

Foreword

Postgraduate Diploma in Family Medicine is a new postgraduate program offered by Rawalpindi Medical University, Rawalpindi. This name is well recognized and established for the last many decades world wide. The learning objectives of this diploma course were designed following a need assessment and a valid syllabus was chosen. It is mandatory to complete all modules of the course to receive the qualification of Postgraduate Diploma in Family Medicine.

This program is structured to include lectures and relevant workshops for development of a sound basis for Family Medicine through feasible contact sessions. Rawalpindi Medical University is committed to providing full support for the implementation of this course by allocating necessary resources, providing faculty development, and establishing a monitoring system with an aim to take it to next level to meet with the international standards.

An Expert Committee for Diploma in Family Medicine was formed.

The Chairperson of this Advisory Committee is Prof. Muhammad Umar, Vice Chancellor of Rawalpindi Medical University. The members of this committee are as follows:

1. Dr. Sadia Azam Khan, Assistant Professor and HOD of Family Medicine, RMU
2. Dr. Rizwana Shahid, Assistant Professor, Community Medicine, RMU
3. Dr. Zahid Rafiq, Family Physician, Canada

This advisory committee not only worked responsibly in designing the curriculum of diploma in Family Medicine following the identification of needs of the community but also worked meticulously for its launching, implementation and execution. Dr Arsalan Manzoor was instrumental in designing assessment.

The Chairperson of Content Approval Committee is Prof. Muhammad Ajmal, who is Dean of ENT & Ophthalmology as well as Chairperson of PGME Committee at RMU.

The untiring efforts of the whole team towards the commencement of this Diploma program at Rawalpindi Medical University are worth mentioning. I congratulate them for their commitment and dedication in this regard. I wish that all primary healthcare providers of Pakistan in the near future would be trained family physicians for a healthier nation.

Dr Rizwana Shahid,

Assistant Director,

Department of Medical Education.

PREAMBLE

It gives me a great pleasure to announce the launching of Postgraduate Diploma in Family Medicine at Rawalpindi Medical University, Rawalpindi. Rawalpindi Medical University is a well-recognized and rapidly progressing medical university which recently made a landmark achievement by securing first position in the IMPACT International Rankings.

Family Medicine is the foundation pillar of Health Care System. Structured Training of Family Physicians leads to early diagnosis, prompt treatment and timely referrals .This leads to reduced patient morbidity and mortality. The aim of this program is to provide structured training in major clinical disciplines to enhance the clinical knowledge and skills of practicing family practitioners and improve the standards of health care.

The program will endeavor to equip the trainees in mainly 6 competence areas defined by ACGME that a family physician needs to master; these include Patient Care, Medical Knowledge, System-based Practice, Practice-based Learning, Professionalism and Communication skills. Ultimately, after completing the Diploma, a Family Physician will act as a Family Medicine Expert, effective Communicator, Collaborator, Manager, Health advocate, Scholar and a true Professional

The curriculum has been devised to include a knowledge component and a practical skills component. Knowledge will be imparted mainly through large group interactive sessions while skills will be mainly practiced during clinical rotations. Variety of teaching modalities including lectures, case based discussions, simulations, drills, grand rounds, workshops will be used.

The Face to face interactive sessions will be conducted with simultaneous zoom sessions to allow international candidates to be included in the Program. The Curriculum also includes core elements of the role of family physician in building therapeutic relationships with patients and families, addressing patients' needs and expectations, professionalism, identification and management of acute and chronic illness, maternity care, and the care of hospitalized patients after discharge.

The program is designed in accordance with the modern principles of Medical Education. Participants as "Adult Learners" will be "able to identify their learning needs; hence self directed learning will be encouraged. It will allow flexibility in accommodating learning needs of trainees which can vary according to the health needs of the local population served.

The vision is to redesign family medicine residency training to prepare graduates to meet the health care needs of their patient populations and regional communities. Family physicians serve as personal physicians and as the patient's usual source of care, as recognized in historic documents that have defined the specialty's enduring role in the society as *the foundation of the health care system*.

Assessment will be structured in the course with emphasis on Formative Assessment during training. This will be conducted through a series of Quiz, MCQs, case Scenarios, case based discussions, MiniCEX, peer discussions, reflective entries, portfolio writings and will be followed by a Summative Assessment on completion of training.

The program will prepare candidates for career-long practice and serve as a bridging program for recent graduates and experienced practitioners in building satisfying career in the exciting and rewarding specialty of Family Medicine.

The untiring efforts of the whole team led by the dynamic leadership of Vice Chancellor Prof Muhammad Umar have been phenomenal.

Finally, I admire the contributions of our Faculty and staff in supporting, strengthening and promoting Family Medicine as an emerging specialty in Pakistan.

Dr. Sadia Azam Khan

M.B.B.S, M.R.C.G.P UK, CCT

FCPS Equivalence, PMDC

Certified in Palliative Care, UK (Merit)

Master Trainer in Family Medicine, UHS

Program Director & Course Organizer,

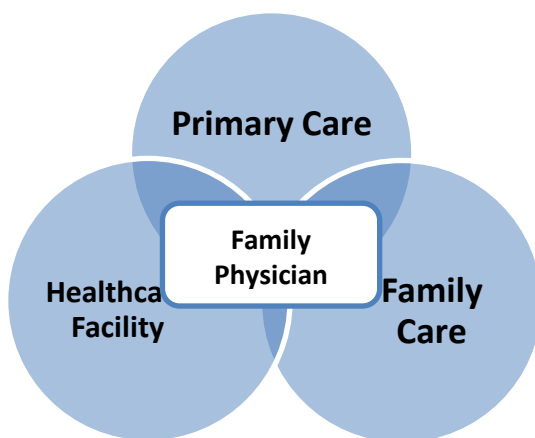
Head of Department of Family Medicine,

Rawalpindi Medical University.

INTRODUCTION

Family medicine is the medical discipline also known as a general practice, general medical practice, family practice, or primary care. It is a discipline which integrates several medical specialties into a new whole. It is concerned with the holistic approach to patient care in which the individual is seen in his totality and in the context of his family and community. The trainees in family medicine should be appropriately equipped to meet the contemporary and future health needs of individuals and families within their practice community. It is therefore indispensable to have acquisition of knowledge and skills in the major clinical disciplines with appropriate attitudes essential to the practice of the specialty.

Family Medicine Practice consists of three Core Areas as depicted below:



Family Physicians should be competent enough to work in a multi-disciplinary context in cooperation with non-professional community health workers in order to respond effectively to the health needs of the population.

There is a need to produce a critical mass of family physicians to bring quality health care closer to the people. Family physicians will provide health maintenance/promotion, disease prevention, basic medical, surgical, paediatric, obstetric and gynecological care within the community. The recent pandemic of COVID 19 has raised the need of a strong primary health care system and this course will go a long way to help this need of time.

CURRENT NEEDS & CHALLENGES IN PAKISTAN

The health services in Pakistan still face challenges as even serious patient cannot reach the tertiary care hospitals due to their limited resources. These limitations make Family Medicine even more important as a competent general physician is always needed in such cases to diagnose, treat and refer the patient to the higher facilities where needed. Family medicine itself is a unique specialty, as it takes care of the entire body as one unit with great emphasis on family, health promotion and disease prevention. General physicians getting trained in Diploma course will have broad exposure to the patients of all age groups and substantial experience in the management of diverse pathologic conditions. This includes theoretical and practical training in those conditions that are commonly encountered in primary care practice.

It will include a wide range of acute and chronic medical conditions of Family Medicine, preventive health care and ethical issues. Moreover, discussion on the cost and benefits of diagnostic tests, procedures and therapies will also be an integral part of this course. This course will provide an educational experience to the general physicians deemed necessary to provide comprehensive and coordinated care to the patients. Training will be conducted under the supervision of the trained faculty members in family Medicine and will include clinical rotations in respective specialties that will be monitored by the Department of Medical Education of RMU

VISION

Rawalpindi Medical University is a rapidly succeeding university with a broad vision to elevate the standards of healthcare. The diploma program is also part of the same endeavor. RMU is starting this program to enhance the competency of general physicians. This program is intended to emphasize on clinical experience and professional development regarding the commonest ailments of our nation. General physicians are expected to acquire knowledge and skills along with the development of appropriate attitude and behavior throughout their training program.

Rawalpindi Medical University is committed to provide full support for the implementation of the program by allocating necessary resources, promoting faculty development and establishing an ample monitoring system to meet with the international standards.

MISSION

To produce competent family physicians adequately equipped with the knowledge, skills and attitudes deemed necessary to meet the healthcare needs of the community and play a fundamental leadership role in the provision of comprehensive healthcare services.



Department of Family Medicine, New Teaching Block, RMU

MESSAGE OF THE HEALTH MINISTER



Prof. Dr. Yasmeen Rashid
MBBS, MRCOG, MCPS, FRCOG

Our government, since its inception, has been fully supportive of the improvement of health care delivery in Punjab. There are multiple stakeholders and general physicians in the Punjab health care system in public as well as in private setups that are of prime importance. They are the first to receive the patients and to deal with their healthcare problems. Their Continuous Professional Development (CPD) is essential to strengthen the foundations of healthcare delivery in the province.

Strenuous efforts of Prof Dr. Muhammad Umar, Vice Chancellor Rawalpindi Medical University and his dedicated team on launching the Diploma program for general physicians are really appreciable which is the first of its kind in Punjab.

I hope that the general physicians trained under this diploma program will maintain their enthusiasm in sincerely applying the power of education not only to enhance their individual professional careers but also towards the betterment of the healthcare of the nation.

In the end, I hope to see RMU progressively playing its role in professional training of doctors for the social and intellectual wellbeing of our population paving the way towards achievement of Sustainable Developmental Goals.

MESSAGE OF THE VICE CHANCELLOR



Prof. Dr. Muhammad Umar (Sitara-e-Imtiaz)
MBBS, MCPS, FCPS, FRCP (Glasg), FRCP (London), FACG (USA), AGAF (USA)

It is indeed a matter of great pleasure that the Department of Family Medicine, Rawalpindi Medical University is going to commence the Diploma program for family physicians. This is one of the many initiatives that Rawalpindi Medical University has taken to promote medical education and Continuous Professional Development (CPD) of our doctors both working in public and private healthcare settings. It is of prime importance for the family physicians to keep pace with the recent advancements in medical field and this diploma program will provide a broad framework for general physicians to enhance their diagnostic and managerial competencies pertinent to the most commonly encountered healthcare problems of this region. Lastly, I congratulate my faculty for their untiring efforts in designing this course and wish them all the best for the success of this course which will ultimately be beneficial for the community.

COURSE OBJECTIVES

On completion of Diploma in Family Medicine, the participants should be able to:

1. Practice competently in the field of Family Medicine at the levels of primary care, family care and institutional care
2. Apply the principles of health promotion and disease prevention as integrated components of healthcare
3. Practice family medicine with prime focus on the health needs of our patient populations
4. Work in multi-disciplinary context in cooperation with allied-professionals and community health workers in order to respond effectively to people's healthcare needs
5. Undertake diagnosis and initial management of all medical and surgical emergencies ensuring safe transportation of patients to the hospital as needed
6. Apply their clinical knowledge, clinical skills and good communication skills in the best interest of the patients
7. Manage common community / public health problems
8. Refer patients appropriately to secondary and tertiary healthcare facilities, recognizing the limitations of Primary Health Care (PHC)
9. Provide leadership to the other health workers for effective service delivery
10. Coordinate health care services and programs at all levels of care
11. Manage health resources and institutions for efficient service delivery
12. Prevent locally endemic diseases and promote health
13. Practice Evidence based Medicine and keep themselves updated with latest guidelines
14. Play appropriate role in the national and international system of disease surveillance and monitoring
15. Undertake health research under available resources and opportunities

Core Competencies in Family Medicine

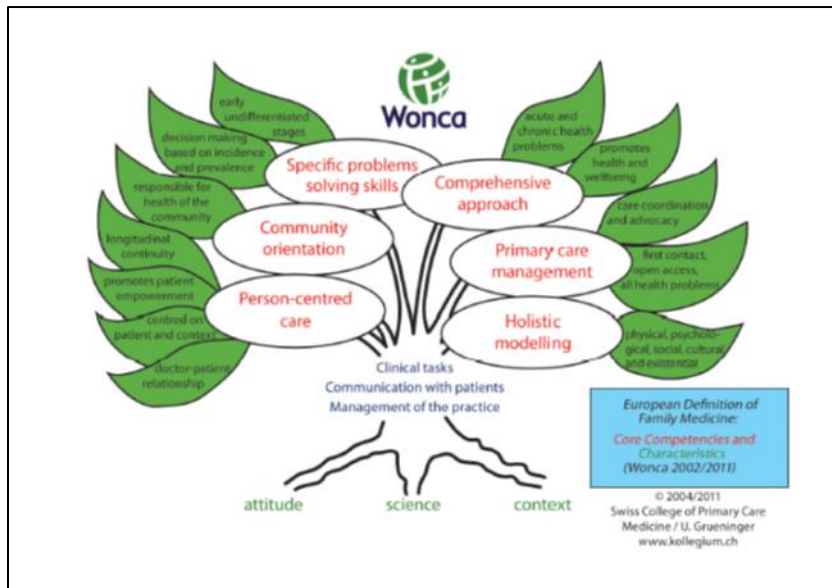
Family practice is characterized by eight different attributes, namely the provision of general, first contact, continuous, comprehensive, coordinated and collaborative care with orientation towards the family and the community. WONCA defined six main competencies that a general practitioner/family physician has to master (figure 1). These competencies include the following: Primary care management, person-centered care, specific problem solving skills, comprehensive approach, community-orientation and holistic approach. These competencies cover the main characteristics of the discipline of family practice; namely:

1. Acting as first point of contact in the health care system, dealing with all health problems of the individuals regardless of their age and sex.
2. Coordinating care of people with other specialists, professionals and health care resources in an efficient way, taking an advocacy role for the patient when needed.
3. Developing a person-centered approach that is oriented to the individual within the context of his/her family and community.
4. Promoting patient empowerment.
5. Providing longitudinal continuity of care depending on the needs of the patient.
6. Applying decision-making process for maintaining health and wellbeing of the people as determined by the prevalence and incidence of the illness in the community.
7. Managing both acute and chronic health problems of individual patients.
8. Managing illnesses presenting in an undifferentiated way namely at an early stage of their development.
9. Promoting health and wellbeing and preventing diseases through appropriate effective interventions.
10. Assuming specific responsibility for the health of the community.
11. Adopting holistic approach for health problems incorporating physical, psychological, social and cultural dimensions.

