



## **MANUAL FOR POSTGRADUATE RESIDENTS**



**FATIMA JINNAH MEDICAL UNIVERSITY**  
**SIR GANGA RAM HOSPITAL**  
**GOVT. TEACHING HOSPITAL SHAHDRA**  
**LAHORE-PAKISTAN**

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



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## **PREFACE TO THE FIRST EDITION**

**Assalaam Alaikam.**

I feel very pleased to write the Preface for the first edition of the Manual for Postgraduate Trainees of FJMU, because I feel that such a document is essential for the trainees to understand all the details pertaining to the training programs.

This task is by no means easy and I would like to congratulate and appreciate the efforts of Prof Aamer Zaman Khan , the Vice Chancellor and all the Members of the different Deaneries and Faculties. I am sure this Manual will facilitate the trainees at FJMU in achieving their learning outcomes within the specified time frames .

The Manual very clearly provides information of the various steps and procedures involved during the 4 or 5 years of training for the MD/MS programs , starting from the induction of the trainee into the training program , the registration process , the intermediate and the final or exit examination and Award of Degree. The procedure of writing the synopsis and thesis has been clearly defined , thus ensuring elimination of errors which commonly occur in this area .

The learning environment has great importance during the training period , and this area also has been adequately addressed in the Manual. The Vision and Mission of the University has been projected in the beginning of the Manual followed by a detailed description of the University and its affiliated hospitals alongwith details of the various Deaneries and Departments.

I have also come to know that the important stakeholders i.e the trainers and trainees were involved in design of curriculum, training schedule and in preparation of various guidelines for the training programs. This input is of great value because it has led to the development of a document in which both trainer and trainee perspectives have been taken into account.

Good luck and best wishes.

**Prof. Dr Rakhshanda Rehman**  
Former Principal FJMC .



**MESSAGE FROM VICE CHANCELLOR  
FATIMA JINNAH MEDICAL UNIVERSITY LAHORE  
PROF. AAMER ZAMAN KHAN**

I hereby take this opportunity to welcome you on behalf of the faculty of the university. FJMU is served by a team of highly learned professionals who have always strived to inculcate the true spirit of serving humanity in health professionals. I assure you that my faculty will always be there to support, nurture and protect you during this adventurous journey which you have embarked upon yourselves.

The opportunity to join one of the most outstanding university and its constituent institutions in the country comes in recognition of your academic and personal achievements. It is a great honor for me to welcome you in the new area of knowledge, humanity, science and medicine. The challenge will create opportunities for spiritual and personal growth for each of you. The journey of professional development starts with the selection of an institution for higher education. This is a complex and responsible choice, as it determines not only the job but also your entire life and your destiny. As time passes by, this experience unravels upon you the wonders of working in an institution with magnificent history. Here, at FJMU and its constituent hospitals, you will be introduced to the vast, ever-expanding world of medicine. I hope you will work to the best of your abilities to bring out the best in you and be a source of pride for FJMU. We expect the post-graduates of this institution to always demonstrate a responsible behaviour and spirit of public service. Your soul will be enriched by each person you care for. You will be guardian angels for so many people. We are confident that the knowledge, skills and competencies that you will acquire at FJMU will be useful in your future and professional development. We assure you that everyone will do their best to give you the opportunity to become highly qualified and successful professional. This manual is being printed to facilitate all aspects of training, teaching & evaluation of the post graduate trainees. Efforts of Prof. Shireen Khawar, Prof. Kamran Khalid, Prof. Shamsa Humayun, Prof. Muhammad Nadeem, Mr. Muhammad Nabeel and Mrs. Shaheen Roohi need to be commended and appreciated.

Welfare of the post graduates is the first priority at FJMU. In sha Allah, training here will be an experience to be cherished throughout your life. Strive with perseverance and explore the land of opportunities that lies ahead of you. Wishing you the very best that life can offer. May Allah's blessings be with all of you at all times.



**MESSAGE FROM PRO-VICE CHANCELLOR  
PROF. SHIREEN KHAWAR**

Fatima Jinnah Medical University is a well-established and recognized institution for undergraduate as well as postgraduate medical education. We have dedicated highly qualified faculty and experienced paramedical staff, purpose-built infrastructure including wards, well equipped labs, up to the mark operation theaters and all the facilities required for standard postgraduate teaching and learning.

Our teaching is designed to provide the postgraduate medical students an exposure to the latest ideas and developments in various fields of medical sciences and to develop and nurture their interests and essential skills.

Post graduate medical training requires a lot of focus, concentration and time. The only way to excel is to complete the given task with dedication, punctuality and honesty. In the end, I would like to tell the post graduate students to have faith in their abilities and success will come your way eventually. I wish you success in your academic endeavors.



**MESSAGE FROM DIRECTOR  
POST GRADUATE PROGRAM AFFAIRS / REGISTRAR FJMU  
PROF. MUHAMMAD NADEEM**

Fatima Jinnah Medical University, Lahore aims to provide training of the highest quality, to lead to the emergence of a qualified academic professional who comes up to the highest professional standards of his/her chosen specialty and at the same time has developed into a humane, communicative and self-directed practical individual.

We have a strong leadership team consisting of creative and enthusiastic faculty, outstanding program directors, and motivated & inspired supervisors. Each one of us works tirelessly to optimize the training experience for our resident doctors. While we have a tradition of training outstanding clinicians, we also continually work to keep our curriculum up-to-date. Our faculty members actively engage in bringing together evidence-based knowledge and research to foster a learning environment that is further enhanced using current teaching and learning methods and approaches.

We believe that our residents should not only be life-long learners of medicine but life-long teachers and scholars of medicine. A pillar of our educational focus has been to teach our residents clinical reasoning and problem solving. No matter a resident's area of career focus, our residency program significantly raises his or her clinical reasoning and performance level.

The office of Director Postgraduate Program Affairs is responsible for:

- Facilitating the PGRs by addressing the various issues encountered during their training period
- Overseeing the administration of all the PGRs working at FJMU
- Act as a coordination center between the university administration, the postgraduate trainees and the administrations of affiliated hospitals
- Act as a bridge between the PGRs and Examination Department
- Help in timely approval of Synopses and Theses of the PGRs
- Help to ensure that the university programs meet the standards of the PMC and HEC regarding postgraduate education
- Contributing to the academic base of Postgraduate Medical Education
- Liaising with other universities and organizations at the national and international level regarding Postgraduate Medical Education and research

We are committed to the provision of a quality educational experience to enable the success of each postgraduate trainee.

The University strongly believes to take all the stake holders on board while making decisions regarding the curricula, training schedule and preparation of various guidelines. This book is one such example where a positive input from the PGRs and supervisors has been incorporated.



### **MESSAGE FROM DIRECTOR**

**PROF. DR. ROSE. K. MADAN DEPARTMENT OF MEDICAL EDUCATION (DME)**

**PROF. SHAMSA HUMAYUN**

The Department of Medical Education and Research Center was established at Fatima Jinnah Medical College in 1986 with the objective to promote faculty development and research. Prof. Rose. K. Madan, a renowned educationist and Professor of Physiology was the pioneer and first Director of the Department. Her successors Prof. Rakhshanda Rehman, Prof. Muhammad Aamir Zaman Khan, Prof. Kamran Khalid, and Prof. Shamsa Humayun carried her legacy forward. In recognition of her dedication and contribution to medical education, it was named as “Rose. K. Madan Department of Medical Education and Research Center” after her death.

