PGT should assist in determining the root cause of any error which is identified and methods for avoiding such problems in the future • PGT must assist in development of systems' improvement if	• Keeping the patient and family informed on the clinical status of the patient, results of tests, etc. • Frequent, direct communication with the physician who requested the consultation • Review of previous medical records and extraction of information relevant to the patient's rheumatologic status. Other sources of information may be used, when pertinent • Understanding that patients have the right to either accepts or decline recommendations made by the physician • Education of the patient	• PGT should understand the ethical conflict between care of an individual and welfare of the community • PGT should understand the ethical conflicts pertinent to antimicrobia l therapy, vaccination and preventive measures • PGT should acknowledg e medical errors and should learn how to avoid mistakes in future • PGT should be responsible and timely	• PGT sho learn wh to call a subspeci to manag patient w rheumat ic disea • PGT sho clearly present t cases to in organi way • PGT sho be able t establish rapport w patients • PGT sho listen to patient's complai for patie welfare • PGT sho effective educate counsel patients • PGT sho not dow complai of patien

problems are identified		in consulting with staff & patients • PGT should have professional appearance at all times • PGT should	organized manner • PGT should timely communicate pt's problem to the staff	

Suggested Readings

1. Section on musculoskeletal disease in Harrison's Principles of Internal Medicine, McGraw-Hill publisher.
2. Section of Rheumatology in Cecil's Textbook of Medicine, latest Edition WB Sanders Publisher.
3. MKSAP booklet on Rheumatology.
4. The textbook Primer on the Rheumatic Disease will also be provided which address all basic areas of rheumatology.

L. EMERGENCY MEDICINE

EDUCATIONAL PURPOSE

To learn practicing emergency medicine, prioritization of care and triage, interaction with ambulance and other emergency personnel and basic approach to common emergencies; traumatic, medical, pediatric and adult.

CONTENT OF REQUIRED KNOWLEDGE

1. PGT should be able to obtain all pertinent historical data and correctly do physical examination and assessment in acute illness
2. PGT should be competent enough to develop an appropriate diagnosis & care plan

for Emergency patients

3. PGT should be proficient in performing emergency procedures under universal precautions
4. PGT should be adequately skilled to resuscitate a critically ill patient

Medical & Surgical Emergencies

- Knowledge of pathological abnormalities, clinical manifestations and principles of management of medical and surgical emergencies
- Understanding of routine investigations for proper management of patients
- Ability to take decision regarding hospitalization or timely referral to other consultants / subspecialty
- Competency in selecting correct drug combinations for different clinical problems keeping in view their pharmacological effect, side effects, interaction with other drugs
- Proficiency in recommending preventive, restorative and rehabilitative aspects including those in elderly so as to counsel the patients correctly after recovery from acute or chronic illness.

General skills to be achieved for managing Emergencies

- History taking
- Planning initial management
- Simple airway maneuvers
- Bag mask ventilation
- LMA & multi-lumen esophageal airway insertion
- Oropharyngeal and nasopharyngeal airway
- Apply nasal prongs
- Administer nebulizer
- Arterial puncture
- Inline immobilization
- Application of cervical collar
- Oxygen therapy
- Cardio-pulmonary resuscitation
- Basics of ECG
- Rhythm recognition
- Defibrillation and cardio version
- Peripheral I/V access

- NG tube insertion
- Urinary catheter insertion
- Decompression of pneumothorax
- Examination of Ear, Nose and Throat
- Splinting
- Debridement
- Wound care
- Suturing
- P/V and P/R examination
- Lumbar puncture
- Basics of radiology

❖ **Desired medical and surgical procedures which should be demonstrated after trainees have been imparted competencies**

Medical Skills

- Advanced airway management
- Ventilator support
- Non-invasive ventilation
- Central vascular access
- CVP monitoring
- Trans cutaneous pacing
- Trans venous pacing
- Invasive hemodynamic monitoring
- Temporary pacemaker insertion and maintenance
- Pain relief
- Naso-jejunal tube placement
- Bronchoscopy
- Abdominal paracentesis
- Hemodialysis

Surgical Skills

- Percutaneous tracheostomy
- Cricothyroidotomy
- Surgical tracheostomy
- Burr hole
- ICP measurement
- Venous cut down

- Thoracentesis
- ICD tube placement
- External fixation of pelvis
- Fasciotomy
- Escharotomy
- Embolization of bleeding vessels
- Retrograde urethrogram
- IVU