A curriculum for training general practitioner/family physician is expected to facilitate acquisition of the above six main core competencies rooted and nurtured by the appropriate attitude, scientific basis and social context. The contextual features take into consideration the context of the physicians themselves (working conditions, community, culture, financial and regulatory frameworks); the attitudinal features cover the professional capabilities of the physicians in addition to the values and medical ethics of the profession; and the scientific features cover the application of a critical and research – based approach in practice through continuous learning and quality improvement.

It is worth noting that WONCA competencies are in line with those of the American Council for Graduate Medical Education (ACGME) and those of the College of Family Physicians of Canada for the specialty of Family Medicine. ACGME defines mainly 6 competencies that a family physician needs to master; these include: 1. Patient Care, 2. Medical Knowledge, 3. System-based Practice, 4. Practice-based Learning, 5. Professionalism, and 6. Communications. The CanMEDS for Family Medicine lists several competencies that the Family Physician needs to master in his/her role as: 1. Family Medicine Expert, 2. Communicator, 3. Collaborator, 4. Manager, 5. Health advocate, 6. Scholar and 7. Professional.

Figure 1: European Definition of Family Medicine



Introduction to the Curriculum

The professional diploma in family medicine aims at equipping general practitioners with the knowledge, skills and attitudes that are needed to provide comprehensive, continuous and appropriate health care to individuals and families. The developed curriculum is mapped to the competencies of Family Medicine/General Practitioner doctor as defined by WONCA, ACGME and those of the College of Family Physicians of Canada for the specialty of Family Medicine.

Competencies

- Maintain health and wellbeing of the population they serve.
- Provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health in different settings.
- Demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to patient care.
- Exhibit the ability to investigate and evaluate the care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on continuous self-evaluation and life-long learning.
- Demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals.
- Show a commitment to carrying out professional responsibilities and an adherence to ethical principles.
- Demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

General Learning Objectives

➤ Program outcomes

At the end of the training, participants will be able:

1. To adopt a bio-psycho-social model taking into account the cultural dimensions of Pakistan.
2. To emphasize the need for building an effective patient-physician relationship.
 - a. To adopt a person-centered approach in dealing with patients.
 - b. To act as advocate for the patient.
 - c. To involve patients as important stakeholders in decision-making and the management of their diseases.
3. To master effective and appropriate care provision and health service utilization.
 - a. To monitor, assess and improve quality and safety of population health, well-being and patient care.
 - b. To provide cost-conscious medical care.
 - c. To advocate for individual and community health and well-being.
4. To provide high quality sustainable and ongoing continuity of care as determined by the needs of the patient.
 - a. To manage and coordinate health and well-being of patients, their families and population at large through the concepts of health promotion, prevention, cure, care and palliation and rehabilitation.
5. To demonstrate high levels of medical professionalism in dealing with others.
 - a. To respect patient privacy and autonomy.
 - b. To demonstrate compassion and respect to others.
 - c. To demonstrate sensitivity to diverse population with no discrimination on the basis of gender, age, culture, ethnicity, religion, and disability.
6. To act as effective and trustworthy primary contact with patients that is responsive to their needs
 - a. To manage conditions that may present early and in an undifferentiated way.
 - b. To cover the most common health conditions prevalent in primary care.
7. To adopt evidence based clinical information management: selectively gather and interpret information from history-taking, physical examination, and investigations and apply it to an appropriate management plan in collaboration with the patient.
8. To use effectively and efficiently diagnostic and therapeutic interventions for patient care, as needed.
9. To refer the patients to other health professionals and specialists as needed, through a well-functioning, effective referral system.
10. To promote health and wellbeing of patients, families and community at large, by applying health promotion and disease prevention strategies appropriately.

PROGRAM SPECIFICATIONS

Attributes	Specifications
Certificate Awarding Institute	Rawalpindi Medical University
Duration	1 year Contact session 8am -2pm, Saturdays and Tuesdays Modified according to university activities and schedule
Course structure	2 semesters each comprising of 8 modules Pass percentage – 60%
8 modules in Semester-I	<ul style="list-style-type: none"> • 1. Principles of Family Medicine & COVID Management Course • 2. Cardiovascular Disease • 3. Infectious Diseases • 4. Gastroenterology & Liver • 5. Respiratory • 6. Musculo-skeletal & Dermatology • 7. Neurology • 8. Surgery / Urology
8 modules in Semester-II	<ul style="list-style-type: none"> • 9. Endocrinology • 10. Mental Health. • 11. ENT & Eye • 12. Orthopedics/Radiology • 13. General Clinical Skills & Emergency case Management • 14. Gynaecology / Obstetrics & Pathology • 15. Paediatrics • 16. Research in Clinical Practice
Credit hours	37 credit hours (total contact hours)
Total contact days	16
Number of students per Batch	30
Fees	PKR 100,000
Admission Criteria	<ul style="list-style-type: none"> • MBBS/MD • Valid PMC Registration Certificate
Training sites	<ul style="list-style-type: none"> • Rawalpindi Medical University, New & old Teaching Block • Holy Family Hospital, Rawalpindi • Benazir Bhutto Hospital, Rawalpindi • DHQ Teaching Hospital, Rawalpindi
Teaching strategies	<ul style="list-style-type: none"> • Assignments, LGIS, bedside teaching, Demonstrations in skill lab, Case-Based Discussions, Videos
Assessment	Candidates will be assessed through formative assessment during the modules and through summative assessment at the end of the course.

**Schedule of Family Medicine Certificate Course 2021
(1st Batch)**

Semesters	Dates	Modules
SEMESTER 1	16-10-2021	Orientation session
	13-11-2021	1.Principles of Family Medicine
	11-12-2021	2.Cardiovascular module
	08-01-2022	3.Infectious Diseases Module
	05-02-2022	4.Gastrointestinal/ Liver Module
	05-03-2022	5.Respiratory Module
	02-04-2022	6.Musculoskeletal & Dermatology Module
	07-05-2022	7.Neurology Module
SEMESTER 2	04-06-2022	8.Surgery& Urology Module
	02-07-2022	9.Endocrinology Module
	06-08-2022	10.Mental Health Module
	03-09-2022	11.ENT & Eye Module
	01-10-2022	12.Orthopedics and Radiology
	19-11-2022	13. Emergency Care
	28-08-2022	14.Gynaecology / Obstetrics
	11-09-2022	15.Pediatrics Module
	25-09-2022	16.Research in Clinical Practice
	09-10-2022	Clinical Grand Round
	23-10-2022	Final Assessment

TIME TABLE

Semester	Date	Modules	Timings								
			08:00-08:15AM	08:15-09:00	09:00-10:00 AM	10:00-11:00AM	11:00-11:30 AM	11:30AM – 12:45PM	12:45-02:00PM		
Semester-I	16-10-2021	Orientation session	Welcome Address of VC RMU				Introduction to Research				
	13-11-2021	Principles of Family Medicine & COVID Management course	Introduction to Family Medicine, Principles of Family Medicine	Prevention & Screening of diseases	Workshop on professionalism	Workshop on Communication skills	Consultation Models, Communication Skills in family Medicine. Evidence Based Medicine. Ethics in Family Medicine				
	11-12-2021	CVS	Evaluation of Chest pain		Hypertension	Heart failure	IHD,PVD,Dyslipedemia				
	08-01-2022	Infectious diseases	Dengue, malaria, VHF			Diphtheria			Seasonal flu, Influenza H1N1	Common infections	
	05-02-2022	Gastroenterology	Liver Diseases		Upper & Lower GI bleeding	Dyspepsia			Chronic abdominal pain	Constipation & diarrhea	
	07-05-2022	Clinical Grand Round(Neurology)						CNS Tuberculosis Stroke			
	05-03-2022	Respiratory	Lower Respiratory tract infections			COPD			TB		
	02-04-2022	Musculo-skeletal & Dermatology	Musculo-skeletal pain		Common skin problems			Wounds & burns	Basic surgical skills		
	04-06-2022	Surgery & Urology	Abdominal Injury		Chest Injury	Head injury			Hematuria, renal / ureteric colic, urinary retention, UTI		
	Semester -II	02-07-2022	Endocrinology	Diabetes Mellitus		Thyroid disorders	Renal failure			Other endocrine disorders	
06-08-2022		Clinical Grand Round (Mental Health)						Depression & suicide, Schizophrenia, Dementia			
03-09-2022		ENT & Eye	Common ear, nose & throat disorders (nasal obstruction, ear discharge and recurrent sore throat)						Common eye disorders (red eye, lid mass, gradual decrease in vision)		
01-10-2022		Clinical Grand Round (Orthopaedics)						Radiology			
19-11-2022		Clinical Grand Round (Emergency Care)						Common emergencies			
28-08-2022		Gynaecology / Obstetrics	Diabetes Mellitus, HTN & Anemia in pregnancy		Antenatal care Drugs & pregnancy			Common Conditions in Obstetrics/Gynaecology			
		Clinical Grand Round (Gynaecology & Obstetrics)						Clinical Grand Round (Paediatrics)			
11-09-2022		Paediatrics	Neonatal examination, vaccination schedule, diarrhea, Pneumonia, Astham / TB, measles and Rash						Neonatal jaundice	Common paediatric surgical problems	
25-09-2022		Research in clinical Practice						Research proposal			
		23-10-2022	Final Assessment								

Tea Break

SECTION-I

SEMESTER-I

- Principles of Family Medicine & COVID Management Course
- Cardiovascular Module
- Infectious Diseases Module
- Gastroenterology & Liver
- Respiratory Module
- Musculoskeletal & Dermatology
- Neurology Module
- Surgical/Urology Module

MODULE 1: PRINCIPLES OF FAMILY MEDICINE

Module Incharge: Dr Sadia Khan

Module Faculty: Prof. Syed Arshad Sabir, Dr Sana Bilal, Dr. Mahjabeen Qureshi, Dr. Arsalan Manzoor, Dr. Azhar Chaudhry (UK)

Topics	Learning Objectives	Teaching Strategy	Time	Dept.	Faculty	Study material /reference of book	Assessment tools
Prevention and Screening of diseases	At the end of session students should be able to; 1. Appraise preventive aspects of Global burden of diseases 2. Apply levels of prevention against common diseases 3. Describe concept of screening 4. Elaborate validity of screening tests results in disease prevention & control 5. Assess patients & clients for screening against common diseases of the region	LGIS, SGD	45 min	Community Medicine	Prof. Syed Arshad Sabir, Dr. Sana Bilal/ Dr. Mahjabeen Qureshi	Park's textbook of Preventive & Social medicine	MCQs, SEQs

MODULE 1: PRINCIPLES OF FAMILY MEDICINE

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
Ethics & Professionalism A. Workshop on Professionalism & communication skill	At the end of workshop participants should be able to: 1. Define a Consultation 2. Elaborate Consultation Models 3. Communication Skills 4. Recognise significance of communication skills in Family Practice 5. Apply Ethics in Family Practice	Workshop	1 hour	Family Medicine	Dr. Sadia Khan	ABC of learning and Teaching in medicine	Role play / SGD

MODULE 1: PRINCIPLES OF FAMILY MEDICINE

Case Scenario

Topic: Prevention and Screening of diseases

Department of Public health is operational in the city with a goal to reduce the burden of disease. A Public health team included a General Physician who is running a clinic in a highly populated area of the city to “estimate” the prevalence of diabetes in that area. They select a screening test which was highly sensitive but moderately specific. Tests were offered to all “eligible “patients and also to their attendants visiting that clinic. There was high “yield” of the applied test but a good number of screens in whom test results were eventually found negative were annoyed with their doctor.

- a) What would be the preventable burden of diseases in the regional context?
- b) How diseases can be controlled & prevented? Elaborate in terms of levels of prevention.
- c) What is role of screening in disease prevention & control?
- d) What are the problems associated with a highly sensitive screening test giving false positive results and highly specific but with false negative tests results?
- e) What are common screen able conditions and their screening tests?