The department is focused to facilitate learning, research and professional development of students, faculty and allied health professionals. It assists and regularly organizes workshops to keep the faculty updated regarding curriculum development, assessment techniques, teaching and research methodology. Need assessment surveys are done to fulfill the health professional needs. Since January 2021, it is regularly conducting the four mandatory workshops for trainees (Information Technology Skills, Biostatistics and Synopsis Writing, Communication Skills and Research Methodology) for MD/ MS university programs.

The department took the lead to initiate a six-months blended learning certificate program in health professions education (CHPE) for health professionals in any public sector university in Punjab and currently 4<sup>th</sup> batch of it is enrolled. The department is committed to serve as a center fostering excellence in professional and personal development of faculty members, under- & postgraduate students, nurses & allied health professionals empowering them to become leaders in education, research, and service delivery.



**MESSAGE FROM DIRECTOR  
QUALITY ENHANCEMENT CELL (QEC) FJMU  
PROF. KAMRAN KHALID**

Quality Enhancement Cell (QEC) of Fatima Jinnah Medical University was established in 2017 under the guidelines of Higher Education Commission of Pakistan (HEC). It is situated in the building of DME. The department is headed by Director QEC and other staff of QEC includes Deputy Director, Data Analyst and Biostatistician. QEC is working directly under the supervision of Vice Chancellor and works closely with HEC and PMC to implement the standards of medical education in the university at both undergraduate and postgraduate levels.

The main function of this department is to strengthen the internal quality assurance mechanism of university and to prepare the institute for external quality assurance tasks. The other main functions of QEC include:

- Preparation of University Portfolio Report (UPR)
- Preparation of Yearly Progress Report (YPR)
- To conduct different surveys
- To manage different HEC and PMC visits
- To organize awareness workshops for students and faculty



**MESSAGE FROM CONTROLLER EXAMINATIONS  
DEPARTMENT OF EXAMINATIONS FJMU  
MR. MUHAMMAD NABEEL**

The Examinations Department is moving towards building, maintaining and improving the Rules and Regulations to enhance the quality of medical education by a unified, technologically strong, efficient, student oriented and transparent system for our students.

Secrecy, transparency and accuracy are our hallmarks. The Examinations Department has launched the modern and latest technology for timely declaration of the results with the guarantee of highly reliable testing and evaluation procedures with zero tolerance towards unfair and inefficient practices. Our mission is to maintain and develop high quality postgraduate programs to provide excellent opportunities to our postgraduate students to exhibit research oriented knowledge, innovation and skills as medical professionals.



## FATIMA JINNAH MEDICAL UNIVERSITY LAHORE



Fatima Jinnah Medical College, initially established in 1948, was awarded the status of Medical University on 1<sup>st</sup> July 2015 by the Government of Punjab. Fatima Jinnah Medical College is the constituent college of the university.

The university has three affiliated teaching hospitals including 954 beds Sir Ganga Ram Hospital 200 beds Govt. Teaching Hospital Shahdara and 50 beds Govt. Teaching Hospital Mozang providing vast variety of health and allied services at tertiary level of care. The College of Nursing SGRH offering BS Nursing for women is the constituent nursing college of university. College of Nursing Shahdra (GTHS) is new academia affiliated with FJMU offers BS Nursing Generic 04 years program for male students.

**Prof. Dr. Aamer Zaman Khan is Vice Chancellor of the University.**

University is offering MD/ MS Programs and its affiliated hospitals are accredited by the College of Physicians and Surgeons Pakistan for FCPS in various basic sciences and clinical disciplines. Currently, a total of 413 Postgraduate Residents, including FCPS & MD/ MS are enrolled in various disciplines of university and its affiliated teaching hospitals.

University hospitals provide tertiary care facilities, learning experiences and opportunities in emergency, outpatients, and indoor care under supervision of faculty of international repute.



FJMU library is in the main building of the College and is equipped with around 38450 current editions of text and reference books and impact factor local and international journals for faculty, under- and postgraduate students, and allied healthcare professionals. The library resources include e-library facility for faculty and students for round the clock learning and research activities. WHO corner has also been established in the library. There is a holding list of 42100 core medical journals present in the library journal's section. Ten National & International Journals are on regular list. Nearly 35 videos on different health related topics are available in the library. There is a separate corner for PGRs in the main library, open during study hours six days a week.

Department of Medical Education (DME) offers workshops and courses in medical education and facilitates students in research and educational activities. The department facilitates the institute in keeping the under- and postgraduate curricula aligned with national and international regulatory bodies. Various courses are organized for medical and allied health sciences for continued professional development. DME remains the backbone in achieving university aims of producing scholars with leadership and lifelong self-directed learning qualities.

A well-equipped Audio-Visual Department, established since 1978, facilitates learning on modern lines. Quality Enhancement Cell (QEC) offers support in the surveillance mechanism for providing evidence of quality organizational structure, responsibilities, processes, procedures, and resources for implementing quality management. The department in close liaison with HEC and PMC, facilitates faculty and students in getting updated information on educational and research opportunities.

Office of Research, Innovation & Commercialization (ORIC) facilitates exposure of research scholars to national and international research and marketing with the objective to develop, expand, enhance and manage the university's research programs and to link research activities directly to the educational, social and economic priorities of the university and its broader community.

University offers selective accommodation facility for female PGRs. Internet facility is available free of cost in the main university campus and is being expanded to its affiliated hospitals to facilitate learning and research by the faculty and students.

Journal of Fatima Jinnah Medical University (JFJMU) is the peer reviewed quarterly published official journal of the university. The journal offers research publication opportunities to university faculty and students in addition to providing information on recent developments in national and international research in health sciences and medical education at door steps.

## SIR GANGA RAM HOSPITAL LAHORE



Sir Ganga Ram was a great Philanthropist. Basically, he was a Civil Engineer & promoted to the Rank of Chief Engineer. The title of Knighthood (SIR) was conferred upon him by the British Govt. in acknowledgement of his services in his own field but more certainly on account of his devotion to the healthcare of common populace. Sir Ganga Ram Hospital was started with 80 beds in 1921 in the walled city of Lahore and was shifted in the present place in 1943. At present, the bed strength

is 954. It is a teaching hospital affiliated with Fatima Jinnah Medical University, Lahore. The Mission of Sir Ganga Ram Hospital is to serve humanity with knowledge and skills to improve the fields of medicine and knowledge with a sense of duty and passion.

Facilities provided in the Accident and Emergency Block include: Emergency care for patients of General Medicine, General Surgery, Gynaecology & Obstetrics and Neonatal Nursery. Other supporting facilities include Radiology Department, Pharmacy, a well-equipped Pathology Laboratory, Blood Bank, Medico-legal Services and ICU.

The Outdoor Department caters for Patients of General Medicine (liver/ diabetic/ endocrinology/ rheumatology clinic), Nephrology Clinic, General Surgery (Breast clinic/ Oncology), Neurosurgery, Neurology (Epilepsy clinic), Urology, Gynae & Obst., Orthopaedics, ENT, Ophthalmology, Psychiatry, Dermatology, Chest Clinic, Physiotherapy, Dental Clinic along with Radiological Services and a medical Laboratory.

Indoor Department of SGRH consists of 3 Medical Units (Covid HDU, Dengue HDU, Endocrinology Unit), 3 Surgical Units (Surgical ICU, GOT), 4 Gynae & Obst. Units (Covid Labor Room & Covid Operation Theatre), Cardiology & Neurology Department with facilities of Echocardiography and EEG. Departments of ENT, Ophthalmology, Orthopaedic Surgery, Neurosurgery and Urology have their own Operation Theatre facilities. Nephrology Department has a Dialysis Centre. There is a Dermatology Department, Anaesthesia Department and a Pulmonology Department with a Medical ICU.