Hands on Training in Trauma Management & Assessment

1. Needle thoracentesis
2. Cricothyroidectomy
3. Needle cricothyroidotomy
4. Supra pubic catheterization
5. Inter osseous nailing
6. Central venous access
7. Spine immobilization
8. Splinting
9. POP casting
10. Compartment pressure measurement
11. Invasive pressure monitoring
12. Suturing technique
13. ABG sampling
14. Anterior and posterior nasal packing
15. Foreign body removal
16. Reducing dislocated joints
17. Debridement
18. Endotracheal insertion
19. Insertion of Foley's catheter
20. Umbilical vein catheterization
21. Emergency ultrasonography
22. Nail bed hematoma removal
23. Reducing paraphymosis
24. External fixator for pelvis
25. Auto transfusion technique
26. Incision and Drainage
27. Nerve blocks
28. Abdominal compartment pressure monitoring

Interpretations of clinical and laboratory procedures

- Reading trauma and surgical related CT
- Reading trauma and surgical related MRI
- Reading trauma and surgical related X-ray
- Interpret results of specialized investigations like:
    - Ultrasonography
    - Biochemical, hemodynamic, electro-cardiographic, electro-physiological, pulmonary functional, hematological, immunological, nuclear isotope scanning and ABG analysis results

TEACHING STRATEGIES

- Hands on training in trauma management workshops
- Didactic lectures
- Bed side teaching
- Case based discussion
- Problem based learning
- Seminars
- Conferences
- Symposiums
- Outpatient evaluation in clinical settings
- Interactive sessions

Assessment

- OSCE
- MCQs
- SEQs
- Long case
- Short case

*Assessment of the trainees will be followed by constructive feedback for improvement of their attitude, performance and competencies.

Evaluation / Feedback

- 360 degree evaluation of the trainees to judge the professionalism, ethics, counseling & interpersonal communication skills
- Evaluation by formal discussion of trainees with supervisor, co-supervisor and program director by the end of rotation to rule out conflicts of interest and

difficulties faced by trainees

- Evaluation of training program pertinent to effectiveness and efficiency of program in equipping trainees with necessary skills
- Trainees will frequently be provided with feedback for improvement of their performance.

Attributes required other than knowledge

Systems Based Learning	**Attitudes, Values and Habits**	**Professionalism**	**Interpersonal Communicatio Skills**
• PGT should improve in the utilization of and communication with many health services and professionals such as the radiologist, surgeon, and pathologist • PGT should advise the use of cost effective medicine • PGT should assist in determining the root cause of any error which is identified and methods for avoiding such problems in the future • PGT must assist in development of systems' improvement if	• Keeping the patient and family informed on the clinical status of the patient, results of tests, etc. • Frequent, direct communication with the physician who requested the consultation • Review of previous medical records and extraction of information relevant to the patient's hematologic status. Other sources of information may be used, when pertinent • Understanding that patients have the right to either accepts or decline recommendations made by the	• PGT should understand the ethical conflict between care of an individual and welfare of the community • PGT should understand the ethical conflicts pertinent to antimicrobial therapy, vaccination and preventive measures • PGT should acknowledge medical errors and should learn how to avoid mistakes in future • PGT should be responsible and timely in consulting with staff &	• PGT sho learn wh to call a subspeci to manag patient w medical surgical emergen • PGT sho clearly present t cases to in organi way • PGT sho be able t establish rapport w patients • PGT sho listen to patient's complair for patie welfare • PGT sho effective educate counsel

problems are identified • PGT should recommend medicines easily available from hospital pharmacy • PGT should recommend lab tests that could easily be done in hospital • For bed issue, bed bureau should be informed	physician • Education of the patient	patients • PGT should have professional appearance at all times • PGT should	patients • PGT should not down all complaints of patients in organized manner • PGT should timely communicate pt's problem to the staff	

Suggested Readings

1. Basic Life Support (BLS) Provider Manual by American Heart Association. 2016.

2. EMERGENCY CARE AND TRANSPORTATION OF THE SICK AND INJURED (BOOK & NAVIGATE 2 ESSENTIALS ACCESS). 11TH EDITION. AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS (AAOS)

3. RESPONDING TO EMERGENCY: COMPREHENSIVE FIRST AID / CPR / AED. AMERICAN RED CROSS. 1ST EDITION.

4. JOHN TARDIFF, PAULA DERR, MIKE MCEVOY. EMERGENCY & CRITICAL CARE POCKET GUIDE 8TH EDITION. 2016.

SECTION 4:

TEACHING AND LEARNING METHODS FOR MS DERMATOLOGY CURRICULUM

Inpatient Services

Residents will rotate through various inpatient services to gain comprehensive experience.