MODULE 2: CARDIOVASCULAR

Module Incharge: Prof. Imran Saeed Ali

Module Faculty: Prof. Imran Saeed Ali, Dr. Naima Shahzadi, Dr. Atif Shahzad

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
Chest pain	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Approach to a patient with chest pain 2. Assess and manage the patients at initial stage 3. Monitor the patients in long term 	LGIS, CBD, Video	1 hour	Cardiology	Prof. Imran Saeed Ali		MCQs, SEQs, OSCE
Hypertension	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Monitor BP 2. Enlist guidelines for management of HTN 3. Enumerate complications of HTN 4. Do CVD Risk Assessment 	LGIS, CBD, Video	1 hour	Cardiology	Dr. Naima Shahzadi		MCQs, SEQs, OSCE
Heart failure	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Enlist causes of heart failure 2. Enumerate types of heart failure 3. Elaborate stages of heart failure 4. Describe management & complications of heart failure 	LGIS, CBD, Video	1 hour	Cardiology	Dr. Atif Shahzad		MCQs, SEQs, OSCE

MODULE 2: CARDIOVASCULAR

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
BLS	<p>At the end of workshop participants should be able to;</p> <ol style="list-style-type: none"> 1. Recognize the severe life threatening emergencies 2. Provide CPR 3. Use an AED 4. Relieve choking in a safe, timely and effective manner 5. Interpretation of ECGs 	Workshop	2.5 hours	General Surgery	Prof. M. Idrees Anwar	American Heart Association (AHA) BLS Manual	MCQs, OSCE

MODULE 2: CARDIOVASCULAR

Case Scenario

Topic: Chest Pain

1. 45 yrs old gentleman an office executive with very long working hours, smoker, presented in your clinic with complaints of episodes of dizzy spells, which have worsened over the last one week. On examination he has BMI of 25. Pulse 88beats/min regular, BP 150/90mmHg. He is suffering from emotional stress these days as his younger brother died three weeks ago with Acute Extensive Anterior wall MI as a complication of Diabetes. He does not give history of breathlessness as such, however, on probing he admits to experiencing un-proportional breathlessness on effort with palpitation and retrosternal burning, especially when he has to walk at a faster pace or has sometimes to climb the stairs to his office when the lift is not operational.

How will you proceed?

2. 36yrs old lady known diabetic for the last 5yrs presents to your clinic for routine management for diabetes. Her BP is maintained on 140/90 for the last few visits without medication.

How will you proceed?

Topic: Hypertension

1. 60 year old male with no pre-morbids presented to you with severe headache. His blood pressure is 180/100mmHg. Blood random sugar is 250mg/dl. Pulse rate is 90 beats per min. Respiratory rate is 12 breaths per min. Systemic examination is unremarkable.

How will you proceed?

2. A 40 year old male known hypertensive and smoker presented to you for follow up.

His BMI is 28kg/m², Blood pressure is 140/100, pulse rate is 80 beats per min regular. He is afebrile. Systemic examination is unremarkable.

How will you manage the case?

3. A 30 year old pregnant female with gestational age of 26 weeks presented to you with headache and vertigo.

On vital examination her blood pressure is 160/100 in left arm in supine position. , Blood pressure is 140/100; pulse rate is 80 beats per min regular. Afebrile Systemic examination is unremarkable.

How will you manage her?

MODULE 2: CARDIOVASCULAR

Case Scenario

Topic: Heart failure

1. A 60 year male known diabetic and hypertensive diagnosed case of ischemic dilated cardiomyopathy presented to you with complaints of shortness of breath NYHA IV along with 2 days history of burning micturation, urgency and increased frequency.

He is taking tab Aspirin 75mg OD, tab spiomide 40mg OD, tab lisinopril 5mg OD and tab Bisoprolol 2.5mg OD.

On examination his BP is 90/60 mmHg, pulse rate is 112/min regular respiratory rate is 28/min, temperature is 100 F.

He has bilateral fine crepts at bases. His first and second heart sounds are of normal intensity

How will you proceed?

2. A 65 year old male known hypertensive, dilated cardiomyopathy with EF 30 – 35% presented to you with complaints of shortness of breath NYHA IV, orthopnea, paroxysmal nocturnal dyspnea and bilateral pedal edema. He is poor compliant with treatment.

His BP is 85/60 mmHg, pulse rate is 106/min respiratory rate is 28/min, temperature is 98.6 F.

He has bilateral fine crepts at bases. His first and second heart sounds are of normal intensity
His ECG shows bigeminy.

How will you investigate and proceed?

MODULE 3: INFECTIOUS DISEASES

Module Incharge: Dr. Mujeeb Khan

Module Faculty: Dr. Mujeeb Khan, Dr. Nasir Khan / Dr. Maria Khaliq

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
Dengue, malaria, VHF	At the end of session students should be able to; 1. Manage a case of dengue 2. Manage a case of Malaria	LGIS, CBD, Video	2 hour	DID	Dr. Mujeeb Khan	Oxford Textbook of Medicine	MCQs, SEQs, OSCE
Diphtheria	At the end of session students should be able to; 1. Manage a case of Diphtheria	LGIS, CBD, Video	1 hour	DID	Dr. Mujeeb Khan	Oxford Textbook of Medicine	MCQs, SEQs, OSCE
Seasonal flu, Influenza H1N1	At the end of session students should be able to diagnose and manage common infections presenting in the community including Flu;	LGIS, CBD, Video	1 hour	DID	Dr. Mujeeb Khan	Oxford Textbook of Medicine	MCQs, SEQs, OSCE

COVID MANAGEMENT COURSE

This course is comprised of 4 modules:

- Module I: Introduction to Coronavirus and COVID-19
- Module II: Infection Prevention and Control (IPC) for Novel Coronavirus
- Module III: COVID-19 Treatment Facility Design
- Module IV: Clinical Care of COVID-19 Patient

Module 1: Introduction to Coronavirus and COVID-19

Module Incharge: Dr. Mujeeb Khan

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
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Introduction to the coronavirus	<p>At the end of the session students should be able to describe:</p> <ul style="list-style-type: none"> • The nature of Coronavirus causing COVID-19 • The strategies to be used to communicate risk and engage communities to detect, prevent and respond to the emergence of COVID-19 	Online session	30 min	DID	Dept of infectious diseases	WHO Guidelines available on the WHO Website	M C Q s
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Module 2: Infection Prevention and Control (IPC) for Novel Coronavirus (COVID-19)

Module Incharge: Dr. Mujeeb Khan

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference book	Assessment tools
<p>Preparedness, readiness, and IPC (Use of PEP)</p> <p>Standard precautions, transmission-based precautions, and COVID 19 specific recommendations</p>	<p>At the end of the session students should be able to;</p> <p>1 Define IPC and its role in the context of preparedness, readiness, and response;</p> <p>2 Describe the current epidemiological COVID-19 situation, including case definitions and signs & symptoms;</p> <p>3 Describe source control, administrative controls and environmental and engineering controls;</p> <p>4 Describe the WHO-recommended IPC measures for health care facilities, including when dealing with suspect or confirmed COVID-19 cases;</p> <p>5 Describe additional IPC measures to be taken to assist in general preparedness within a health care facility.</p>	Online session	30 min	DID	Dept of infectious diseases	WHO Guidelines available on WHO Website	MCQs

Module3: COVID-19 Treatment Facility Design

Module Incharge: Dr. Mujeeb Khan

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
COVID Management Course	<p>At the end of session students should be able to;</p> <ol style="list-style-type: none"> 1. Diagnose a patient of COVID-19 2. Manage the patient of COVID-19 3. Provide instructions for home isolation 4. Identify and manage the complications of COVID-19. 5. Recent advances of COVID-19 	LGIS, CBD, Video	3 hours	Infectious diseases	Dr. Mujeeb Khan	Oxford handbook of infectious diseases	MCQs, SEQs

Topics	Learning Objectives	Teaching Strategy	Time	Dept	Faculty	Study material /reference of book	Assessment tools
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<p>Designing a Corona screening area and treatment center</p>	<ul style="list-style-type: none"> • Describe the key principles driving COVID-19 treatment centers and dedicated screening points design. • Draft and evaluate a COVID-19 treatment center layout, including triage and different risk areas, with clear and rational flows of people and material. • Describe different types of ventilation and exhaust air treatments. • Describe the referral pathway and patient's journey. • Assess and evaluate available existing structures. 	<p>Online session</p>	<p>½ hour</p>	<p>DID</p>	<p>Dept of infectious diseases</p>	<p>WHO Guidelines available on WHO Website</p>	<p>MCQs</p>
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: Module 4: Clinical Care of COVID-19 Patient

Module Incharge: Dr. Mujeeb Khan

Topics	Learning Objectives	Teaching Strategy	Time	Department	Faculty	Study material /reference of book	Assessment tools
Monitoring Oxygen therapy Antimicrobials Mechanical ventilation Sedation Preventing complications Liberation from mechanical ventilation Ethical considerations	By the end of this module, participants should possess some of the necessary tools that can be used to care for critically ill patients from hospital entry to hospital discharge.	Online session	30 min	DID	Dept of infectious diseases	WHO Guidelines available on the WHO Website	MCQs

MODULE 3: INFECTIOUS DISEASES

Case Scenario

Topic: Imaging of chest diseases

A 55 years old male patient presented with history of off and on cough and fever for the last 3 weeks. Chest X-ray showed scattered areas of air space shadows involving bilateral lung fields.

Topic: Imaging of bone diseases

12 years old limping child presented with pain in his left thigh referring to the knee joint. X-ray showed lytic lesions in distal end of the femur.

Topic: Dengue

26 year old male, Rashid, Labourer by profession, resident of Tarnol, Islamabad, with no comorbidities, presented to the Emergency Department with a 4 day history of a sudden onset high grade intermittent fever, documented at 104 F. The fever is associated with severe headache, pain behind his eyes, severe muscle aches and a severe backache. He also complains of severe generalized abdominal pain and vomiting upon any kind of oral intake and hasn't passed urine since early in the day. On Examination his mucosal membranes are dry and there are multiple bruises on his arms and legs. Vitals are as follows: BP 100/70, Pulse 84, Temp 101F, Respiratory rate 22. CBC showed WBC 1.7, Hb 12.4, Hct 45.5, and Platelets 24. On Ultrasound there was a streak of peri-cholecystic fluid.

Topic: Malaria

43 year old female, Shahnaz, hypertensive house wife and mother of 3, from Rawalpindi, presented to the ER with a 12 days history of recurrent fever spikes followed by rigors and chills with profuse sweating. She also complains of a severe headache, myalgia, fatigue, loose stools and dark colored urine. On Examination there is jaundice of the eyes. Ultrasound reports an enlarged spleen. CBC shows WBC 10.3, Hb 9.6, Hct 27.6, Platelets 68, Total Bilirubin 4.6, Urea 24, Creatinine 1.1, Na 132, K 4.9, Cl 110.

MODULE 3: INFECTIOUS DISEASES

Case Scenario

Topic: H1N1 Influenza

67 year old Male, Khalid, Hypertensive and Diabetic, Resident of Karachi, having just returned from Umrah, presented to the Accident & Emergency department with a 3 day history of a high grade continuous fever with chills associated with a nonproductive cough with a headache and severe body aches along with a 1 day history of sudden onset SOB and severe chest discomfort. There was no associated flu like symptoms. O2 Saturation was 82% on room air. Blood Tests showed WBC 3.2 Hb 12.6 Platelets 149, Total Bilirubin 1.4, Urea 45 Creatinine 2.1 CRP 23. Chest X-ray showed diffuse patchy infiltration.

Topic: COVID-19

1. A diabetic patient has presented with loss of sense of smell, loss of taste, high grade fever, chills, severe body aches and cough for the last 2 days. He has recently arrived from the united kingdom 2 days back?
 - a) What are the differential diagnoses?
 - b) How you will investigate this case?
 - c) How you will give instructions for home isolation.
 - d) How you will investigate the contacts.