There is a separate Paediatrics Block which consists of Paediatric Medicine Department along with an NICU, Nursery, Paediatric Emergency, Paediatric Outdoor and a Preventive Paediatrics Department with an EPI Vaccination Centre and a Daycare Centre for university & hospital employees.

Almost five hundred thousand patients visit the various OPDs of SGRH annually while there are approx. forty thousand admissions in the Indoor wards of different departments. Similarly, around three hundred thousand patients come to the Emergency Department for help and almost forty thousand paediatric patients visit the Paeds. Emergency per year.

## GOVT. TEACHING HOSPITAL SHAHDRA



GTHS was established in March, 2013 by the Govt. of Punjab. The main purpose of constructing this hospital was to provide best healthcare facilities to the population of Shahdara and towns around. It was declared a Teaching Hospital in July, 2015 and was attached to Fatima Jinnah Medical University. It was approved for FCPS training in 2017 in Surgery, Gynae, Medicine, Nephrology, Paediatric Medicine, Anaesthesia and Urology. Since Jan-2018, Postgraduate

Residents have been inducted in GTHS through CIP in both the FCPS and MD/ MS Programs. Recently, MS residents have also been inducted in the Orthopaedics Department.

A total of 55 residents are getting their training in the above-mentioned disciplines. Total sanctioned beds are 300 but at the moment, 203 beds are functional in GTHS. There are Associate Professors, Assistant Professors and Consultants working in various departments of GTHS providing teaching and training to these postgraduate residents. Almost 2000 patients visit the OPD facility on daily basis and around similar number of patients come to the Emergency Department for various ailments.

In the Emergency Department, there is a 2-bedded critical area for resuscitation of patients, received in shock status. There is a 20-bedded Medical Ward (10 for male & female each), a 20 bedded Surgical Ward (10 for male & female each), Diagnostic area with Mini-Lab, X-ray and Ultrasound room, Blood Bank to cater for the blood need of emergency and indoor patients. A Pharmacy has been provided for provision of free medicines to emergency patients and OPD.

OPD Block comprises of following disciplines: Gynae & Obst.; Surgery; Medicine; Eye; ENT; Urology; Cardiology; Paeds; Orthopaedics; Neurosurgery; Nephrology; T.B./ Chest; and Psychiatry. Each OPD section consists of 2 rooms, one for Consultant and other for Medical Officer.

The Diagnostic area caters for the diagnostic need of OPD and indoor patients. It comprises of CT-Scan, X-Ray, Ultrasound, ECG and Lab. The Indoor Department includes a Medical and Surgical Ward each consisting of 20 Beds (Male & Female), a 40-Bedded Gynae & Obstetrics Ward, a Paediatrics Ward of 20 Beds, a 10 bedded Paediatric Nursery Ward, CCU/ ICU comprising of 07 beds.

There is a newly built Nursing & Paramedical College attached with the GTHS. It is one of the few centres in Govt. sector where male nurses are being trained.

## VISION

A leading national academia offering leadership in medical education, research and community health services of international standards.

## MISSION

Fatima Jinnah Medical University will be world class medical academia producing undergraduate and postgraduate healthcare professionals and research scholars demonstrating excellence in knowledge, skills and empathetic values empowered with community oriented self-directed learning and professional development qualities to provide leadership in education, research and professional service.

## GOALS

**Fatima Jinnah Medical University will strive for:**

1. Providing a conducive learning environment of international standards for education and research.
2. Inculcating empathy and leadership qualities in its undergraduate and postgraduate students and healthcare providers contextual to local community and national needs.
3. Providing community health services of high standards by its affiliated institutes and hospitals.
4. Achieving international standards by continuous process of quality control, maintenance and enhancement.

## OBJECTIVES

**Fatima Jinnah Medical University will be able to:**

1. Attain a position among top national universities listed by the Higher Education Commission.
2. Create a conducive learning environment for its under-graduates, post-graduate and research scholars.
3. Conduct high quality assessments.
4. Acquire research-oriented culture.
5. Establish a dynamic quality Enhancement cell inculcating the tradition of internal and external audit of its faculty, students and support staff.

## DEANS OF FACULTY FJMU

### BASIC SCIENCES & ALLIED SPECIALTIES

#### Prof. Dr. Shireen Khawar

- Department of Anatomy
- Department of Physiology
- Department of Biochemistry
- Pharmacology
- Department of Pathology
- Department of Forensic Medicine & Toxicology
- Department of Community Medicine
- Department of Behavioural Sciences

### SURGERY & ALLIED SPECIALTIES

#### Prof. Dr. Shamsa Humayun

- Department of General Surgery
- Department of Gynecology & Obstetrics
- Department of Ophthalmology
- Department of ENT
- Department of Orthopedic Surgery
- Department of Urology
- Department of Anesthesia

### MEDICINE & ALLIED SPECIALITIES

#### Prof. Dr. Muhmmad Nadeem

- Department of General Medicine
- Department of Dermatology
- Department of Radiology
- Department of Cardiology
- Department of Nephrology
- Department of Pulmonology
- Department of Oncology

### NURSING & ALLIED SPECIALTIES

#### Prof. Dr. Zohra Khanum

- College of Nursing & Midwifery, FJMU/ SGRH
- College of Nursing, Govt. Teaching Hospital Shahdara, Lahore

### NEURO-SCIENCES & ALLIED HEALTH SPECIALTIES

#### Prof. Dr. Abdul Hameed

- Department of Neurosurgery
- Department of Psychiatry
- Department of Neurology

### PUBLIC HEALTH & PREVENTIVE MEDICINE & ALLIED SPECIALITIES

#### Prof. Dr. Naveed Akbar Hotiana

- Department of Paediatrics
- Department of Preventive Paediatrics
- Department of Community Medicine



## POSTGRADUATE PROGRAMS

Following postgraduate programs level-III/ Level IV for MS/MD are being offered by Fatima Jinnah Medical University, Lahore:

<b>FJMU/ SGRH/ GTHS</b>		
<b>Sr. No.</b>	<b>MD (DOCTOR OF MEDICINE)</b>	<b>Duration</b>
1.	CARDIOLOGY	5 Years
2.	DERMATOLOGY	5 Years
3.	GENERAL MEDICINE	4 Years
4.	NEPHROLOGY	5 Years
5.	NEUROLOGY	5 Years
6.	PAEDIATRICS	4 Years
7.	PREVENTIVE PAEDIATRICS	5 Years
8.	PSYCHIATRY	4 Years
9.	PULMONOLOGY	5 Years
10.	RADIOLOGY	4 Years
<b>MS (MASTER OF SURGERY)</b>		
11.	ANAESTHESIA	5 Years
12.	GENERAL SURGERY	4 Years
13.	NEUROSURGERY	5 Years
14.	OBSTETRICS & GYNECOLOGY	4 Years
15.	OPHTHALMOLOGY	4 Years
16.	ORTHOPAEDIC SURGERY	5 Years
17.	OTORHINOLARYNGOLOGY	4 Years
18.	UROLOGY	5 Years
<b>SUPRA-SPECIALTIES</b>		
19.	MS VITREO-RETINAL SURGERY	2 Years after MS Ophthalmology
<b>FJMU/ SGRH/ GTHS</b>		

**Note:** For all 5-year programs, one year is mandatory for clinical work in the relevant specialty, after the completion of compulsory academic credit hours.