Outpatient Experiences

Residents will demonstrate expertise in diagnosing and managing patients in acute care clinics and longitudinal clinics, gaining experience in various subspecialties

Mandatory Workshops

Hands-on training will be provided through mandatory workshops on:

1) Research Methodology
2) Advanced Life Support
3) Communication Skills
4) Computer & Internet Skills
5) Clinical Audit

Core Faculty Lectures (CFL)

Core faculty lectures will focus on monthly themes covering various specialty topics. Lectures will incorporate active learning techniques such as buzz groups.

Journal Club Meeting (JC)

Residents will present and critically evaluate research articles, highlighting applicable results for clinical practice.

Case-Based Learning

Small groups will engage in case based learning. This method emphasize problem-solving skills and integrated knowledge.

Grand Rounds (GR)

Weekly grand rounds will feature speakers from local, regional, and national training programs, presenting topics from the broad spectrum of topics.

Clinico-pathological Conferences

Using case methods, these conferences will involve discussing differential diagnosis, diagnostic data, and final diagnoses.

Clinical Audit Based Learning

Residents will participate in quality improvement processes by reviewing patient care against explicit criteria and implementing necessary changes.

Peer-Assisted Learning

Residents will engage in peer-assisted learning, providing opportunities for reinforcement, responsibility, self-confidence, and development of teaching and communication skills.

Morbidity meeting (MM)

Adverse outcomes, not necessarily resulting in death, will be discussed and thoroughly reviewed.

Skills Workshops

Conduct skills workshops on surgical techniques, diagnostic procedures, and equipment handling.

Provide opportunities for students to practice and receive feedback on their skills.

Multidisciplinary Team-based Learning

Collaborate with other healthcare professionals to simulate a multidisciplinary team approach to patient care.

Encourage students to understand the roles of different team members and practice effective communication and teamwork.

Simulation Training

Utilize simulation training tools and platforms to provide a realistic and safe environment for students to practice complex procedures.

Incorporate simulation scenarios that mimic challenging clinical situations to enhance decision-making skills.

E-learning and Online Resources

Integrate e-learning modules, online resources, and virtual simulations to supplement traditional teaching methods.

Provide access to online databases, journals, and educational videos to support self-directed learning.

Encourage use of digital library available at RMU.

Appendices Documents.

1

RAWALPINDI MEDICAL UNIVERSITY

MENTOR / SUPERVISOR EVALUATION OF TRAINEE

Resident's Name: _____

Evaluator's Name(s): _____

Hospital Name: _____

Date of Evaluation: _____

☐ Traditional Track (10% Clinic) ☐ Primary Care Track (20% Clinic)

1	Unsatisfactory
2	Below Average
3	Average
4	Good
5	Superior

Please circle the appropriate number for each item using the scale above.

Patient Care	Scale				
1. Demonstrates sound clinical judgment	1	2	3	4	5
2. Presents patient information case concisely without significant omissions or digressions	1	2	3	4	5
3. Able to integrate the history and physical findings with the clinical data and identify all of the patient's major problems using a logical thought process	1	2	3	4	5
4. Develops a logical sequence in planning for diagnostic tests and procedures and Formulates an appropriate treatment plan to deal with the patient's major problems	1	2	3	4	5
5. Able to perform commonly used office procedures	1	2	3	4	5
6. Follows age appropriate preventative medicine guidelines in patient care	1	2	3	4	5
Medical Knowledge	**Scale**				
1. Uses current terminology	1	2	3	4	5
2. Understands the meaning of the patient's abnormal findings	1	2	3	4	5
3. Utilizes the appropriate techniques of physical examination	1	2	3	4	5
4. Develops a pertinent and appropriate differential diagnosis for each patient	1	2	3	4	5
5. Demonstrates a solid base of knowledge of ambulatory medicine	1	2	3	4	5
6. Can discuss and apply the applicable basic and clinically supportive sciences	1	2	3	4	5
Professionalism	**Scale**				
1. Demonstrates consideration for the patient' s comfort and modesty	1	2	3	4	5
2. Arrives to clinic on time and follows clinic policies and procedures	1	2	3	4	5
3. Works effectively with clinic staff and other health professionals	1	2	3	4	5
4. Able to gain the patient's cooperation and respect	1	2	3	4	5
5. Demonstrates compassion and empathy for the patient	1	2	3	4	5
6. Demonstrates sensitivity to patient's culture, age, gender, and disabilities	1	2	3	4	5
7. Discusses end-of-life issues (DPOA, advanced directives, etc.) when appropriate	1	2	3	4	5