How you will treat this case

MODULE 4: GASTROENTEROLOGY & LIVER

Module Incharge: Dr. Tayyab Saeed Akhtar

Module Faculty: Prof. Muhammad Umar, Prof. Hamama-tul-Bushar Khaar, Dr. Tanveer Hussain, Dr. Tayyab Saeed Akhtar, Dr. Aqsa

Topics	Learning Objectives	Teaching Strategy	Time	Department	Faculty	Study material /reference of book	Assessment tools
Liver diseases	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Enlist causes of acute and chronic liver diseases 2. Diagnose the patients of Chronic Liver Disease & hepatitis 3. Outline management plan for patients with liver disorders 4. Refer the patients to gastroenterologist 	LGIS, CBD, Video	1 hour	Gastroenterology	Prof. Muhammad Umar	Oxford Handbook of Gastroenterology & Hepatology	MCQs, SEQs, OSCE
Upper & Lower GI bleeding	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Enlist causes of upper & lower GI bleeding 2. Diagnose the patients with GI bleeding 3. Manage them accordingly 4. Refer the complicated cases to tertiary health centre 	LGIS, CBD, Video	1 hour	Gastroenterology	Prof. Hamama-tul-Bushar Khaar	Oxford Handbook of Gastroenterology & Hepatology	MCQs, SEQs, OSCE
Dyspepsia IBS IBD	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Enlist causes of dyspepsia 2. Diagnose the patients of dyspepsia 3. Outline management plan 4. Diagnose and 	LGIS, CBD, Video	1 hour	Gastroenterology	Dr. Aqsa	Oxford Handbook of Gastroenterology & Hepatology	MCQs, SEQs, OSCE

	manage IBS, IBD						
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MODULE 4: GASTROENTEROLOGY & LIVER

Topics	Learning Objectives	Teaching Strategy	Time	Department	Faculty	Study material /reference of book	Assessment tools
Chronic abdominal pain	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Enlist causes of chronic abdominal pain 2. Make differential diagnosis of chronic abdominal pain 3. Outline management plan for patients presenting with chronic abdominal pain 4. Refer the patients to tertiary health care facility 	LGIS, CBD, Video	1 hour & 15 min	Gastroenterology	Dr. Tanveer	Oxford Handbook of Gastroenterology & Hepatology	MCQs, SEQs, OSCE
Constipation & Diarrhea	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Enlist causes of constipation & diarrhea 2. Diagnose the patients suffering from constipation and diarrhea 3. Discuss the management of patients presenting with constipation and diarrhea 	LGIS, CBD, Video	1 hour & 15 min	Gastroenterology	Dr. Tayyab Saeed Akhtar	Oxford Handbook of Gastroenterology & Hepatology	MCQs, SEQs, OSCE

MODULE 4: GASTROENTEROLOGY& LIVER

Case Scenario

Topic: Liver Diseases

Patient is 19 years of age who presented to her physician's office with mild jaundice. The patient reports being in good health until a week before, at which time she began having flu-like symptoms of headache, low-grade fever, nausea, loss of appetite, and malaise. She self-treated the fever with acetaminophen. The symptoms persisted. Upon awakening this morning, she noticed that her eyes were yellow. She indicated that her urine has been darker than usual and she has been experiencing joint pain for the last three days. She also acknowledged that her stools have been lighter than usual. She therefore contacted her physician's office. Her labs are : Hematocrit (Hct) 40%, Hemoglobin (Hgb) 13.3mg/dl, White blood cell count 6200 cell/ul , Aspartate aminotransferase (AST) 323 Units/L, Alanine aminotransferase (ALT) 358 Units/L, Total bilirubin 3.7 mg/dL, HBsAg negative, HBsAb Positive, Alkaline phosphatase (ALP) 85 Units/mL, Prothrombin time (PT) 11.6 seconds, Albumin 3.8 mg/dL, Glucose 84 mg/dL.

1. What is differential diagnosis?
2. How will you further investigate the case?
3. How will you manage this patient?

Topic: Upper GI bleeding

A 35 years old female, presenting to Emergency Department with history of hematemesis of fresh blood twice in the past 3 hours. She feels light headedness and her blood pressure is 80/50, her pulse is 110/minute. She gives history of ibuprofen for 2 weeks now for back pain. Examination reveals that she appears anxious and somewhat restless. Facial pallor and cool, moist skin are noted. No telangiectasia of the lips or oral cavity is noted. Abdominal examination is unremarkable. Her labs are : Hemoglobin 9gm/dL, Hematocrit 27%, MCV 90. WBC 13,000/mm. PT/PTT - normal. BUN 45mg/dL, Creatinine 1.0 mg/dL. Chest X-ray - normal.

1. What is the initial management?
2. What could be the causes of UGI bleed in this patient?
3. How will you assess the prognosis and mortality of UGI bleed patients?

MODULE 4: GASTROENTEROLOGY& LIVER

Case Scenario

Topic: Lower GI bleeding

29 years old Female reported several months of diarrhea and general malaise. She has had 6 – 8 loose to watery stools daily. She denies hematochezia or melena. She endorses increased fatigue and lethargy. Her appetite had been poor and she thought she had lost 10-12 lb. She also reports intermittent joint pains, particularly in her knees. She denies fever, but has had night sweats on several occasions. She denies palpitations, increased hunger or tremor. On examination temperature was 37.8°C. Abdominal examination notable for right lumbar quadrant tenderness. Examination of her knees was normal. Stool tests: WBC seen, positive FOBT, no ova, cysts or parasites, negative bacterial cultures.

Labs: Hct 32, WBC 13.5, ESR 38, CRP 21.2

1. What is differential diagnosis?
2. How will you further investigate this patient?
3. How will you manage this patient?
4. What are extra intestinal manifestations of Irritable Bowel Disease?

CLINICAL GRAND ROUND (MEDICINE)

MODULE 5: RESPIRATORY

Module Incharge: Prof. Muhammad Khurram

Module Faculty: Prof. Muhammad Khurram

Topics	Learning Objectives	Teaching Strategy	Time	Department	Faculty	Study material /reference of book	Assessment tools
Lower Resp. tract infections (LRTI)	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Enlist causes of Lower Resp. tract infections 2. Make differential diagnosis of lower resp. tract infections 3. Describe management plan for lower resp. tract infections 4. Refer the patients to pulmonologist 	LGIS, CBD, Video	2 hours	Pulmonology / Medicine	Prof. Muhammad Khurram	Davidson textbook of Medicine	MCQs, SEQs, OSCE
COPD & Asthma	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Diagnose COPD and outline management plan 2. Diagnose and manage Asthma 	LGIS, CBD, Video	1.5 hour	Pulmonology / Medicine	Prof. Muhammad Khurram	Davidson textbook of Medicine	MCQs, SEQs, OSCE
TB	At the end of session students should be able to; <ol style="list-style-type: none"> 3. Diagnose TB and outline management plan 	LGIS, CBD, Video	2 hours	Pulmonology / Medicine	Prof. Muhammad Khurram	Davidson textbook of Medicine	MCQs, SEQs, OSCE

MODULE 5: RESPIRATORY

Case Scenario

Topic: Lower Respiratory Tract Infections (LRTI)

A 17 years old boy presented with complaint of episodic shortness of breath and wheeze. Family history of allergic asthma is present. Clinical diagnosis of clinical asthma was made. What investigation you will do to confirm?

- a) CXR
- b) PEF monitoring
- c) Sputum for eosinophil
- d) Spirometry with reversibility
- e) Methacoline challenge test

Topic: COPD

A 65 years old male diagnosed as a case of group A COPD on the basis of history and investigation. What will be the first treatment option?

- a) single bronchodilator
- b) combination of bronchodilators
- c) inhaled steroid
- d) inhaled steroid and bronchodilator
- e) inhaled steroid and Roflumilast

Topic: TB

A 50 YEARS old female, known case of uncontrolled diabetes mellitus presented with complaint of fever and productive cough for 10 days. Patient was prescribed 5 days course of co-amoxiclav for LRTI but no improvement. CXR was done showing infiltrates in right upper zone. Clinical/radiological diagnosis of PTB was made. What will be the first investigation to be done?

- a) CBC and ESR
- b) Sputum for AFB smear
- c) sputum for gene expert MTB
- d) SPUTUM FOR AFB culture
- e) HRCT chest

MODULE 6: MUSCULO-SKELETAL & DERMATOLOGY

Module Incharge: Prof. Muhammad Idrees Anwar

Module Faculty:, Dr. Husnain Khan, D Lubna Miraj, Dr. Shawana Sharif, Dr. Shumaila Mumtaz, Dr. Sara Awan (UK)

Topics	Learning Objectives	Teaching Strategy	Time	Department	Faculty	Study material /reference of book	Assessment tools
Musculo-skeletal pain	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Enlist causes of musculo-skeletal pain 2. Make differential diagnosis of musculo-skeletal pain 3. Describe management plan 4. Illustrate when to refer the patient to rheumatologist 	LGIS, CBD, Video	1.5 hour	Rheumatology / Medicine	Dr. Shumaila Mumtaz Dr Lubna Miraj	Guidelines	MCQs, SEQs, OSCE
Common skin problems (scaly erythematous plaque, Acne, Scabies, Dermatitis, Psoriasis)	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Enlist causes of common skin problems 2. Classify the severity of skin disorders 3. Make differential diagnosis of common skin problems 4. Discuss the management plan 5. Refer the patients to the specialist if required 	LGIS, CBD, Video	1.5 hour	Dermatology	Dr. Shawana Sharif	Oxford Handbook of Medical Dermatology	MCQs, SEQs, OSCE

MODULE 6: MUSCULO-SKELETAL & DERMATOLOGY

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
Wounds and burns	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Assess the depth and degree of burn 2. Illustrate referral criteria 3. Provide initial resuscitation 4. Manage small burns 5. Refer the patients accordingly 	LGIS, CBD, Video	1 hour	Plastic surgery	Dr. Husnain Khan	Oxford Handbook of Clinical Surgery	MCQs, SEQs
Basic surgical skills	At the end of workshop participants should be able to; <ol style="list-style-type: none"> 1. Identify the patients who need referral to tertiary care facility 2. Manage minor injuries 3. Perform minor suturing of the wound 4. Counsel a patient with minor injury 	Workshop	1.5 hour	General Surgery	Prof. Muhammad Idrees Anwar	Basic Surgical skills and Techniques by David Stoker	MCQs, SEQs

MODULE 6: MUSCULO-SKELETAL & DERMATOLOGY

Case Scenario

Topic: Musculo-skeletal pain

a. Approach to inflammatory Arthritis

A 30-years old lady who delivered her first baby six months back presented with complaint of pain, swelling and early morning stiffness (lasting till mid-day) involving small joints of her hands and feet for last 3 months. At first glance at your primary care clinic, you have noticed that she has multiple swollen hand joints.

1. What relevant questions would you like to ask her in history and how will you proceed with her examination?
2. How will you plan her workup to reach the diagnosis?
3. What is your initial management plan and when will you refer the patient to specialist clinic?

b. Psoriatic Arthritis

A 30 years old gentleman with presented with asymmetrical polyarthritis along with pitting and ridging of nails and scaly skin lesions. What is the most likely diagnosis?

- a) Gout
- b) Rheumatoid arthritis
- c) Psoriatic arthritis
- d) Fibromyalgia
- e) Ankylosing spondylitis

Topic: Common Skin Problems

a. Approach to a patient with a scaly erythematous plaque

A 35 year old male, laborer by profession presents to you with a single itch plaque on dorsal surface of right forearm for 2 weeks. There is no previous history of any skin lesion. On examination, well demarcated scaly erythematous annular plaque 2×2cm on dorsal surface of right forearm was observed.

1. What are the questions you would like to ask in history?
2. What is your clinical diagnosis?
3. Which investigations you would like to do?
4. How will you treat him?
5. When will you refer this patient to a dermatologist?

MODULE 6: MUSCULO-SKELETAL & DERMATOLOGY

Case Scenario

b. Approach to a patient with acne

A 35 year old female presented with 1 month history of pimples on face. On examination, 2 papules, 3 pustules and 1 comedone were found on cheeks and bridge of nose.

1. What questions you would like to ask in history?
2. How will you grade acne?
3. How will you treat her?
4. When will you refer her to a dermatologist?

c. Approach to a patient with melasma

A 25 year old married female presented with brown patches on cheeks for 6 months. On examination, symmetrical brown patches were present on apples of both cheeks.

1. What questions you will ask in history?
2. How will you grade it?
3. How will you treat it?
4. When will you consider referring to a dermatologist?

d. Approach to a patient with scabies

A 15 year old boy presented with 1 week history of skin lesions with nocturnal itching. On examination, excoriated papules were found on hands, feet and trunk.

1. Which questions are important in history?
2. Which specific lesions will you look for and where?
3. How will you treat him?
4. When will you consider referring to a dermatologist?