## **DEPARTMENTS OFFERING MD/ MS PROGRAMS**

### **DEPARTMENT OF ANAESTHESIA**

Department of Anaesthesia, FJMU/ SGRH is headed by Prof. Dr. Muzamil Hussain. There are two Assistant Professors, four Senior Registrars and 21 Medical Officers/ Women Medical Officers who help in the smooth running of the department. The department provides anaesthesia cover for elective and emergency operation theatres for 24 hours. There are almost 37 PGRs and 10 House Officers in the department. The Anaesthesia Department provides services to operation theatres of General Surgery, Gynaecology, Urology, Neurosurgery, Eye, ENT and Orthopaedics. They also provide care to patients in the Emergency Surgical ICU and Indoor Surgical ICU for 24 hours. In addition to all these facilities, the department provides in-hospital services to Covid Medical HDU and patients admitted in medicine, surgery, gynaecology, urology, orthopaedics, eye, ENT and neurosurgery.

### **DEPARTMENT OF CARDIOLOGY**

Cardiology Department, FJMU/ SGRH is a renowned facility, with full accreditation for MD Cardiology training and Cardiology rotation of internal medicine. The department is headed by Dr. Shahzad Majeed Bhatti, who is working as an Assistant Professor. There are 10 Medical Officers/ Women Medical Officers, 7 House Officers and 3 PGRs in the department.

Cardiology Department is working with a total of 26 beds, having a fully equipped coronary care unit with 8 beds for acute cardiac emergencies. The department has diagnostic facilities of Echocardiography, Exercise tolerance test, Holter monitoring and ECG for indoor and outdoor patients. There is a capability of performing pericardial centesis and temporary pacemakers as indicated.

Cardiology Department is doing OPD on daily basis. Continuous academic activities including case and topic presentations by postgraduate students and house physicians are carried out in the department on regular basis.

### **DEPARTMENT OF DERMATOLOGY**

The Department of Dermatology is headed by Prof. Dr. Muhammad Nadeem along with an Associate Professor and 2 Senior Registrars. There are four Medical Officers/ Women Medical Officers. We have 6 FCPS, 4 MD Postgraduate Trainees and 7 House Officers. Besides these PGs, we also have Residents from other departments to do their elective rotations here.

In March 1985, Dermatology was started as an OPD in Sir Ganga Ram Hospital, Lahore which was attached to Fatima Jinnah Medical College, Lahore (at that time), now Fatima Jinnah Medical University, Lahore. In 1999, Prof Dr. Atif Hasnain Kazmi was appointed as Head of the Department, and the department was shifted to its present place. In 2007, Prof. Dr. Tariq Rashid joined as Head of Department, and in late 2007, the department was recognized by CPSP for Postgraduate Training. In 2010, the new building of the Dermatology Department

(Indoor) was constructed. Dermatology In-door Department consists of 12 beds in female ward and 9 beds in male ward, one reading room, doctors duty rooms and nursing station.

There is a Departmental Library with almost 75 books on various topics of Dermatology. Daily Teaching Rounds and Consultant Outpatient Clinics are conducted. Other Academic Activities include daily 4th year classes, lectures in FJMU for 4th and 5th year MBBS classes, lectures in SGRH for 3rd year nursing class, a weekly journal club, weekly departmental CPC (Conference Room has a capacity of 30), monthly histopathology class, monthly assessment of PGs, slide sessions and short & long case discussions with PGRs. Guest lectures of various faculty members from other institutions/ departments are regularly held. Other facilities available in the department include Electrocautery & Electrolysis, Cryotherapy, Chemical Peeling, Intra-lesional Injections, Scraping for Fungus & Smears, Wood's Lamp, Dermatoscopy, PRP, Plasma Pen, Derma Pen, CO2 Laser, IPL for Hair removal, Skin Biopsy, Punch Grafting, Excision of Small Tumors and Moles, Computer & Internet, Digital Camera, Multimedia etc.

### **DEPARTMENT OF GENERAL MEDICINE**

Department of Medicine, FJMU/ SGRH consists of 3 Units. Each Unit caters for 48 hours emergency cover every week, plus a Special Sunday Emergency Cover every third week. They share two out-patient days each, every week. There are a total of 88 beds, with an equal distribution for males and females, and a good number of beds for HDU/ Dengue Isolation.

Medical Unit 1 is headed by Prof. Muhammad Imran Hasan Khan, who also heads the Department of Medicine, FJMU. Unit 2 is being chaired by Prof. Dr. M. Naeem Afzal whereas Unit 3 is supervised by Dr Rashid Iqbal, Assistant Professor. Along with these heads of units, there are 6 Assistant Professors, 6 Senior Registrars and 4 Medical Officers/ Women Medical Officers to help in teaching and training of undergraduates and postgraduate residents. There are about 14 PGRs and 24 House Officers in each unit.

The Department of Medicine has recently established the Fatima Jinnah Center for Diabetes Endocrine and Metabolism (FJCDEM), which is working 6 days a week. Dedicated staff is available in a paper less environment and EMR, and it has recently been recognized for second fellowship in Endocrinology by CPSP. There is a plan to start MD in Endocrinology and Postgraduate Diploma in Diabetes as well, in near future. In addition to the general medical OPD, the department renders services in Rheumatology, Gastroenterology OPD and provides Endoscopy Services where diagnostic and therapeutic upper and lower GI procedures are routinely being done.

Classes for postgraduates are regularly held for knowledge as well as skill development with a strong emphasis on bedside teaching during daily ward rounds, case presentations, journal club and morbidity and mortality review weekly. Due to Covid, online symposia have been executed multiple times in relation with teaching and training. Weekly research meetings are held, with ongoing more than 20 topics on different aspects which are in process. To aid the trainees and consultants in performing their tasks with utmost efficiency, a comfortable space in the form of offices, PG room, teaching room and a library with internet facility have been allocated. Extracurricular activities



are arranged for better bonding between the team members. We are striving to achieve excellence in Internal Medicine and Endocrinology.

### **DEPARTMENT OF GENERAL SURGERY**

Department of General Surgery, SGRH is one of the vibrant and academic departments of FJMU located on the first floor of main hospital. Surgical Unit 1 is headed by Prof. Kamran Khalid who is also the Chairman Department of General Surgery and is working as Director, QEC at FJMU. Unit 2 is headed by Prof. Khalid Javeed Khan while Prof. Andleeb Khanam is heading the Surgical Unit 3. There are 2 Associate Professor, 3 Assistant Professors, 11 Senior Registrars and 7 Medical Officers/ Women Medical Officers in all the units at surgical floor. Around 17 PGRs and 24 House Officers are working in each unit.

The department comprises of 125 beds distributed among 3 Professorial Units. Each unit has 36 beds distributed among Male and Female Wards. There are 12 beds in the Emergency Department. Furthermore, 5 beds are shared in the Central Surgical ICU located on the same floor. Each unit has its own High Dependency Unit, Departmental Library, Demonstration Room and Duty Room for PGRs.

The Department provides comprehensive care to General Surgery, Surgical Oncology and Trauma patients round the clock seven days a week. The department maintains close liaison with allied specialties and provides extensive exposure of interdisciplinary training to PGRs. Emergency cover is provided to all types of surgical emergencies including trauma and burns. The Department has a comprehensive Disaster Management Plan. General Operation Theatre (GOT) has 5 operation tables and is equipped with modern instruments, along with operating and monitoring facilities. Surgical Outdoor is one of the busiest outpatient departments and caters around 750-1000 patients daily during the working hours. There is a dedicated Breast Clinic in the outdoor providing comprehensive diagnostic and treatment facilities to patients with breast disorders. There are twice weekly meetings of CPC and morbidity and mortality meetings where patient care and clinical judgement is strengthened by robust discussion using evidence-based learning.