RAWALPINDI MEDICAL UNIVERSITY

1

Interpersonal and Communication Skills	Scale				
1. Demonstrates appropriate patient/physician relationship	1	2	3	4	5
2. Uses appropriate and understandable layman's terminology in discussions with patients	1	2	3	4	5
3. Patient care documentation is complete, legible, and submitted in timely manner	1	2	3	4	5
4. Recognizes need for behavioral health services and understands resources available	1	2	3	4	5
Systems-based Practice	**Scale**				
1. Spends appropriate time with patient for the complexity of the problem	1	2	3	4	5
2. Able to discuss the costs, risks and benefits of clinical data and therapy	1	2	3	4	5
3. Recognizes the personal, financial, and health system resources required to carry out the prescribed care plan	1	2	3	4	5
4. Demonstrates effective coordination of care with other health professionals	1	2	3	4	5
5. Recognizes the patient's barriers to compliance with treatment plan such as age, gender, ethnicity, socioeconomic status, intelligence, dementia, etc.	1	2	3	4	5
6. Demonstrates knowledge of risk management issues associated with patient's case	1	2	3	4	5
7. Works effectively with other residents in clinic as if a member of a group practice	1	2	3	4	5
Practice-Based Learning and Improvement	**Scale**				
1. Locates, appraises, and assimilates evidence from scientific studies	1	2	3	4	5
2. Apply knowledge of study designs and statistical methods to the appraisal of clinical studies to assess diagnostic and therapeutic effectiveness of treatment plan	1	2	3	4	5
3. Uses information technology to access information to support diagnosis and treatment	1	2	3	4	5

Comments

Total Score _____/165

_____ _____ _____ _____

Resident's Signature **Date** **Evaluator's Signature** **Date**

RAWALPINDI MEDICAL UNIVERSITY

2

Patient Medical Record / Chart Evaluation Proforma

Name of Resident

Location of Care or Interaction
(OPD/Ward/Emergency/Endoscopy Department)

S#		Poor	Fair	Good	V. Good	Excellent
1.	Basic Data on Front Page Recorded	O	O	O	O	O
2.	Presenting Complaints written in chronological order	O	O	O	O	O
3.	Presenting Complaints Evaluation Done	O	O	O	O	O
4.	Systemic review Documented	O	O	O	O	O
5.	All Components of History Documented	O	O	O	O	O
6.	Complete General Physical Examination done	O	O	O	O	O
7.	Examination of all systems documented	O	O	O	O	O
8.	Differential Diagnosis framed	O	O	O	O	O
9.	Relevant and required investigations documented	O	O	O	O	O
10.	Management Plan framed	O	O	O	O	O
11.	Notes are properly written and eligible	O	O	O	O	O
12.	Progress notes written in organized manner	O	O	O	O	O
13.	Daily progress is written	O	O	O	O	O
14.	Chart is organized no loose paper	O	O	O	O	O
15.	Investigations properly pasted	O	O	O	O	O
16.	Abnormal findings in investigations encircled.	O	O	O	O	O
17.	Procedures done on patient documented properly	O	O	O	O	O
18.	Medicine written in capital letter	O	O	O	O	O
19.	I/v fluids orders are proper with rate of infusion mentioned	O	O	O	O	O
20.	All columns of chart complete	O	O	O	O	O

Poor: 0, Fair: 1, Good: 2, V.Good: 3, Excellent: 4

RAWALPINDI MEDICAL UNIVERSITY

3

Preview Form

RESIDENT EVALUATION BY NURSE / STAFF

Please take a few minutes to complete this evaluation form. All information is confidential and will be used constructively. You need not answer all the questions

Name of Resident*

Location of care or interaction: *(OPD/Ward/Emergency/Endoscopy Department)*

Your position (Nurse, Ward Servant, Endoscopy Attendant)