MODULE 6: MUSCULO-SKELETAL & DERMATOLOGY

Case Scenario

Topic: Wounds & Burns

1. The newly admitted client has burns on both legs. The burned areas appear white and leather-like. No blisters or bleeding are present, and the client states that he or she has little pain. How should this injury be categorized?
 - a. Superficial
 - b. Partial-thickness superficial
 - c. Partial-thickness deep
 - d. Full thickness

2. The newly admitted patient has a large burned area on the right arm. The burned area appears red, has blisters, and is very painful. How should this injury be categorized?
 - a. Superficial
 - b. Partial-thickness superficial
 - c. Partial-thickness deep
 - d. Full thickness

3. Which type of fluid should be given as fluid resuscitation during the emergent phase of burn recovery?
 - a) Colloids
 - b) Crystalloids
 - c) Fresh-frozen plasma
 - d) Packed red blood cells

4. All requires hospitalization except
 - a) 5% Burns in children
 - b) 10% Scald in females
 - c) Electrocutation
 - d) 15% Deep burns in adults

5. A 40 years old male presented in emergency with 30% mix thickness burn. His body weight is 80 kg. How much fluid you will infuse in first 8 hours?
 - a) 3600 ml
 - b) 4600 ml
 - c) 6600 ml
 - d) 9600 ml

SECTION-II

SEMESTER-II

- Surgery and Urology
- Endocrinology
- Mental Health
- ENT & Eye
- Orthopedics and Radiology
- Emergency Care
- Gynaecology / Obstetrics & Pathology
- Paediatrics

MODULE 7: NEUROLOGY

Module Incharge: Prof. Nadeem Akhtar

Module Faculty: Prof. Nadeem Akhtar, Dr. Lubna Miraj

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
CNS Tuberculosis	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Identify the patients with CNS tuberculosis 2. Give symptomatic treatment to the patients 3. Refer such patients to tertiary care facility 	LGIS, CBD, Video	1 hour	Neurology	Dr. Meher Bano	Oxford Textbook of Neurology	MCQs, SEQs, OSCE
Stroke	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Enlist common causes of stroke 2. Illustrate signs and symptoms of stroke 3. Localize the stroke lesion 4. Describe supportive and definitive management of stroke 5. Elaborate the scales of stroke severity 	LGIS, CBD, Video	1 hour	Neurology	Dr. Meher Bano	Oxford Textbook of Neurology	MCQs, SEQs, OSCE
Head injury	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Diagnose the severity of injury among patients arriving with head injury 2. Manage the patients 3. Refer the patients to tertiary care facility if required 	LGIS, CBD, Video	1 hour	Neurosurgery	Prof. Nadeem Akhtar	Oxford Textbook of Neurosurgery	MCQs, SEQs, OSCE

MODULE 7: NEUROLOGY

Case Scenario

Topic: CNS Tuberculosis & Stroke

- a) 84 year old woman began to experience gait difficulty and vertigo since yesterday. She also complains that objects seemed to be jumping around. She is non-hypertensive non diabetic with no history of smoking and substances abuse. O/E she is well oriented and alert, her vitals are normal, fundoscopy is normal. Cranial nerves examination seems to be normal except for dysarthria, nystagmus on horizontal eye movements worsened on lateral gaze to either side. Finger nose test and heel shin test were impaired on left side. Gait was impossible with inability to even stand unassisted. What is the most likely diagnosis?
- b) 38 year old man brought to emergency room with history of sudden onset of severe thunder clap headache 06 hours back followed by loss of consciousness, Examination revealed severe neck stiffness with bilateral papilledema and sub-hyloid hemorrhages on fundoscopy.
- c) A young patient presents in emergency with sudden onset weakness of right half of body with difficulty in speech. O/E power in right upper limb is 2/5, right lower limb 4/5 with motor aphasia.

Topic: Head Injury

A 25 years old male patient, falls from a height of 20 feet. He is brought to the emergency room in a semi-conscious state. First aid was given on the spot and has a bandage applied to his head. What steps should be followed by the treating doctor to successfully manage this patient.

MODULE 8: SURGERY & UROLOGY

Module Incharge: Prof. Muhammad Idrees Anwar

Module Faculty: Prof Muhammad Idrees Anwar

Topics	Learning Objectives	Teaching Strategy	Time	Department	Faculty	Study material /reference of book	Assessment tools
Limb Pain Varicose veins Leg ulceration	At the end of the session students should be able to; Enlist causes of Acute and Chronic Limb pain Enlist differential diagnosis of Limb Pain Outline management plan for Limb Pain and refer appropriately Diagnose and assess Varicose veins and Leg Ulcers	LGIS, CBD, Video	1.5 hour	Surgery Department	Prof M Idrees Anwar		MCQs, SEQs, OSCE
Abdominal pain Abdominal swelling Gastrointestinal haemorrhage Dyspepsia Jaundice Common surgical conditions	At the end of session students should be able to; Assess and Manage common surgical problems Appendicitis • Inflammatory bowel disease • Diverticular disease • Intestinal obstruction • Adhesions • Abdominal hernias • Peritonitis • Intestinal perforation • Benign oesophageal disease • Peptic ulcer disease • Benign and Malignant hepatic, gall bladder and pancreatic disease • Haemorrhoids and perianal disease • Abdominal wall stomata • Abdominal trauma including splenic injury Discuss the management plan of the above conditions Diagnose and Manage Prostate Problems	LGIS, CBD, Video	1.5 hour	Surgery	Prof M Idrees Anwar	Oxford Handbook of Surgery	MCQs, SEQs, OSCE

Breast Lump.	Understand Screening of Prostate D Diagnose Benign and Malignant breast lumps Manage Mastitis and Breast Abscess Refer Breast Lumps appropriately						
Perioperative Care	To assess and manage perioperative risk and initiate safe prescribing						

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Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
Hematuria	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Identify gross & microscopic hematuria 2. Suggest relevant investigations 3. Screen the patients for bladder cancer 4. Provide first aid 5. Refer the patient to tertiary care facility 	LGIS, CBD, Video	35 min	Urology	Prof. Zein-El-Amir	Oxford Textbook of Urology	MCQs, SEQs, OSCE
Renal / Ureteric Colic	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Diagnose ureteric colic 2. Differentiate renal pain from acute abdominal pain 3. Manage patients with acute colic 4. Recognize renal / ureteric stones 5. Refer the patients to tertiary care facility 	LGIS, CBD, Video	35 min	Urology	Prof. Zein-El-Amir	Oxford Textbook of Urology	MCQs, SEQs, OSCE
Acute / chronic urinary retention	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Differentiate acute / chronic urinary retention from oliguria / anuria 2. Catheterize the patients of urinary retention 3. Do supra-pubic catheterization 4. Monitor urine output 	LGIS, CBD, Video	40 min	Urology	Prof. Zein-El-Amir	Oxford Textbook of Urology	MCQs, SEQs, OSCE

MODULE 8: SURGERY & UROLOGY

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
Urinary Tract Infection (UTI)	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Diagnose UTI 2. Treat uncomplicated UTI effectively 3. enlist causes of UTI 4. Refer complicated cases of UTI to tertiary care 	LGIS, CBD, Video	35 min	Urology	Prof. Zein-El-Amir	Oxford Textbook of Urology	MCQs, SEQs, OSCE

Case Scenario

Topic: Renal / Ureteric Colic, Acute / Chronic Urinary Retention

1. A 38-year-old lady patient presents to the urology clinic with off-and-on flank pain. She is afebrile and has no other co-morbidities. On physical examination, she has slight flank tenderness. Routine laboratory investigations reveal Hemoglobin 12 g/dl, serum creatinine 0.9 mg/dl and multiple RBCs in urine. On Plain CT abdomen, there is a 25mm stone in the left kidney. What is the best course of management?
2. A 25-year-old woman presents to the emergency department with acute right lower quadrant pain. On examination, she is febrile having fever of 38.5°C, with chills and rigors, and has tenderness in the right flank. Her WBC count is 18000/mm³. Routine laboratory investigations show hemoglobin 12.5 g/dl, serum creatinine 1.2 mg/dl and numerous RBCs in urine. On non-contrast enhanced CT, a 12 mm mid-ureteric stone is found, causing hydro-nephroureter. What is the best course of management for this patient?
3. A 30-year-old man was involved in a road traffic accident and presented to the emergency department. During resuscitation his vitals were BP 90/60mmHg, pulse 110/ minute regular, respiration 26/minute, afebrile, pupillary reflexes intact. Chest showed bilateral air entry. Abdomen was tender and there was a bruise in the flank. A contrast enhanced abdominal CT showed 1.5cm laceration of the kidney. There is slight hematuria in the Foley catheter. What is the best management for this condition?
4. A 55-year-old man presented to urology clinic with painless gross hematuria and clots. He is a chronic smoker. He has a long history of sero-sanguinous umbilical discharge. Laboratory

investigations show Hemoglobin 10.5 g/dl, Creatinine 1.1 mg/dl and multiple RBCs on urinalysis. Flexible cystoscopy was done and showed a bladder tumor, which was subsequently resected. What is the most likely histology?

MODULE 9: ENDOCRINOLOGY

Module Incharge: Prof. Muhammad Khurram **Module Coordinator :** Dr Sadia Khan

Module Faculty: Prof. Muhammad Khurram, Dr Mujeeb Khan

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
Diabetes Mellitus	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Elaborate diabetes mellitus 2. Diagnose the patients with diabetes mellitus 3. Illustrate management plan for diabetic patients 4. Recognize complications of diabetes 5. Refer the patients with diabetic complications to tertiary healthcare facilities 	LGIS, CBD, Video	1 hour	Medicine	Prof. Muhammad Khurram	Kumar & Clark	MCQs, SEQs, OSCE
Thyroid disorders	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Enlist commonest thyroid disorders 2. Diagnose patients with thyroid disorders 3. Outline management plan for thyroid 	LGIS, CBD, Video	1 hour	Medicine	Prof. Muhammad Ali Khalid	Kumar & Clark	MCQs, SEQs, OSCE

	problems						
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MODULE 9: ENDOCRINOLOGY

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
Renal failure	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Enlist the causes of renal failure 2. Diagnose the patients suffering from renal failure 3. Outline management plan for renal failure 4. Decide when to refer the patient to tertiary health care facility 	LGIS, CBD, Video	1 hour	Nephrology	Dr. Noreen Ch. / Dr. Naveed Sarwar	Kumar & Clark	MCQs, SEQs, OSCE

1. MODULE 9: ENDOCRINOLOGY

Case Scenario

Topic: Diabetes Mellitus

1. A 50 years old obese diabetic lady presents in diabetic clinic with complaint of hyperglycemia. She is taking metformin and sitagliptin in maximum dose. Her average BSR is 150 to 200mg/dl. What will be the next management step to control her blood sugar levels?
 - a. Sulfonylureas
 - b. GLP-1 agonist
 - c. Pioglitazone
 - d. Basal insulin
2. A diabetic patient on basal bolus regime presents with complaint of fasting hyperglycemia. In order to control BSF what will be appropriate next management step.
 - a) Stop basal insulin
 - b) Check BSR at 3 AM
 - c) Stop Pre-dinner bolus insulin

- d) Add oral hypoglycemic at night

Topic: Renal Failure

A 50 year old male presents to hospital with complaints of fever, vomiting (2 to 3 episodes/day) and diarrhoea(4 to 5 episodes) for the last two days. Vomitus was about a cup, no blood. Stools are watery containing mucus but no blood. He feels that his urine output has decreased and he felt dizzy upon standing in the morning. He has history of hypertension and dyslipidemia for which he has been regularly taking furosemide, enalapril and simvastatin. Clinically he is mildly dry, with a BP 105/73, HR 90 and with urine output of 35ml/hr. Labs show Sodium 132 mEq/l, Potassium 5.0 mEq/l, Urea 24 mmol/l ,Creatinine 390 µmol/l.

Which one of the following is the best management option?

1. Switch to high dose IV furosemide, stop enalapril, and give IV fluids to maintain urine output, daily bloods
2. Stop furosemide, stop enalapril, add in dopamine and maintain adequate hydration to maintain urine output, daily bloods
3. Stop furosemide, stop enalapril, adequate fluids to maintain urine output, daily bloods
4. Continue furosemide, stop enalapril, high dose corticosteroids and continue adequate fluids to maintain urine output, daily bloods
5. Any other medication?

MODULE 9: ENDOCRINOLOGY

Case Scenario

Topic: Thyroid Disorders

1. A 60-year-old woman presented with cold intolerance, fatigue, somnolence, heaviness in the chest, breathlessness on exertion, along with weight gain. She also noticed complaints of constipation and gradual abdominal distension for 6 months. She also suffers from muscle stiffness on and off.

On examination, the patient looks obese, pale, with dry skin, dry hairs and hoarseness

Investigation:

- | | |
|--------------------|---|
| • Full Blood Count | Hb-9.2g/dL, WBC –7,700/cmm, poly – 65%,lympho – 30%,
mono – 5% , ESR -50min in 1 st hr. |
| • MCV | 102 fl (normal 76 to 96). |
| • PBF | Macrocytic and normochromic. |
| • Chest X-ray | Cardiomegaly with clear margin. |
| • Cholesterol | 8.9mmol/L (normal 3.7 to 7.8). |
| • Triglyceride | 6.4mmol/L (normal 0.8 to 2.1) |
| • CPK | 560 IU/L (normal 10 to 79) |

1. What is the likely diagnosis?
2. Mention one investigation to confirm your diagnosis.

2. A house wife of aged 49 years was hospitalized following an attack of unconsciousness. According to the relative's statement, the patient was feeling unwell with loss of appetite, lack of interest, constipation and weight gain for the last 9 months. No significant past medical history.

On examination, BP-170/105 mm Hg, pulse – 54/min, no response to painful stimulation. No neck rigidity, no Kerning's sign. Plantar – extensor on both sides. Heart and lungs – normal.

Investigation:

- | | |
|------------------------|--|
| ❖ Full blood Count | Hb – 8.7g/dL, WBC – 19300/cmm, poly – 83%, lympho – 17%,
platelets – 2,35,000/cmm, ESR – 41 mm in 1 st hr. |
| ❖ PBF | Macrocytosis and normochromic. |
| ❖ Serum bilirubin | 29mmol/L (normal 2 to 17) |
| ❖ SGPT | 41 IU/L (normal 5 to 40) |
| ❖ Alkaline phosphatase | 91 IU/L (normal 20 to 100) |
| ❖ Serum electrolytes | Sodium 119mmol/L., Potassium 4.1 mmol/L.
Chloride 90mmol/L. Bicarbonate 24mmol/L. |
| ❖ RBS | 6.9mmol/L. |
| ❖ Urea | 8.3mmol/L (normal 2.5 to 6.7) |
| ❖ Creatinine | 110µmol/L (normal 50 to 120). |
| ❖ ECG | Heart rate 54/min and T- inversion in V1 to V6. |
| ❖ Chest X-Ray | Cardiomegaly. |
| ❖ CT scan of brain | Normal. |

1. What is your diagnosis?
2. Suggest two immediate investigations.

MODULE 9: ENDOCRINOLOGY

Case Scenario

Topic: Thyroid Disorders

3. A 25 – year- old lady teacher is referred from an obstetrician for medical consultation. Following delivery of a baby 3 months back, the patient is complaining of weakness, tiredness on mild exertion and loss of appetite. She has been breastfeeding normally and her son is well. She has one daughter, delivered by lower uterine cesarean section (LUCS).