The department offers a wide variety of clinical and research opportunities to PGRs, with international publications in esteemed journals such as the British Medical Journal. All the faculty, residents, house surgeons and medical students rotating in the unit are encouraged to participate in the research the department undertakes. This surgical department is patron to the first national public health obesity endeavor that offers Sleeve Gastrectomy for morbid obesity along with a team consisting of a nutritionist, endocrinologist and anesthetists. The department undertakes laparoscopic splenectomy, appendectomy, hysterectomy & oophorectomy, cholecystectomy and pancreatic cyst drainages routinely. We are also performing Breast Oncoplastic procedures with breast conservation surgery, sentinel lymph node biopsy, and Latissimus Dorsi (LD) flap coverage for breast reconstruction.

## **DEPARTMENT OF NEPHROLOGY**

Nephrology Department is headed by Dr. Shahid Anwar, who is working as Associate Professor. There is 1 Assistant Professor, 2 Medical Officers/ Women Medical Officers to assist him in the training of PGRs and management of the department. There are 16 PGRs and 5 House Physicians working in the department.

The Nephrology Department provides full OPD cover, 24 hours Emergency cover and 24 hours renal ICU cover. There are 12 Hemodialysis units functioning round the clock for the suffering ailing humanity. The department takes 2 classes per week for the PGRs, once a week research class, daily consultant rounds and CPC on weekly basis. Guest lectures from other institutions are also arranged on regular basis.

## **DEPARTMENT OF NEUROLOGY**

FJMU owns a well-equipped Neurology Department which is headed by Dr. Faheem Saeed, who is working as an Assistant Professor. There is 1 Assistant Professor, 1 Senior Registrar, 3 Medical Officers/ Women Medical Officers along with 14 PGRs and 4 House Officers.

Neurology Department is working with a 20 beds capacity with 10 floating beds and a high patient turnover with a wide variety of Neurological conditions. Department has a fully functional electrophysiology section doing thrice weekly EEG (Electroencephalography). Neurology department has the facility of plasmapheresis for life threatening disorders like Myasthenia Gravis, GBS etc. The department is currently doing OPD twice weekly and a specialty Clinic of Epilepsy on Wednesdays along with additional services of OPD being provided in the Govt. Teaching Hospital Shahdara which is affiliated with FJMU.

Continuous academic activities are an integral part of working of the department including case and topic presentations by Postgraduate Residents, daily academic rounds that include clinical methods and case discussions, special classes for short and long case preparations.

## **DEPARTMENT OF NEUROSURGERY**

Neurosurgery Department, FJMU/ SGRH is providing highly specialized and professional services to the patients with surgically treatable ailments of Brain and spine. Neurosurgical team is chaired by Prof. Abdul Hameed, Professor of Neurosurgery and Dean Faculty of Neurosciences and includes One Assistant Professor and 11 postgraduate students of FCPS and MS Neurosurgery. At the moment, department is providing training to 11 postgraduate trainees of both (2) FCPS and (9) MS Neurosurgery.

Neurosurgery ward is a 23 bedded, fully equipped unit with all the necessary equipment, capable of managing all kinds of neurosurgical ailments. Doctors, nurses and paramedical staff are, round the clock, ready to serve with best of attitude and professionalism. The Indoor Department is equipped with 2 latest ventilators, in addition to main surgical ICU, providing service to critically ill patients.

A latest modular Theater, equipped with high tech. gadgets is fully functional to provide neurosurgical help which is at par with modern neurosurgical standards in the world. It is equipped with 2 automatic operation tables,

2 C-ARMS, High Resolution overhead magnetic hand-controlled Microscope, Brain & Spinal Neuro-endoscope with HD resolution camera, latest craniotome and two high speed zero torque electric drills and bone scalpel. To provide safety and accuracy to highly complex neurosurgical procedures, the theater is also equipped with CUSA, Retractor systems for brain and spinal surgery, Latest stereotactic and Neuro-navigation systems, MER system, PER operative EMG and nerve monitoring system and ICP monitors. There are 3 days elective OT lists per week during which neurosurgical help is provided for a vast spectrum of brain & spinal diseases in adult, pediatric and geriatric patients. Outpatient services are provided 3 days a week. Average number of patients who show their trust to treatment is 110 per week.

Training is in strict accordance with the respective curriculum of PGRs. Two academic ward rounds per week along with video club once a week, journal club, case presentations and operative skills transfer are to ensure the training according to modern standards. Neurosurgery Department also contributes in research work and has presented research papers in National and International Conferences.

For undergraduate students lectures are delivered to introduce them with neurosurgical diseases and during their ward rotations of 4th and final year special emphasis is given to sharpen their clinical skills and interpretation of neuroradiology. During operation theater rotations, these undergraduate students are introduced with surgical approaches and working of high-tech neurosurgical equipment. Our aim is to provide treatment services to community according to latest standards.

### **DEPARTMENT OF OBSTETRICS & GYNAECOLOGY**

The department of Obstetrics & Gynaecology, FJMU/ SGRH comprises of four Units. Each unit provide 24 hours emergency cover on its turn along with a special Sunday emergency cover every 4th week. Each unit conducts OPD & operation list on its allocated days. The department has 240 beds, which are distributed into all units.

Department is headed by Prof. Shamsa Humayun who is also the Chairperson Department of Gynae & Obst. and Head of Unit 1. In addition, she is holding the portfolio of the Dean Faculty of Surgery & Allied and Director Department of Medical Education. Unit 2 is headed by Prof. Zohra Khanum, who is also the Dean Nursing & Allied Health Sciences. Prof. Noreen Akmal chairs the Unit 3 along with the responsibilities of Chief Warden, FJMU Hostels while Unit 4 is headed by Prof. Sharmila Ijaz Munir. Each unit has one Associate Professor and two Assistant Professors besides Senior Registrars. The whole faculty is dedicated to educate and train the PGRs, House Surgeons and Undergraduate students. There are 26 Medical Officers/ Women Medical Officers, 106 PGRs and 40 House Officers in the department for smooth functioning and patient care. The department caters a large proportion of high-risk pregnancies and complicated gynecological cases. Approximately 600-800 patients are seen in OPD per day. Annual hospital delivery rate is around 24000. Our department provides consultation, comprehensive treatment, and a broad range of diagnostic and therapeutic services to the patients. The Government of Punjab designated the Gynae & Obst. Department, SGRH as a

dedicated facility for Covid-19 obstetric patients. Since the onset of pandemic, the staff is taking care of COVID patients and these front-line workers are selflessly serving the humanity.

The department is actively involved in various family planning initiatives of government and non-government organizations. It is collaborating successfully with NCMNH for skill training and post abortion and postpartum family planning services at Sir Ganga Ram hospital. It is also collaborating in baby friendly hospital initiatives. The research is essential to generate evidence and to fill the knowledge gaps. The faculty members actively participate in national and international conferences and present paper and posters. They have multiple research publications in reputable national and international journals. In collaboration with London School of Hygiene UK, the department has successfully completed the multicenter international women trial 1 and presently, the women trial 2 is going on in the department. Moreover, another multicenter trial titled Maternal, pregnancy and neonatal outcome in SARS-COV-2 in Pakistan is underway with Aga khan university and WHO.