S#	PROFESSIONALISM	Poor	Fair	Good	V Good	Excellent	Insufficient Contact
1.	Resident is Honest and Trustworthy	❍	❍	❍	❍	❍	❍
2.	Resident treats patients and families with courtesy, compassion and respect	❍	❍	❍	❍	❍	❍
3.	Resident treats me and other member of the team with courtesy and respect	❍	❍	❍	❍	❍	❍
4.	Resident shows regard for my opinions	❍	❍	❍	❍	❍	❍
5.	Resident maintains a professional manner and appearance	❍	❍	❍	❍	❍	❍
INTERPERSONAL AND COMMUNICATIONS SKILLS							
6.	Resident communicates well with patients, families, and members of the healthcare team	❍	❍	❍	❍	❍	❍
7.	Resident provides legible and timely documentation	❍	❍	❍	❍	❍	❍
8.	Resident respect differences in religion, culture age, gender sexual orientation and disability	❍	❍	❍	❍	❍	❍
SYSTEMS BASED PRACTICE							
9.	Resident works effectively with nurses and other professionals to improve patient care.	❍	❍	❍	❍	❍	❍
PATIENT CARE							
10.	Resident respects patient preferences	❍	❍	❍	❍	❍	❍
11.	Resident is reasonable accessible to patients	❍	❍	❍	❍	❍	❍
12.	Resident take care of patient comfort and dignity during procedures.	❍	❍	❍	❍	❍	❍
PRACTICE BASED LEARNING AND IMPROVEMENT							
13.	Resident facilitates the learning of students and other professionals	❍	❍	❍	❍	❍	❍
COMMENTS							
14.	Please describe any praises or concerns or information about specific incidents	❍	❍	❍	❍	❍	❍

THANK YOU for your time and thoughtful input. You play a vital role in the education and training of the internal medicine residents.

Poor: 0, Fair: 1, Good: 2, V. Good: 3, Excellent: 4

Total Score _____/56

RAWALPINDI MEDICAL UNIVERSITY

4

Patient Evaluation of Trainee

Trainee Name: _____

Date of Evaluation: _____

1	Strongly Disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly Agree

Please circle the appropriate number for each item using this scale. Please provide any relevant comments on the back of this form.

	This Trainee:	Scale				
1.	Introduces him/herself and greets me in a way that makes me feel comfortable. ڈاکٹر صاحب نے خود کو متعارف کرایا اور خوش اسلوبی سے پیش آئے	1	2	3	4	5
2.	Manages his/her time well and is respectful of my time. ڈاکٹر صاحب نے میرے اور اپنے وقت کا خیال رکھا۔	1	2	3	4	5
3.	Is truthful, upfront, and does not keep things from me that I believe I should know. ڈاکٹر صاحب نے میرے مرض کی صورتحال پوری سچائی سے بیان کی۔	1	2	3	4	5
4.	Talks to me in a way that I can understand, while also being respectful. ڈاکٹر صاحب نے میرے احساسات کا خیال رکھا اور عزت سے میرا علاج کیا۔	1	2	3	4	5
5.	Understands how my health affects me, based on his/her understanding of the details of my life. ڈاکٹر صاحب نے میرے علاج میں میری صحت پر ذاتی زندگی کو مدنظر رکھا۔	1	2	3	4	5
6.	Takes time to explain my treatment options, including benefits and risks. ڈاکٹر صاحب نے میرے مرض کے علاج کے فوائد اور نقصانات کو تفصیلاً بیان کیا۔	1	2	3	4	5

Total Score _____/30

RAWALPINDI MEDICAL UNIVERSITY

5

Resident/Fellow Evaluation of Faculty Teaching

Evaluator: _____

Evaluation of: _____

Date:_____

Evaluation information entered here will be anonymous and made available only in aggregated form.

S#		Strongly Disagree	Disagree Moderately	Disagree Slightly	Agree Slightly	Agree Moderately	Strongly Agree
	PATIENT CARE						
1.	Teaches current scientific evidence for daily patient management*						
2.	Explains rationale behind clinical judgements/decisions*						
3.	Teaches clear diagnostic algorithms*						
4.	Teaches clear treatment algorithms*						
	PATIENT CARE - OPERATIVE AND PROCEDURAL SKILLS						
5.	Teaches operative/procedural skills during cases*						
6.	Allows learners to perform operative/procedural skills when appropriate*						
	MEDICAL KNOWLEDGE						
7.	Teaches relevant pathophysiology needed to evaluate patient medical conditions*						
8.	Teaches how/when to use-order-perform procedures/tests*						
9.	Teaching content adds significantly to my medical knowledge						
10.	Teaches the use of literature / evidence based medicine to support clinical decisions/teaching points*						