On examination, she is mildly anemic, edema- mild, pulse – 110/min, BP- 145/70 mm Hg. Thyroid – mildly enlarged. Cardiovascular, respiratory and abdominal examinations are normal.

Investigation:

- | | |
|----------------------|---|
| • Full Blood Count | Hb – 10.0g/dL, WBC – 8200/cmm poly – 70%,
lympho30%, |
| • RBS | 11.2mmol/L. |
| • Serum electrolytes | Sodium 141mmol/L, Chloride 102mmol/L. |
| • | Potassium 3.8mmol/L. |
| • Chest x-ray | Normal |
| • Serum Creatinine | 100 µmol/L (normal 55 to 125) |

- Serum Urea 6.3 mmol/L (2.5 to 6.6)
- FT₃ 6.5 pmol/L (normal 1.2 to 3.1).
- FT₄ 172pmol/L (normal 65 to 145).
- TSH 0.6 mIU/L (normal 0.8 to 3.6).

1. What is the most likely diagnosis?
2. What treatment will you give?

4. A 27yrs old pregnant lady with family history of thyroid disorders presents in first trimester presents to you for the screening of thyroid function tests, on her TFTS Report shows TSH, T3, T4 are raised.

What will be the next step of management?

- Wait and Repeat TFTS in 2nd trimester
- Get FT3 FT4 done.
- Start with the treatment immediately?

MODULE 10: MENTAL HEALTH

Module Incharge : Prof Asad Nizami Module Coordinator: Dr Sadia Khan

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
Depression & Suicide	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Manage depression and self-harm on the basis of bio-psychosocial model as explained in mhGAP Intervention guide 2. Identify the role of psycho- 	LGIS, CBD, Video	50 min	Psychiatry	Prof. Asad Tameezuddin Nizami	Oxford textbook of Psychiatry	MCQs, SEQs, OSCE

	<p>education in management of depression</p> <ol style="list-style-type: none"> 3. Recognize when to initiate and terminate anti-depressant medication 4. Monitor patients on anti-depressants 5. Describe the precautions to be observed for antidepressant medication in special population 6. Elaborate the dosage and side effects of various anti-depressants 7. Assess risk factors for suicide 8. Manage deliberate self-harm 						
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MODULE 10: MENTAL HEALTH

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
Schizophrenia	<p>At the end of session students should be able to;</p> <ol style="list-style-type: none"> 1. Manage psychosis on the basis of bio-psychosocial model as explained in mhGAP intervention guide. 2. Identify the role of psycho- 	LGIS, CBD, Video	50 min	Psychiatry	Prof. Asad Tameezuddin Nizami	Oxford textbook of Psychiatry	MCQs, SEQs, OSCE

	<p>education in management of psychosis</p> <p>3. Recognize the importance of facilitating rehabilitation of psychotic patient in community and regular follow up</p> <p>4. Recognize when to initiate and terminate anti-psychotic medication</p> <p>5. Monitor people on anti-psychotic medication</p> <p>6. Elaborate the dosage and side effects of various anti-psychotics</p>						
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MODULE 10: MENTAL HEALTH

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
Dementia	<p>At the end of session students should be able to;</p> <p>1. Manage dementia on the basis of bio-psychosocial model as explained in mhGAP intervention guide.</p> <p>2. Identify the role of psycho-education in management of dementia</p> <p>3. Recognize the importance of facilitating rehabilitation of dementia patients in the community and regular follow up</p> <p>4. Recognize when to initiate and terminate medications for dementia</p>	LGIS, CBD, Video	50 min	Psychiatry	Prof. Asad Tameezuddin Nizami	Oxford textbook of Psychiatry	MCQs, SEQs, OSCE

	<p>5. Monitor people taking medication for dementia</p> <p>6. Elaborate the dosage and side effects of various drugs used for dementia</p> <p>7. Illustrate the concept of care giving for the family members taking care of patients with Dementia</p>						
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MODULE 10: MENTAL HEALTH

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
Depression & Suicide	<p>At the end of session students should be able to;</p> <p>9. Manage depression and self-harm on the basis of bio-psychosocial model as explained in mhGAP Intervention guide</p> <p>10. Identify the role of psycho-education in management of depression</p> <p>11. Recognize when to initiate and terminate anti-depressant medication</p> <p>12. Monitor patients on anti-depressants</p> <p>13. Describe the precautions to</p>	LGIS, CBD, Video	50 min	Psychiatry	Prof. Asad Tameezuddin Nizami	Oxford textbook of Psychiatry	MCQs, SEQs, OSCE

	<p>be observed for antidepressant medication in special population</p> <p>14. Elaborate the dosage and side effects of various antidepressants</p> <p>15. Assess risk factors for suicide</p> <p>16. Manage deliberate self-harm</p>						
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MODULE 10: MENTAL HEALTH

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
Schizophrenia	<p>At the end of session students should be able to;</p> <p>7. Manage psychosis on the basis of bio-psychosocial model as explained in mhGAP intervention guide.</p> <p>8. Identify the role of psycho-education in management of psychosis</p> <p>9. Recognize the importance of facilitating rehabilitation of psychotic patient in community and regular follow up</p> <p>10. Recognize when to initiate and terminate anti-psychotic medication</p>	LGIS, CBD, Video	50 min	Psychiatry	Prof. Asad Tameezuddin Nizami	Oxford textbook of Psychiatry	MCQs, SEQs, OSCE

	11. Monitor people on anti-psychotic medication 12. Elaborate the dosage and side effects of various anti-psychotics						
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MODULE 10: MENTAL HEALTH

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
Dementia	At the end of session students should be able to; 8. Manage dementia on the basis of bio-psychosocial model as explained in mhGAP intervention guide. 9. Identify the role of psycho-education in management of dementia 10. Recognize the importance of facilitating rehabilitation of dementia patients in the community and regular follow up 11. Recognize when to initiate and terminate medications for dementia 12. Monitor people taking medication for dementia 13. Elaborate the dosage and side effects of various drugs used for dementia 14. Illustrate the concept of care giving for the family members taking care of patients with Dementia	LGIS, CBD, Video	50 min	Psychiatry	Prof. Asad Tameezuddin Nizami	Oxford textbook of Psychiatry	MCQs, SEQs, OSCE

MODULE 10: MENTAL HEALTH

Case Scenario

Topic: Depression & Suicide

A 48 years old lady presents to your clinic with self-inflicted superficial tentative cuts on her neck. She was rescued by her family while trying to slit her throat alone in a room. On being questioned, she reported that her life felt like a burden. She had low mood, frequent weeping spells, and would find no pleasure in daily activities for the past 2 months after the death of her 20 years old son in a road traffic accident. She would dwell on her past mistakes and feel hopeless about the future. Her sleep and appetite were also reduced. On further questioning, it was found that she had had 3 similar episodes in the past 15 years. She is hypertensive and diabetic since the last 5 years.

Topic: Schizophrenia

A 20 years old man is brought to your clinic forcefully by his family. He has a 8 months' history of hearing voices commenting on his activities, which he believes are electromagnetic signals that he receives of his neighbors reporting his activities to intelligence agencies. To keep these neighbors from spying on him, he has isolated himself in his room and put extra locks on all the doors and windows. He becomes aggressive if anyone from his family communicates with his neighbors. Lately, he stopped eating and taking care of his self since the last 1 month and the family had to forcefully bring him to the doctor.

Topic: Dementia

A 72 years old man is brought to your clinic by his family with complaints of increasing irritability and suspiciousness. They also report that for the past 3 years, he has memory impairment which keeps getting worse. He cannot go out of the house alone as he gets lost on the way, and sometimes wears mismatching clothes. When he cannot find one of his belongings at home, he gets aggressive and claims that thieves have stolen his stuff. Since he was now becoming unmanageable at home, the family has brought him to the doctor for advice.

CLINICAL GRAND ROUND (MENTAL HEALTH)

MODULE 11: ENT & EYE

Module Incharge: Prof. Muhammad Aslam Chaudhry

Module Coordinator Dr Sadia Khan

Module Faculty: Prof. Fuad Ahmed Niazi, Facilitators: Dr. Ahmed Hasan Ashfaq, Dr. Maria Waqas

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
Common ear, nose & throat disorders (nasal obstruction, ear discharge and recurrent sore throat)	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Diagnose the patients with common ENT disorders 2. Manage the patients presenting with common ENT disorders 3. Identify the primary source of infection and its effect on the adjacent areas 4. Differentiate between viral and bacterial respiratory tract infection 5. Counsel the patients regarding the effect of ear, nose and throat problems 	LGIS, CBD, Video	3 hours	ENT	Dr. Ahmed Hasan Ashfaq	Oxford handbook of ENT & head and neck surgery	MCQs, SEQs, OSCE
Common eye disorders (red eye, lid mass, gradual decrease in vision)	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Diagnose the patients with common 2. Enlist differential diagnosis 3. Manage the patients presenting with common 4. Refer the patients for ophthalmic consultation 	LGIS, CBD, Video	2.5 hours	Eye	Prof. Fuad Ahmed Niazi /Dr. Maria Waqas	Oxford Textbook of Ophthalmology	MCQs, SEQs, OSCE

	5. Recognize various ophthalmic conditions on ophthalmoscopy						
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MODULE 11: ENT & EYE

Case Scenario

Topic: Nasal Obstruction

A 23 years old boy presents in the ENT OPD with the complaint of nasal obstruction for the last 5 years. The nasal obstruction is intermittent and alternate from side to side. There is a history of frequent sneezing and nasal discharge, headache and post nasal drip. On examination, there is a gross deflection of the nasal septum on the left side. Throat examination reveals granules on the posterior pharyngeal wall. How you will proceed with the management of this patient?

Topic: Ear Discharge

A 40 years old woman presents to ENT OPD with the complaints of left-sided ear discharge for the last 7 years. She also complained of decreased hearing from the left ear. On examination, there is mucopurulent left sided ear discharge with a central tympanic membrane perforation. On nasal examination, there is bilateral marked inferior turbinate hypertrophy with discharge in both nasal cavities. How you will manage this case?

Topic: Recurrent Sore Throat

A 20 years old male presents in the ENT OPD with the complaint of recurrent sore throat for the last 7 years. During the episode of sore throat he experiences a low grade fever, change of voice, nasal stuffiness and decreased hearing. On examination there are bilateral hypertrophied tonsils and deviated nasal septum. Patient has been asked by many general physicians to undergo tonsillectomy. How you will manage this case and will counsel him regarding the nature of his illness?

MODULE 11: ENT & EYE

Case Scenario

Topic: Gradual Decrease of Vision

A 59 years old male presented in Eye OPD with complaint of gradual decrease of vision.

1. What is the differential diagnosis?
2. How will you manage the case?

Topic: Red Eye

A 26 years old male presented to OPD with complaint of redness and discharge from right eye.

1. What are the important points in the history that need to be asked?
2. Enlist differential diagnosis.
3. Describe management plan.

Topic: Lid Mass

A 35 years old female presented in OPD with complaint of growth on right upper eyelid since 1 month.

1. What are the important points in the history that need to be asked?
2. Enlist differential diagnosis.
3. Describe management plan.