### **DEPARTMENT OF OPHTHALMOLOGY**

Ophthalmology Department is one of the oldest and most prestigious units of this institution. It is headed by Prof. Huma Kayani Saigol, who besides holding FCPS, FRCS and VRO degrees, is also a Medical Educationist and chairs the Institutional Review Board of the university. The faculty includes 1 Assistant Professor, 4 Senior Registrars, 2 Medical Officers/ Women Medical Officers and 6 House Officers. Currently, there are 15 postgraduate trainees in the department getting postgraduate level 3 training in MS and FCPS Ophthalmology program and 3 postgraduates training in super-specialty level 4 in vitreo-retina.

Eye department has a busy outdoor providing expertise to 150-200 patients per day. Latest diagnostic facilities, refraction, low vision aid, lasers and diagnostics are all done on daily basis. Indoor of 52 beds caters to the clinical and surgical needs of patients as well as reaching and training undergraduate students of FJMU and postgraduates of FJMU/ SGRH. The department provides expertise to patients both local and patients from other provinces. Eye department has 24/7 ocular emergencies cover as well. The aim is to improve sight of poor patients in the best manner possible.

Eye department of FJMU/ SGRH is a tertiary center of excellence. The teaching strategies adopted by the training program match any international level program comprising of bed-side teaching, case-based discussions, journal club review, surgical skill orientation, clinic-pathological conferences and encouraging research in the field of ophthalmology.

Renovated eye theatre with latest microscopes is providing surgical expertise in Phacoemulsification, glaucoma surgery, oculoplastic and retinal surgeries. Diagnostic facilities in the form of YAG, Argon and Diode laser are available along with B scan, Visual field analyses and fundus fluorescein angiography. Recently, pre-term babies' evaluation for retinopathy of prematurity in collaboration with Paediatrics Department has been taken up as important task to prevent blindness. In addition, Corneal transplants with PHOTA license is a milestone achieved in the department for the first 6 successful corneal transplants done this year.

## **DEPARTMENT OF ORTHOPAEDIC SURGERY**

The Department of Orthopaedic Surgery is headed by Prof. Dr. Yawar Anis. He is assisted by 1 Associate Professors, 2 Assistant Professors and 2 Senior Registrars and 3 Medical Officers/ Women Medical Officers. There are 15 PGRs and 4 House Officers. The unit aims for “Excellence Through Service”.

Department of Orthopedics caters Emergency Services of SGRH 24/07 and renders services in the Orthopedic OPD twice weekly. It also covers the trauma management in SGRH. The Unit has 40 beds at its disposal where patients are admitted through ER as well as OPD. The Unit is recognized by CPSP for FCPS and by FJMU for training in MS Orthopedics.

Department of Orthopedics of SGRH aims for the best possible patient care as well as imparting par excellence to its undergraduate and postgraduate students. The faculty is keen to produce quality research from the Unit. The faculty has a special interest and excellence in the Endoscopic Orthopaedic Surgery.

## **DEPARTMENT OF OTORHINOLARYNGOLOGY**

Department of ENT, FJMU/ SGRH consists of Two Units. Since its inception, the department has continually evolved and flourished with the aim of providing quality care to patients and their families. Now, it is a major tertiary referral center in the Punjab Province.

The department is chaired by Prof. Dr. M. Irshad Malik, who is assisted by 2 Associate Professors, 2 Assistant Professors, 1 Senior Registrar and 2 Medical Officers. There are 39 beds, with male and female distribution. There is a Demonstration Room, Separate Rooms for each Consultant and MOs/ Postgraduate Residents. Each unit has almost 10 PGRs and 7 House Surgeons.

The 2 units share a very busy ENT outpatient clinic 6 days a week. Large number of patients with ENT problems visit the outpatient department. OPD is well equipped for detailed evaluation of these patients including ear microscope. The OPD has facilities for Audiometry/ Tympanometry because Hearing assessment is an integral part of audiology clinic which is maintained by a well-trained technician. Emergency cover is provided by each unit three days a week with Sunday cover fortnightly. Residents are trained to deal with all ENT related emergencies.

Operative facilities for common ENT diseases are available. Advanced ENT and head and neck surgeries are also routinely performed. These include: Ear surgery, Nose surgery including endoscopic sinus surgery, Throat and laryngeal surgery, Thyroid surgery, Oral cavity and salivary gland surgery and Head & Neck Oncologic surgery. Also included in Operation theatre is a procedure room for minor ENT/ H&N procedures, wound management and diagnostic laryngoscopy.

The goal is to train Postgraduate Residents in clinical, diagnostic and communication skills and to make them responsible, dedicated and caring doctors. The Department encourages students and residents to participate in research and academic activities.



## DEPARTMENT OF PAEDIATRICS

Department of Pediatrics, FJMU/ SGRH is known as Rao Bahadur Narindas Molchand Hospital for Children, founded by Lady Glancy on 5th April, 1944. It was opened formally by Sir Evan Jenkins (Government of the Punjab) on 21st December, 1946. The department is headed by Prof. Dr. Naveed Akbar Hotiana, who is also the Dean Faculty of Public Health & Preventive Medicine. There are 3 Assistant Professors, 4 Senior Registrars, 1 Principal Medical Officer, 1 Senior Medical Officer and 1 Woman Medical Officer working in the department, along with 20 FCPS and 15 MD postgraduate residents and 21 House Officers.

It is a 130 bedded department, comprising of Paediatric Emergency (13), Paediatrics ICU (12), Neonatal Unit (60), Paediatric Ward/ Isolation/ HDU (39) and Preventive Paediatrics (6). There is an Outpatient Department (OPD), Ultrasonography, Laboratory and X-ray facility available under one roof. The department has an extraordinary teaching activity involving teachers from other institutions. Moreover, the department conducts training courses like in collaboration with UNICEF for LHVs and nurses. Training courses like Neonatal Resuscitation, Breast Feeding & Clinical Preparation Course for Postgraduates are done on regular basis.

## DEPARTMENT OF PREVENTIVE PAEDIATRICS

The Department of Social & Preventive Paediatrics is headed by Dr. Rameeza Kaleem, who is working as Associate Professor.

**VISION:** “Thriving Childhood” - To strive for providing nurturing environment where children not only survive but also thrive.

**MISSION:** The mission of Department is to provide services to children and their families to promote optimal health and healthy life style through promotive, preventive and curative health services. The Department of Social and Preventive Paediatrics FJMU was established in 1992 in Sir Ganga Ram Hospital. It is one of the few departments providing preventive, promotive and rehabilitative services to children to help them reach their optimal growth and development.

It provides indoor and outdoor hospital-based health services, as well as outreach services to urban slum population attached with the department and in Charar village. The outdoor health services include vaccination and surveillance center, growth monitoring clinic, lactation management clinic, nutrition clinic, health education and management of common childhood illnesses. Indoor services include six bedded stabilization center providing nutritional rehabilitation to severely malnourished children.

Outreach services include antenatal counselling, care of newborn, breastfeeding promotion, vaccination, growth monitoring, health education and nutrition counselling. In addition, the Department provides collaborative and consultative services to Ministry of Health, Department of Primary & Secondary Healthcare, IRMNCH, UNICEF and WHO. It also establishes academic partnership with various Universities and conducts national and international trainings on child health and promotion. It also advocates and implement public health programs and policies.