PRACTICE-BASED LEARNING & IMPROVEMENT/TEACHING							
11.	Asks questions about differential diagnosis*						
12.	Teaches trainees when to consider referrals/consults with other specialists*						
13.	Actively teaches trainees in clinical settings/labs*						
INTERPERSONAL & COMMUNICATION SKILLS							
14.	Motivates learners to expand medical knowledge*						
15.	Stimulates critical thinking*						
16.	Encourages questions*						
17.	Teaches at the appropriate level for the trainee*						
18.	Provides feedback specific enough to be helpful*						
PROFESSIONALISM							
19.	Demonstrates respect for trainees of all levels*						
20.	Does not belittle/ publicly humiliate learners*						
21.	Teaches professional behavior with respect to patient care.*						
22.	Exhibits professional behavior with respect to patient care*						
23.	Role models professional behavior*						
SYSTEMS-BASED PRACTICE							
24.	Teaches cost/benefit decision making*						
25.	Teaches how to call on resources in the system to provide optimal health care*						
26.	Role models the necessity of working in inter-professional teams to enhance patient safety/outcomes.*						

Strongly Disagree: 0, Disagree Moderately: 1, Disagree Slightly: 2, Agree Slightly: 3, Agree Moderately: 4, Strongly Agree: 5

Total Score _____ / 130

RAWALPINDI MEDICAL UNIVERSITY

6

FINAL Evaluation Scoring Sheet

Name of Resident	Name of Supervisor	Year of Training

Date _____

Duration of Assessment _____

Specialty _____

Hospital _____

Unit _____

	Faculty #1 (165)	Faculty #2 (165)	Faculty #3 (165)	Average Score
Medical Patient Care (30)				___/30
Medical Knowledge (30)				___/30
Professionalism (35)				___/35
Interpersonal and Communication Skills (20)				___/20
System Based Practice (35)				___/35
Practice Based Learning and Improvement (15)				___/15
Overall Rating				
Average:				_____/165

Patient # 1 (30)	Patient # 2 (30)	Patient # 3 (30)	Medical Record Performa #1 (80)	Medical Record Performa #2 (80)	Medical Record Performa #3 (80)	Staff # 1 (56)	Staff #2 (56)	Staff #3 (56)
___/30			___/80			___/56		

Grand Total

_____/331

7

RAWALPINDI MEDICAL UNIVERSITY

RESIDENT SELF-ASSESSMENT PROFORMA

Resident Name_____ **Date** _____

Year of Training _____ **Hospital Name**_____ **Unit** _____

❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
Not Applicable	I rarely demonstrates (<25% of the time)	I do this Sometimes (25-50% of the time)	I do this most of the time (50-75% of the time)	I do this all the time (>75% of time)

1.	I am able to acquire accurate and relevant histories from my patients in an efficient, prioritized and hypothesis driven fashion.	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
2.	I am able to seek and obtain appropriate, verified, and prioritized data from secondary sources (e.g. family, records and pharmacy)	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
3.	I am able to perform accurate physical examinations that are appropriately targeted to the patient's complaints.	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
4.	I am able to synthesize all available data, including interview, physical exam, and preliminary lab data to define each patient's central clinical problem.	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
5.	I am able to develop prioritized differential diagnoses, evidence based diagnostic and therapeutic plans for common conditions in Internal Medicine patients.	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
6.	I am able to recognize situations with a need for urgent or emergent medical care, including life threatening conditions.	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
7.	I am able to recognize when to seek additional guidance.	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
8.	I am able to provide appropriate preventive care.	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
9.	I am able to manage patients with common clinical disorders in the practice of outpatient internal medicine with minimal supervision.	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
10.	I have performed several invasive procedures and documented them in my New Innovations log.	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
11.	I demonstrate sufficient knowledge to diagnose and treat common conditions that require hospitalization.	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
12.	I understand the indications for and the basic interpretation of common diagnostic tests.	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
13.	I have reviewed my in service exam scores and believe my medical knowledge is where it should be for my level of training.	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
14.	I am able to identify clinical questions as they emerge	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4