CLINICAL GRAND ROUND (ENT & EYE)

MODULE 12: ORTHOPEDICS & RADIOLOGY

Module Faculty: Prof Riaz Sheikh

Module Coordinator Dr Sadia Khan

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
Musculoskeletal Trauma		LGIS, CBD, Video	50 min	Orthopedics	Prof. Riyaz	Oxford textbook of Orthopedics and Trauma	MCQs, SEQs, OSCE

1. MODULE 12: ORTHOPEDICS & RADIOLOGY

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
Fractures	At the end of session students should be able to; Identify and diagnose important fractures Assess risk factors for Fractures Manage patients with common fractures Recognize the importance of timely and safe Referral of fracture case	LGIS, CBD, Video	50 min	Orthopedics	Prof. Riaz Sheikh	Oxford textbook of Psychiatry	MCQs, SEQs, OSCE
Perioperative Care	Manage acutely unwell patients suffering from the complications of elective Orthopaedic Surgery						
Radiology Imaging of bone lesions	At the end of session students should be able to; 1. Correlate clinical presentation of bone lesions with radiological picture 2. Differentiate diverse patterns	LGIS, CBD, Video	45 min	Radiology	Dr. Nasir Khan / Dr. Maria Khaliq	Oxford Textbook of Radiology	MCQs, SEQs, OSCE

	of lytic lesions in bone 3. Recommend for further investigations						
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MODULE 13: EMERGENCY MANAGEMENT

Module Coordinator: Dr Sadia Khan Module Faculty : Dr Usman Qureshi, Dr Aimen

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
Shock	At the end of session students should be able to; Identify various types of shock, Assess a patient presenting with shock Outline the management of Cardiogenic, Hypovolemic, Neurogenic shock	LGIS, CBD, Video	50 min 30 min	Accident and Emergency Department	Dr. Usman Qureshi	Oxford textbook of Emergency Medicine	MCQs, SEQs, OSCE
Anaphylaxis	Identify a patient with Anaphylaxis, Illustrate causes of Anaphylaxis Manage a patient with Anaphylaxis						
Sepsis	Recognize and manage a patient presenting with Sepsis including neutropenic sepsis.						
Common Medical and Surgical Emergencies	Diagnose and manage acute abdominal pain Identify and manage GI bleed Enlist causes of abdominal distention and initiate management						
Neurological Cognitive and Affective	Identify and manage Stroke and TIA Recognize various causes						

Presentations	<p>and initiate treatment of headaches</p> <p>Manage a patient with Sever acute anxiety, mania , hallucinations or psychotic symptoms</p> <p>Identify poisoning and suicide</p>						
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MODULE 13: EMERGENCY MANAGEMENT

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
The unconscious patient	<p>At the end of session students should be able to;</p> <p>Identify and enlist causes of unconsciousness</p> <p>Assess and manage the unconscious patient</p> <p>Enlist indications of urgent CT scan.</p> <p>Manage cases of unconsciousness e.g suspected drug overdose metabolic, alcohol intoxication, neurological causes, head injury and refer appropriately</p>	LGIS, CBD, Video	50 min	Accident & Emergency	Dr Usman Qureshi	Oxford textbook of Emergency Medicine	MCQs, SEQs, OSCE
Seizures/ fits	<p>Assess and manage a patient presenting with fits.</p> <p>Outline management of Status Epilepticus</p>						

Common Emergencies including Abdominal pain, chest pain, vomiting, headache	Assessment and management of common emergency cases						
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**CLINICAL GRAND ROUND
(SURGERY & EMERGENCY CARE)**

MODULE 14: GYNAECOLOGY / OBSTETRICS & PATHOLOGY

Module Incharge: Dr Sadia Khan

Module Faculty: Prof Lubna Ijaz Dr. Humera Noreen, Prof. Naeem Akhtar

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
Antenatal and Post Natal Problems Diabetes Mellitus, HTN & Anemia in pregnancy	At the end of session students should be able to; 1)Diagnose and manage antenatal and post natal problems 2) Diagnose patients presenting with diabetes, hypertension and anaemia during pregnancy 3) Counsel patients about medical problems during pregnancy 4) Educate patients about nutrition during pregnancy 5) Refer to tertiary care as indicated	LGIS, CBD, Video	1.5 hour	Gynae / Obs	Prof. Lubna Ijaz	Oxford handbook of Gynae/ Obs	MCQs, SEQs, OSCE
Drugs & pregnancy Menstrual Problems	At the end of session students should be able to; 1. Recommend safe medication during pregnancy 2. Avoid prescribing medication with risk of teratogenicity Diagnose and manage common Menstrual disorders including Menopause	LGIS, CBD, Video	1.5 hour	Gynae / Obs	Prof. Lubna Ijaz	Oxford handbook of Gynae/ Obs	MCQs, SEQs
Pathology	At the end of session students should be able to; 1. Interpret common pathological investigations 2. Counsel the patients	LGIS, CBD, Video	2.5 hours	Pathology	Prof. Naeem Akhtar / Dr. Kiran Fatima	Oxford handbook of Pathology	MCQs, SEQs

MODULE 14: GYNAECOLOGY / OBSTETRICS & PATHOLOGY

Case Scenario

Topic: Hypertension in pregnancy

1. A 26 years old woman at 26 weeks of gestation presents to your clinic for antenatal checkup. On examination her B.P is 145/95mmHg. Which laboratory investigation is most appropriate to advice?
2. A 20 years old woman, Primigravida at 32 weeks of gestation presented to you with complaint of severe headache. On examination edema ++, B.P 180/120, proteinuria ++ on routine urine examination. How will you manage her?
3. A 35 years old woman G₅P₄ now at 36 weeks of gestation presents to your clinic to show her laboratory investigations. On CBC her Hb is 10.6 g/dl, urine R/E shows proteins 2+. On examination her B.P is 160/110mm Hg, edema ++. She is otherwise asymptomatic. How will you manage her?

Topic: Diabetes in Pregnancy

1. A 28 years old woman with type I DM on treatment comes to your clinic. She wants pre pregnancy counseling as she is told by some friend that diabetes can cause anomalies in fetus. What will you advise her?
2. 28 years old Primigravida at 24 weeks of gestation comes to your clinic for first time. She has positive family history for DM. Her BMI was 30kg/m². She did not have any other risk factor. Which investigation would you advise her?

Topic: Anaemia in Pregnancy

A 25 years old female presents at 24weeks of gestation with generalized weakness and shortening of breath for 2 weeks. Her blood complete count shows Hb 6gm/dl. How will you manage her?

MODULE 10: GYNAECOLOGY / OBSTETRICS & PATHOLOGY

Case Scenario

Topic: Safe use of drugs in Pregnancy

1. A 22 years old Primigravida at 10 weeks of gestation presents with complaint of burning micturation and dysuria. On routine urine examination shows 25-30 puss cells. Which drug is safe for her to treat UTI?
2. A 25 years old healthy female presents to your clinic at 8 weeks of gestation. She has no history of any co morbid and currently not taking any medication. She is very anxious about baby's health and wants you to prescribe her supplements. Which supplement will you prescribe her at this gestational age?
3. A 22 years old woman, primigravida at 20 weeks of gestation. She is known epileptic for 10 years. In addition to her anti-convulsing treatment she is taking iron supplements and 400mcg/day of folic acid. What will you advise her?

CLINICAL GRAND ROUND
(GYNAECOLOGY / OBSTETRICS)

MODULE 15: PAEDIATRICS

Module Incharge: Dr Sadia Khan

Module Faculty: Prof. Rai Muhammad Asghar, Dr. Mudassar Sharif, Dr. Mudassar Gondal

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
Neonatal examination	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Perform neonatal examination/ Newborn check 2. Recognize common neonatal problems 	Hands on session, Video, SGD	30 min	Paediatric Medicine	Prof. Rai Muhammad Asghar	Oxford handbook of Paediatrics	MCQs, SEQs, TOACS
Vaccination Schedule	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Elaborate vaccine schedule 2. Describe dose and route of administration of vaccines 	Hands on session, Video, SGD	30 min	Paediatric Medicine	Prof. Rai Muhammad Asghar	Oxford handbook of Paediatrics	MCQs, SEQs, TOACS
Diarrhea	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Assess diarrhea 2. Classify diarrhea 3. Manage cases of acute diarrhea 	SGD, Bedside teaching	30 min	Paediatric Medicine	Prof. Rai Muhammad Asghar	Oxford handbook of Paediatrics	MCQs, SEQs, TOACS
Pneumonia	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Diagnose cases of pneumonia 2. classify pneumonia 3. Manage cases presenting with cough and fever 	LGIS, Bedside teaching, CBD	30 min	Paediatric Medicine	Prof. Rai Muhammad Asghar	Oxford handbook of Paediatrics	MCQs, SEQs, TOACS
Asthma /TB	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Investigate patients suspected of TB and asthma properly 	LGIS, Bedside teaching, CBD	30 min	Paediatric Medicine	Prof. Rai Muhammad Asghar	Oxford handbook of Paediatrics	MCQs, SEQs, TOACS

	<ol style="list-style-type: none"> 2. Write long term treatment of asthma 3. Recognize patients for referral to hospital 						
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MODULE 15: PAEDIATRICS

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
Measles and Rash	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Make differential diagnosis of rash 2. Outline management plan for patients presenting with rash 	LGIS, Video, CBD	30 min	Paediatric Medicine	Prof. Rai Muhammad Asghar	Oxford handbook of Paediatrics	MCQs, SEQs, TOACS
Neonatal Jaundice	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Enlist the causes of neonatal jaundice 2. Recommend investigations 3. Interpret investigations report 4. Outline management plan for neonatal jaundice 	LGIS, Video, Bedside teaching	30 min	Paediatric Medicine	Prof. Rai Muhammad Asghar	Oxford handbook of Paediatrics	MCQs, SEQs, TOACS
Common Pediatric surgical problems	At the end of session students should be able to; <ol style="list-style-type: none"> 1. Make differential diagnosis 2. Diagnose children with common surgical problems. 3. Outline management plan 4. Recognize patients for referral to hospital 	LGIS, Video, CBD	2 hours	Paediatric Surgery	Prof. Rai Muhammad Asghar	Oxford handbook of Paediatrics	MCQs, SEQs, TOACS

MODULE 15: PAEDIATRICS

Case Scenario

Topic: Common Paediatric Surgical Problems

1. A 2 days old baby presented in Accident & Emergency department with failure to pass meconium, gross abdominal distension and bilious vomiting. On examination, Pulse was 120 beats/minute; respiratory rate was 52 breaths/minute. Abdomen was distended and anus was patent. There is also antenatal history of Polyhydramnios.

- 1- What is most likely diagnosis?
- 2- What are differential diagnoses?
- 3- How will you manage this child?

2. A 5 years old boy presented in OPD with recurrent abdominal pain. There is history of off and on bleeding per rectum. Child is pale looking having hemoglobin of 6.7 gm/dl. Ultrasound abdomen was unremarkable

- 1- What is a differential diagnosis?
- 2- How to investigate the patient?
- 3- Outline management plan?

3. A 9 years old boy presented in Accident & Emergency department with sudden onset of pain in scrotum from last 6 hours. O/E right hemiscrotum was red, swollen and tender. Clinical examination of opposite side was unremarkable.

- 1- What is differential diagnosis?
- 2- How will you investigate this child?
- 3- How will you manage this patient?

MODULE 16: RESEARCH IN CLINICAL PRACTICE

Module Coordinator: Dr Sadia Khan Module Faculty: Dr Rizwana Shahid, Dr Khaula

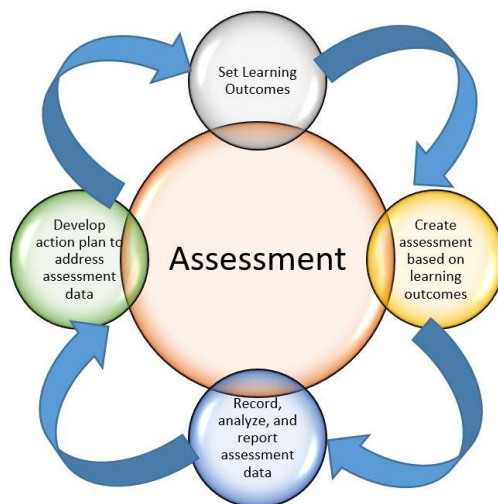
Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
Introduction to health system Research	At the end of session students should be able to: <ul style="list-style-type: none"> Describe the purpose, scope and characteristics of health systems Research. Identify the criteria for selecting health problems to prioritise for research. 	LGIS, Power point presentation	50 min	Community Medicine	Prof. Arshad Sabri		MCQs, SEQs,
Identify Research problem and introduction to literature Review	<ul style="list-style-type: none"> formulate the Research Problem Reviewing Literature Identify resources available for literature Reviews Literature Review Referencing 	LGIS, Power point presentation	30min				
Formulation of Research Objectives	Prepare Research objectives	LGIS, Power point presentation					
Hypothesis	Formulate Null hypothesis and Alternate hypothesis		30min				

MODULE 16: RESEARCH IN CLINICAL PRACTICE

Topics	Learning Objectives	Teaching Strategy	Time	Deptt.	Faculty	Study material /reference of book	Assessment tools
Research Methodology	<ul style="list-style-type: none"> At the end of session students should be able to: Define Study variables Identify types of variables and their use in research design. 	LGIS, CBD, Video	50 min	Community Medicine	Prof. Arshad Sabri		MCQs, SEQs, OSCE
Study Designs	<ul style="list-style-type: none"> Recognize the appropriate study design for Research 						
Data Collection	<ul style="list-style-type: none"> Identify appropriate data collection tools. 		30 min				
Sampling	<ul style="list-style-type: none"> Describe common sampling methods 						
Statistical Analysis	<ul style="list-style-type: none"> Demonstrate knowledge of resources for data collection, storage and analysis 						
Study Designs	Demonstrate knowledge of various study designs		30 min				
Critical Appraisal	Able to critically appraise a research paper.						

SECTION-III

ASSESSMENT



ASSESSMENT

The aim of assessment is to assess both the clinical competence and professionalism during the course. It includes both formative and summative assessments as detailed below.

Attendance and participation in the face to face sessions and online discussions are also considered as part of the formative assessment. The training component of the course should be for developing clinical competence and to complete the compulsory WPBA.