## **DEPARTMENT OF PSYCHIATRY AND BEHAVIOURAL SCIENCES**

The Department of Psychiatry and Behavioral Sciences, FJMU/ SGRH is headed by Associate Professor Dr. Ayesha Rashid, along with 2 Assistant Professors and 1 Senior Registrar and 2 Medical Officers. There are a total of 27 beds, 8 beds in female ward and 9 beds in male ward with an addiction ward consisting of 7 beds and 3 beds in children ward. There are 10 PGRs and 5 Hos. Department of Psychiatry & Behavioral Sciences is training and teaching the undergraduates, postgraduates, nurses and psychologist interneers. Catering the physical, psychological, spiritual and social needs of patients is at the heart of our mission. Turning this department into an institute of psychiatry and start training in subspecialties of psychiatry is our vision.

The department offers community psychiatric services, outdoor consultation clinics, inpatient units and day hospital for adults, adolescents and children. The department is fully equipped for FCPS & MD Psychiatry training and full-time teaching of Behavioral Sciences curriculum of Fatima Jinnah Medical University. We have complete hierarchy of teaching faculty and supervisors for FCPS/ MD Psychiatry and House Job. Department also offers student counseling services and carrier counseling services along with liaising the psychiatric services with other departments.

## **DEPARTMENT OF PULMONOLOGY**

Department of Pulmonology, FJMU/ SGRH is headed by Dr. Mirza M. Ayub, who is working as Assistant Professor. It is catering ten bedded ICU in the Emergency block. Department is providing facility of following procedures: Video Bronchoscopy and related procedures, Video Pleuroscopy and Ultrasound guided procedures for lung diseases.

MD Pulmonology, MCPS and FCPS is under process with availability of the ward.

## **DEPARTMENT OF RADIOLOGY**

The department is headed by Dr. Khalid Rehman Yousaf, Associate Professor. There are two Assistant Professors, Two Senior Registrars, Five Consultant Radiologists, One Assistant Radiologist and Five SMO/ MOs. Twenty-four FCPS and MD trainees and five house officers are also working in the department. There are 35 members of Technical Staff working on different modalities like MRI, CT, Fluoroscopy, Mammography and X-ray Imaging Technology. We have 10 Nursing Staff members working in the department.

The department is equipped with a Toshiba 1.5 T Excelart Vantage MRI Unit, Toshiba Aquilion 4 slice CT scanner with provision of image processing, reconstruction, reformatting and CT angiography. The Color Doppler Ultrasound machines include 4 machines in the indoor and one in the emergency department along with three portable ultrasound machines. Also there is provision of ultrasound facility in the outdoor department. One Digital Fluoroscopy Unit with bolus chase and angiography is also a part of the department. 630mA and 800mA x-ray units are present in the main department with state-of-the-art dark room. 630mA x-ray

units, one in emergency and one in outpatient department with automatic processors, 100mA x-ray unit for the pediatric department, 500mA x-ray unit for the orthopedic department, 6 mobile x-ray units for bed side cases and modern CR system with three digital printers. Dedicated Mammography unit completes the radiological modalities under one roof. About 900 patients are provided various types of radiological services daily in the department. The academic activities include case-based presentations, teaching tutorials, clinical discussions and reporting sessions. Supervised and independent hands-on sessions are being conducted on routine basis. Monthly clinicopathological conferences and seminars of radiological society of Pakistan are attended enthusiastically by our department staff. Research is a regular feature done by the PG trainees during their residency programme. Many research papers in indexed journals are published.

The Mission of Department of Medical Imaging is to improve the health of our community and set highest standards of patient care.

### **DEPARTMENT OF UROLOGY**

The Department of Urology, FJMU/ SGRH was established in 1998 with OPD based-services and gradually indoor patients were shared with surgical department. In 2002, a Full Urology Department was developed having 8 beds with an independent Urology Theater that was further expanded to 15 beds in 2013. In 2018, New state of the art Urology Department was established with a new building having facility of 30 beds for admitted patients, Investigative Lab, Procedure Room, Auditorium, Lithotripsy Suit and other infrastructure facilities including state of the art modular operation theater which is in its completion form. We will be starting Kidney Transplantation in near future.

The department is headed by Prof. Dr. Naveed Iqbal with 1 Associate Professor, 1 Assistant Professor, 4 Senior Registrars and 20 Medical Officers/ Women Medical Officers. There are 20 PGRs with 6 PGRs on rotation from General Surgery and 4 House Officers working in the department.

The Department provides services in the Outpatients Department (Twice a week) [like General Urology, Prostate Clinic, Urogynae Clinic], Indoor Department, 24 Hours Emergency, Investigative Urology (Urodynamics, TRUS, Retrograde Urethrogram, PCN, Vasography), Operating facility Twice a week, Open Surgery, Endoscopic Procedures like TURP, Laser Source, Percutaneous Nephrolithotomy (PCNL), Laparoscopic Surgeries, Radical Surgeries and Reconstructive Surgeries.



## ROADMAP OF MD/ MS PROGRAMS

### 1<sup>st</sup> TO 6<sup>th</sup> MONTH - COMMON FOR ALL PROGRAMS

(Induction in Specialty, Mandatory Workshops, Synopsis Submission to BASR)

#### 4-YEAR PROGRAMS

**MD:** General Medicine, Paediatrics, Radiology,  
Psychiatry

**MS:** General Surgery, Obstetrics & Gynecology,  
Ophthalmology, Otorhinolaryngology

#### 5-YEAR PROGRAMS

**MD:** Cardiology, Dermatology, Neurology,  
Nephrology, Pulmonology, Preventive  
Paediatrics

**MS:** Anesthesiology, Neurosurgery, Urology,  
Orthopaedic Surgery

7-24 Months

Training in Allocated Disciplines

Synopsis Approval within 2 Years

At Completion of 2 Years

### INTERMEDIATE EXAMINATION

\*3rd and 4th  
Year of Training

\*3rd, 4th and 5th  
Year of Training

### ACCEPTANCE OF THESIS

Completion of 4 Year Program

Completion of 5 Year Program

### FINAL/ EXIT EXAMINATION

### AWARD OF DEGREE OF MD OR MS

#### \* INSTRUCTIONAL STRATEGIES

- Mandatory Workshops (within first 06 months)
- Synopsis of Research (within first 06 months)
- Rotational Placements (As per respective curriculum)
- Training of Generic and Specialty Specific Competencies
- Research (Thesis)
- Continuous Internal Assessment (CIS) (Every 03 months)
- Thesis submission for evaluation (06 months before completion of training)
- Final/ Exit Examination

## OBJECTIVES

Major objectives of MD/ MS Programs are to:

- Provide training in cognitive, psychomotor and affective domains
- Train in chosen clinical field through a competency-based training program
- Develop skills in conducting research and its application to clinical environment
- Enable trainees to use modern techniques and technologies effectively
- Develop leadership and self-directed learning qualities

## ADMISSION POLICY AND PROCEDURE

All the seats are filled according to Policy & Procedure Manual (PPM) of Post-graduate Residency Programs of Specialized Healthcare & Medical Education (SHC&ME) Department of the Government of Punjab. Admissions will be offered on open merit, twice a year, as per Central Induction Policy (CIP) through Punjab Residency Program (PRP) <https://prp.phf.gop.pk/>.