	in patient care activities.					
15.	I am responsive to feedback from all members of the healthcare team including faculty, residents, students, nurses, allied health professionals, patients and their advocates.	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
16.	I am an active participant in teaching rounds and intern report.	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
17.	I effectively use verbal and non verbal skills to create rapport with patients and their advocates.	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
18.	I communicate effectively with other caregivers to ensure safe transitions in care.	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
19.	My patient presentations on rounds are organized, complete and succinct.	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
20.	I am able to communicate the plan of care to all the members of the healthcare team.	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
21.	My documentation in the medical record is accurate, complete and timely.	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
22.	I accept personal errors and honestly acknowledge them.	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
23.	I demonstrate compassion and respect to all patients.	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
24.	I complete my clinical, administrative and academic tasks promptly.	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
25.	I maintain patient confidentiality	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
26.	I log my duty hours regularly and make every effort not to violate the rules	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
27.	When I feel I am too fatigued to work safely, I understand that I can call the chief medical residents for back-up.	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
28.	I understand the unique roles and services provided by the workers in the local health delivery system (social workers, case managers, dept of public health etc...)	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
29.	I am able to identify, reflect on, and learn from critical incidents and preventable medical errors.	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4
30.	I do my best to minimize unnecessary care including tests, procedures, therapies and consultations.	❑ NA	❑ 1	❑ 2	❑ 3	❑ 4

Please identify three specific clinical skills that you have improved over the past six months:

Please set three specific goals for the next six months:

Signature _____ Date _____

Rawalpindi Medical University

8

DIRECT OBSERVATION OF PROCEDURAL SKILLS (DOPS)

Please complete the questions using a cross ☒ Please use black ink and CAPITAL LETTERS

Doctor's Name: _____

PMDC Number: _____

Clinical setting: A&E ☐ OPD ☐ In-patient ☐ Acute Admission ☐ Other

Procedure number ☐☐

Assessors position: Consultant ☐ SpSR ☐ SpR ☐ Specialty doctor ☐ Nurse ☐ Other ☐

Number of previous DOPS observed by assessor with any trainee 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5-9 ☐ >9 ☐

Number of times procedure performed by trainee: 0 ☐ 1-4 ☐ 5-9 ☐ >10 ☐

Difficulty of procedure: Low ☐ Average ☐ High ☐

Please grade the following areas	Well below expectations	Below Expectations	Borderline	Meets Expectations	Above Expectations	Well above expectations	U/C*
	1	2	3	4	5	6	
1 Demonstrate understanding of indications, relevant anatomy, technique of procedure	☐	☐	☐	☐	☐	☐	☐
2 Obtains informed consent	☐	☐	☐	☐	☐	☐	☐
3 Demonstrates appropriate preparation pre-procedure	☐	☐	☐	☐	☐	☐	☐
4 Appropriate analgesia or preparation pre-procedure	☐	☐	☐	☐	☐	☐	☐
5 Technical ability safe sedation	☐	☐	☐	☐	☐	☐	☐
6 Aseptic technique	☐	☐	☐	☐	☐	☐	☐
7 Seeks help where appropriate	☐	☐	☐	☐	☐	☐	☐
8 Post procedure management	☐						
9 Communication skills	☐	☐	☐	☐	☐	☐	☐
10 Consideration of Patient/professionalism	☐	☐	☐	☐	☐	☐	☐
11 Overall ability to perform procedure	☐	☐	☐	☐	☐	☐	☐

* U/C Please mark this if you have not observed the behaviour and therefore feel unable to comment.

Please use this space to record areas of strength or any suggested development

Anything especially good?	Suggestions for development:

Have you had training in the use of this assessment tool? ☐ Face to face ☐ Have read guidelines ☐ Web/ CD-Rom

Time taken for observation: (in minutes) ☐☐

Assessors signature:

Date (mm/yy) ☐☐ / ☐☐

Time taken for feedback ☐☐

Assessor's Name: _____

*if appropriate Please note failure of return of all completed forms to your administrator is a probity issue

Acknowledgement: Adapted with permission of the American Board of internal Medicine

SpSR - Specialty Senior Registrar
SpR - Specialty Registrar

RAWALPINDI MEDICAL UNIVERSITY

9

CASE BASED CLINICAL EVALUATION OF TRAINEE

Resident's Name: _____

Evaluator's Name(s): _____

Hospital Name: _____

Date of Evaluation: _____

☐ Traditional Track (10% Clinic) ☐ Primary Care Track (20% Clinic)