This assessment will be done by means of following assessment tools:

Assessment	Formative	Summative
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Knowledge	MCQs, OSCE	MCQs , OSCE
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Skills	WPBA (DOPS, mini CEX)	OSCE, PSA
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Behaviour	WPBA (Portfolio, COT, CBD)	OSCE
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WPBA Work place based assessment

CBD Minimum 1-2 per module

Mini CEX 1 per system

COT Total - 4

DOPS Total - 10

Assessment

The aim of assessment is to assess both the clinical competence and professionalism during the course. It includes both formative and summative assessments as detailed below. Attendance and participation in the face to face sessions and online discussions are also considered as part of the formative assessment. The training component of the course is not just for developing clinical competence but can also be used to complete the compulsory WPBA.

Assessment	Formative	Summative
Knowledge	MCQ's, OSCE	MCQ's, OSCE
Skills	WPBA (DOPS, mini-CEX), OSCE	OSCE, PSA
Behavior	SJT, WPBA (E-portfolio, COT, CBD)	OSCE,

WPBA (Work place based assessments)

CBD	Minimum One – Two per module
Mini CEX	One per system
COT	Total 4
DOPS	Total 10
Audits	As agreed

Sr.no	Modules	Face to Face Interactive sessions		MCQs	Rotations		OSCE
		Hours	Percentage %	Questions	Weeks	Percentage %	Stations
1	Principles of Family Medicine	10	10%	10	8	14%	3
2	Cardiovascular Module	6	6%	6	2	3.57%	1
3	Infectious Diseases Module	6	6%	6	2	3.57%	1
4	Gastrointestinal & Liver Module	6	6%	6	2	3.57%	1
5	Respiratory Module	6	6%	6	2	3.57%	1
6	Musculoskeletal & Dermatology Module	6	6%	6	4	7.14%	2
7	Neurology Module	6	6%	6	2	3.57%	1

8	Surgery & Urology Module	6	6%	6	4	7.14%	2
9	Endocrinology Module	6	6%	6	1	1.78%	1
10	Mental Health Module	6	6%	6	4	7.14%	2
11	ENT & Eye Module	6	6%	6	4	7.14%	2
12	Orthopedics and Radiology	6	6%	6	4	7.14%	2
13	Emergency care	6	6%	6	6	10.71%	2
14	Gynaecology & Obstetrics	6	6%	6	4	7.14%	2
15	Pediatrics Module	6	6%	6	6	10.71%	2
16	Research in Clinical Practice	6	6%	6	1	1.78%	0
Total		100	100%	100	56	100%	25
CREDIT HOURS		6			28		

No	Modules	Face to Face Interactive sessions			Rotations		
		Hours	Credit Hours	Percentage %	Weeks	Credit Hours	Percentage %
1	Principles of Family Medicine	10		10%	8	4	14%
2	Cardiovascular Module	6		6%	2	1	3.57%
3	Infectious Diseases Module	6		6%	2	1	3.57%
4	Gastrointestinal & Liver Module	6		6%	2	1	3.57%
5	Respiratory Module	6		6%	2	1	3.57%
6	Musculoskeletal & Dermatology Module	6		6%	4	2	7.14%
7	Neurology Module	6		6%	2	1	3.57%
8	Surgery & Urology Module	6		6%	4	2	7.14%
9	Endocrinology Module	6		6%	1	0.5	1.78%
10	Mental Health Module	6		6%	4	2	7.14%
11	ENT & Eye Module	6		6%	4	2	7.14%
12	Orthopedics and Radiology	6		6%	4	2	7.14%
13	Emergency care	6		6%	6	3	10.71%
14	Gynaecology & Obstetrics	6		6%	4	2	7.14%
15	Pediatrics Module	6		6%	6	3	10.71%
16	Research in Clinical Practice	6		6%	1	0.5	1.78%
Total		100	6	100%	56	28	100%

CREDIT HOURS

Teaching Methodology	Credits
Face to Face sessions	6 Credits
Clinical Rotations	28 Credits
Research Assignment	3 Credits
Assignment	2 Credits
Total	39 Credits



SECTION- IV

CERTIFICATION



CERTIFICATION

Diploma of Family Medicine course will be issued to the qualifying candidates by Rawalpindi Medical University on securing 60% marks in final assessment.

	RAWALPINDI MEDICAL UNIVERSITY RAWALPINDI	
Family Medicine Certificate Course August 2019- February 2020		
This is to certify that		
S/D/O _____ PMDC Registration # _____		
has successfully completed _____ Credit Hours of Family Medicine Certificate Course at Rawalpindi Medical University, Rawalpindi		
Prof. Muhammad Umar Vice Chancellor, Rawalpindi Medical University & Allied Hospitals, Rawalpindi	Prof. Muhammad Ajmal Director Family Medicine Certificate Course RMU & Allied Hospitals, Rawalpindi	Prof. Syed Arshad Sabir Co-Director Family Medicine Certificate Course RMU & Allied Hospitals, Rawalpindi

REFERENCES

- Essentials of Family Medicine (6th edition) by Philip et al.
- Swanson's Family Medicine review (8th edition) by Alfred et al.
- Current diagnosis and treatment of Family medicine (4th edition) by Tanet et al.

SELF DIRECTED LEARNING (SDL) RESOURCES

1. SOPs for communicable disease response and control
http://www.pshealth.punjab.gov.pk/Home/Sops_guidelines
2. Guidelines for Crimean-Congo Hemorrhagic fever
http://www.pshealth.punjab.gov.pk/Home/Sops_guidelines
3. Guidelines for Measles
http://www.pshealth.punjab.gov.pk/Home/Sops_guidelines
4. Guidelines for Pandemic Influenza (H1N1)
http://www.pshealth.punjab.gov.pk/Home/Sops_guidelines
5. Guidelines for Zika virus disease
http://www.pshealth.punjab.gov.pk/Home/Sops_guidelines
6. Guidelines for prevention of Hepatitis A & E
7. Guidelines for the management of Gastroenteritis
8. Guidelines for the management of Dengue hemorrhagic fever
9. Guidelines for the management of respiratory tract infections

MANDATORY TEXTBOOKS

- Oxford Handbook of Clinical Medicine (10th Edition)
- Current Medical Diagnosis & Treatment (2019)

Learning Resources

List Required Textbooks

1 Oxford Hand Book of General Practice (4th Edition)

Chantal Simon, Hazel Everitt, Francoise van Dorp, Matt Burkes
ISBN 978-0-19-874909-7

1 Current Diagnosis and treatment - Family Medicine (4th Edition)

Jeannette E. South-Paul, Samuel C. Matheny, Evelyn L. Lewis
ISBN 978-0-07-182745-4

- a. Chapter 15: Health Maintenance for Adults (pg. 145-161)
- b. Chapter 22: Dyslipidemia (pg. 217-221)
- c. Chapter 27: Cancer Screening In Women (pg. 268-277)
- d. Chapter 35: Hypertension (Pg. 369-380)
- e. Chapter 36: Diabetes Mellitus (Pg. 381-389)
- f. Chapter 61: Tobacco Cessation (Pg. 645-652)

2 Text book of Family Medicine (9th Edition)

Robert Rakel, David Rakel
ISBN: 978-0-323-23990-5

- a. Chapter 34: Diabetes Mellitus (pg. 782-816)
- b. Chapter 36: Obesity (pg. 867-890)
- c. Chapter 49: Nicotine Addiction (pg. 1133-1151)

3 Family medicine Principles and practice (7th Edition)

Paul M. Paulman, Robert B. Taylor

ISBN: 978-3-319-04414-9

- a. Chapter 7: Clinical prevention (pg. 71-98)
- b. Chapter 8: Health Promotion and Wellness (pg. 99-109)
 - Physical Activity Guidelines for Adults (pg. 101-103)
 - Nutrition (pg. 103-106)
 - Identifying disease risk (pg. 107)
 - Tobacco cessation (pg. 107-109)
- c. Chapter 55: Care of the obese patient (pg. 699-706)
- d. Chapter 77: Hypertension (pg. 963-971)
- e. Chapter 85: Obstructive airway disease (pg. 1073-1081)
- f. Chapter 121: Dyslipidemia (pg. 1637-1647)
- g. Chapter 122: Diabetes (pg. 1649-1667)

2. List Essential References Materials

- Package of Essential Non communicable (PEN) Disease Interventions for Primary Health Care in Low-Resource Settings
https://www.who.int/nmh/publications/essential_ncd_interventions_lr_settings.pdf
- Detection, Evaluation, and Management of High Blood Pressure in Adults
<https://www.ahajournals.org/doi/pdf/10.1161/HYP.000000000000065>
- Introduction: Standards of Medical Care in Diabetes—2019
https://care.diabetesjournals.org/content/diacare/suppl/2018/12/17/42.Supplement_1.DC1/DC_4_2_S1_2019_UPDATED.pdf
- Dyslipidemia ATP 4
<http://www.just.edu.fo/DIC/ClinicGuidlines/Dyslipidemia%20ATP4%20GUIDLINES.pdf>

- Asthma Management and prevention. Global Initiative for Asthma. <https://ginasthma.org/wp-content/uploads/2019/04/GINA-2019-main-Pocket-Guide-wms.pdf>
- Pocket Guide to COPD Diagnosis, Management and Prevention. A Guide for Health Care Professionals 2019 Edition. <https://ginasthma.org/wp-content/uploads/2019/04/GINA-2019-main-Pocket-Guide-wms.pdf>

LINKS FOR AUDIOVISUAL SELF-DIRECTED LEARNING

1. How to pass the nasogastric tube
<https://www.youtube.com/watch?v=1OakmxZDa5c>
2. How to perform phlebotomy
<https://www.youtube.com/watch?v=s-vTzQkUQd8>
3. How to pass a Foleys catheter
<https://www.youtube.com/watch?v=2iLPfCAMgZs>
4. How to check arterial blood gases
<https://www.youtube.com/watch?v=0BSv4iN8T2E>
5. How to check urine for ketones
<https://www.youtube.com/watch?v=JaGXDyX876A>
6. How to interpret ECG
<https://www.youtube.com/watch?v=EmmjwghkOO>
7. How to pass an intravenous cannula
<https://www.youtube.com/watch?v=aXJZSYOh6dU>
8. How to use the Otoscope
<https://www.youtube.com/watch?v=FqSCfqcNii>
9. How to use the ophthalmoscope
https://www.youtube.com/watch?v=NE_epHjNpfo
10. How to apply a different splints for fractures
<https://www.youtube.com/watch?v=pGxxKH4wSgs>
https://www.youtube.com/watch?v=iNPy_ClgT9Q
<https://www.youtube.com/watch?v=8jnCDQDzbAc>
<https://www.youtube.com/watch?v=WXA5Ha3P7PE>
<https://www.youtube.com/watch?v=150jI5ChCb8>
https://www.youtube.com/watch?v=bw_wWpHg-E
<https://www.youtube.com/watch?v=pK01AfxMBtk>

LIST OF ABBREVIATIONS

AED	Automated External Defibrillator
AHA	American Heart Association
AKI	Acute Kidney Injury
ALT	Alanine Transaminase
APT	Alkaline Phosphatase
ASD	Atrial Septal Defect
AST	Aspartate Transaminase
BLS	Basic Life Support
BMI	Body Mass Index
BPH	Benign Prostatic Hypertrophy
BUN	Blood Urea Nitrogen
CBC	Complete Blood Count
CBD	Case-Based Discussion
CCU	Coronary Care Unit
CLD	Chronic Liver Disease
COPD	Chronic Obstructive Pulmonary Disease
CPK	Creatinine Phosphokinase
CPR	Cardio-Pulmonary Resuscitation
CRP	C-Reactive Protein
CVS	Cardiovascular System
CXR	Chest X-ray
DID	Department of Infectious Diseases
DM	Diabetes Mellitus
DME	Department of Medical Education
ECG	Echocardiography
ESR	Erythrocyte Sedimentation Rate
ETT	Endotracheal Tube
ENT	Ear Nose & Throat
FOBT	Fecal Occult Blood Test
GI	Gastrointestinal
GPs	General Practitioners
Hb	Hemoglobin
Hct	Hematocrit
HCV	Hepatitis C Virus
HTN	Hypertension
ICU	Intensive Care Unit
I & D	Incision & Drainage
LBW	Low Birth Weight
LFT	Liver Function Test

LIST OF ABBREVIATIONS

LUCS	Lower Uterine Caesarean Section
LRTI	Lower Respiratory Tract Infections
MBBS	Bachelor of Medicine & Bachelor of Surgery
MCQ	Multiple Choice Question
MCV	Mean Corpuscular Volume
mhGAP	Mental Health Gap Action Programme
NG	Nasogastric
OSCE	Objectively Structured Clinical Examination
PBF	Peripheral Blood Film
PDA	Patent Ductus Arteriosus
PGME	Post Graduate Medical Education
PHC	Primary Health Care
PM&DC	Pakistan Medical & Dental Council
POP	Plaster of Paris
PPE	Personal Protective Equipment
PT	Prothrombin Time
PTT	Partial Thromboplastin Time
RBS	Random Blood Sugar
SEQs	Short Essay Questions
SGD	Small Group Discussion
SOB	Shortness of Breath
TB	Tuberculosis
TFT	Thyroid Function Test
TGA	Transposition of Great Arteries
TOF	Tetralogy of Fallot
TSH	Thyroid Stimulating Hormone
USG	Ultrasonography
UTI	Urinary Tract Infection
VHF	Viral Haemorrhagic Fever
VSD	Ventricular Septal Defect
WBC	White Blood Count