1	Unsatisfactory
2	Below Average
3	Average
4	Good
5	Superior

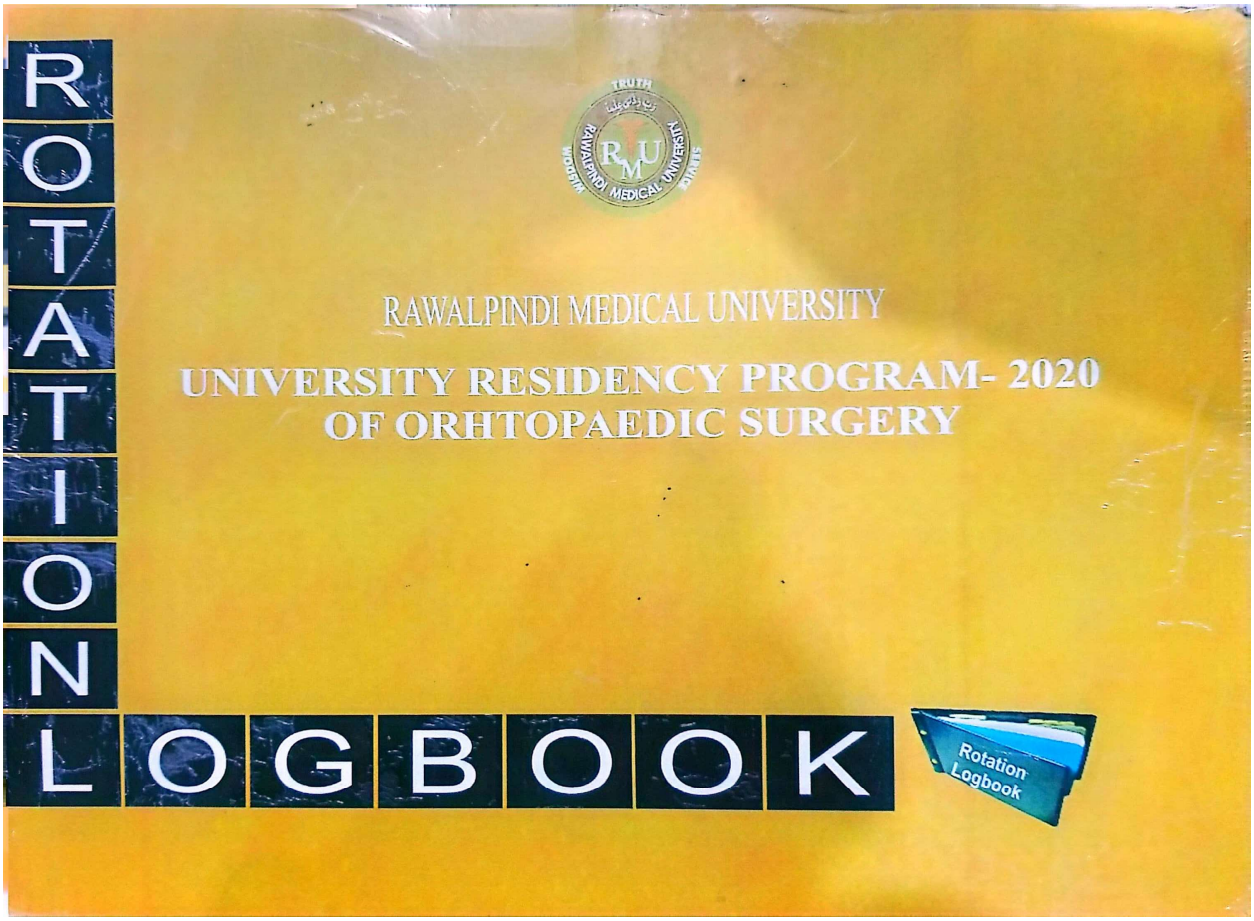
Please circle the appropriate number for each item using the scale above.

History	Scale				
1. Introduces himself and greet the patient.	1	2	3	4	5
2. Listen to the patient problems.	1	2	3	4	5
3. Shows politeness and empathy	1	2	3	4	5
4. Gathers proper information of present and past history	1	2	3	4	5
Physical Examination	**Scale**				
1. Physical examination done correctly	1	2	3	4	5
2. Pick physical signs correctly	1	2	3	4	5
3. Relevant examination done in detail	1	2	3	4	5
4. Interpret physical signs correctly	1	2	3	4	5
Assessment Plans	**Scale**				
1. Can list a logical differential diagnosis	1	2	3	4	5
2. Defend the diagnosis logically	1	2	3	4	5
3. Identifies patient active problems	1	2	3	4	5
Interpretation and Correlation of Laboratory and Imaging Data	**Scale**				
1. Can order logical and relevant investigations	1	2	3	4	5
2. Correctly interpret investigations (Laboratory and Imaging)	1	2	3	4	5
3. Formulate a logical management plan	1	2	3	4	5
4. Treatment plan is logical and relevant	1	2	3	4	5
5. Able to write a proper prescription	1	2	3	4	5

PORTFOLIO

QR CODE OF PORTFOLIO

LOG BOOK



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