## REGISTRATION AT FJMU

- I. Selected candidates are informed through the online portal of PRP.
- ii. The candidate has to give 'Acceptance of Offer' at the PRP portal within 3 days.
- iii. Once he/ she accepts the admission into MD/ MS program at FJMU, the Postgraduate resident (PGR) will contact the Registrar Office for fulfilment of codal formalities. The **Enrollment Form** is available on the FJMU website ([www.fjmu.edu.pk](http://www.fjmu.edu.pk)). Rest of the essential documents to be filled, will be provided by the Registrar Office.
- iv. After codal formalities, the Registrar of the University will assign a **Registration Number** to each candidate.
- v. The candidate shall submit the **Joining Report Proforma** (Available on the FJMU website ([www.fjmu.edu.pk](http://www.fjmu.edu.pk))) duly signed by the Medical Superintendent of the concerned hospital.
- vi. The candidate will also submit an Affidavit (Available at ([www.fjmu.edu.pk](http://www.fjmu.edu.pk))) along with the joining report.

## DETAILS OF FEE TO BE SUBMITTED AT THE TIME OF REGISTRATION

The University will charge the fee (non-refundable) for the following components at the time of registration.

The exact quantum of fee may be decided and adjusted from time to time by the university authorities.

- a) Registration Fee
- b) Tuition fee
- c) Hostel fee (if university accommodation is availed)
- d) Utility Charges (if university accommodation is availed)

## FIRST PHASE OF TRAINING (INDUCTION PHASE)

I. Every candidate will spend first 06 months in the chosen specialty. During this period, he/ she will learn the Basics of the Specialty (Generic Competences). He/ she will complete the mandatory workshops within this period. The resident will also choose a topic for his/ her research in consultation with the Supervisor.

**II. Synopsis for Research:** The candidate will write a research synopsis during the induction phase and submit it to the Departmental Board of Studies (BoS) for approval. After approval of the BoS, the synopsis will be submitted to the concerned Board of Faculty (BoF). After approval by BoF, the synopsis will be submitted to Institutional Review Board (IRB) and Ethics Review Committee (ERC). The approved synopsis will be submitted to the Board of Advanced Studies and Research (BASR) for final approval. If the approved research needs funding, the synopsis will then be submitted to Research Grant and Monitoring Committee for allocation of funds and monitoring of expenses.

**III. Mandatory Workshops:** Each candidate would attend 04 mandatory workshops and any other workshop as required by the concerned specialty and university. These workshops are to be successfully completed within the first 6 months of induction phase. The four mandatory workshops include the following:

**1) Introduction to Computer, Information Technology and Software programs**

**2) Research Methodology and Biostatistics**

**3) Writing**

**4) Communication Skills**

The workshops are conducted regularly on 03 monthly basis. An appropriate fee for each workshop will be charged. Each workshop will be from 2-5 days duration. Certificates will be issued upon satisfactory completion of workshops.

### **SYNOPSIS PREPARATION & SUBMISSION**

i. The candidate will submit synopsis for approval within the first 06 months of induction according to the prescribed framework under the prevailing institutional regulatory requirements for submission of synopsis (Synopsis Submission Proforma is available on the FJMU website [www.fjmu.edu.pk](http://www.fjmu.edu.pk))

ii. In case of failure to submit the synopsis for approval within the first 06 months, after induction in the program, an additional grace period of 07 days may be granted by the Director Postgraduate Program Affairs.

iii. The candidate is expected to get the synopsis approved from the Board of Advanced Studies and Research (BASR) within 2 years from the date of admission into the training program. His/ her supervisor will facilitate the process. In case of failure in doing so, an additional grace period of 30 days may be granted by the competent authority. If the candidate still fails to get the synopsis approved, he/ she would stand ineligible to appear in the Intermediate Examination. Any difficulty being faced by the candidate in submission of synopsis, must be timely brought to the notice of the Registrar FJMU for appropriate remediation.

iv. The candidates of all programs will initiate research project immediately after approval of synopsis by BASR.

### **INTERMEDIATE EXAMINATION**

#### **I. Eligibility Criteria:**

To appear in the Intermediate Examination, a candidate is required to have submitted:

- a) Certificates of successful completion of mandatory workshops
- b) Certificate/s of completion of first two years of training from the supervisor/s during rotation
- c) CIS (Continuous Internal Assessment) Proforma from his/ her supervisor on 03 monthly basis and also from his/ her supervisor during rotation, achieving a cumulative score of 75%

- d) Certificate of approval of synopsis or undertaking/ affidavit that if the synopsis is not approved within 30 days of submission of application for the Intermediate Examination, the candidate will not be allowed to take the examinations
- e) Evidence of payment of examination fee

## **I. INTERMEDIATE EXAMINATION SCHEDULE AND FEE**

- a) Intermediate Examination is held twice a year.
- b) A minimum period of 30 days between submission of application and IMM examination is required.
- c) Examination fee will be determined periodically by the university.
- d) The examination fee once deposited, cannot be refunded/ carried over to the next examination under any circumstances.
- e) The Controller of Examinations will issue Roll Number Slips on receipt of prescribed application form, documents satisfying eligibility criteria and evidence of payment of examination fee.

## **ONLINE EXAMINATION ADMISSION FORM PORTAL:**

<https://dev-fjmu.punjab.gov.pk> (Note: Use latest **Chrome** for better performance)

## **WRITTEN PART OF INTERMEDIATE EXAMINATION**

Total Marks of the Written Examination will be 300 and to be divided as follows:

Multiple Choice Question Paper	Total Marks = 200
Short Essay/ Short Answer Question Paper (SEQ/ SAQ)	Total Marks = 100

## **CLINICAL & ORAL PART OF INTERMEDIATE EXAMINATION**

- a) It will be of 200 total marks consisting of the following components:
 

Four Short Cases	Total Marks = 100
One Long Case	Total Marks = 50
Oral Examination	Total Marks = 50
- b) The candidates scoring 50% marks in each component of the Clinical & Oral Examination will pass this part of the Intermediate Examination.

## **DECLARATION OF RESULT**

- a) In the Intermediate Examinations, the candidate has to pass the theory examination before appearing in the clinical, oral or practical examinations.
- b) The candidate will have to score minimum 50% marks in written and 50% marks in the clinical and oral examination with a cumulative score of 60% to be declared successful in the Intermediate Examination. Cumulative score of 60% marks to be calculated by adding up secured marks of each component of the examination and then calculating its percentage.
- c) The written part result will be valid for three consecutive attempts for appearing in the clinical & oral part.
- d) A maximum total of six consecutive attempts (availed or un-availed) will be allowed in the Intermediate Examination.

## **ROTATIONAL PLACEMENTS**

Every program has different rotational placements. Rotations with duration can be found in the curriculum of chosen specialty.

## SECOND PHASE OF TRAINING

Every PGR will spend this phase of training (according to their allocated MD/ MS Program) in the chosen specialty. During this period, he/ she will learn the Specialty Specific and Core Competencies and will complete his/ her research. The PGR must submit the thesis for evaluation 6 months before the completion of training.

## CONTINUOUS INTERNAL ASSESSMENTS (CIS)

- I. There will be Continuous Internal Assessments (CIS) of each candidate during the training period. These Continuous Internal Assessments will include Workplace Based Assessments, Assessment of Candidate's Training Portfolio and Supervisor's 03 monthly Review Report according to the annexed Continuous Internal Assessment Form.
- ii. The candidate would request the Supervisor for Continuous Internal Assessment (CIS) proforma report (Available on the FJMU website [www.fjmu.edu.pk](http://www.fjmu.edu.pk) to be communicated to the Registrar as early as possible.
- iii. In case of failure of submission of CIS proforma report, the Registrar would issue 02 reminders at 15 days interval and if the completed assessment proforma is not delivered, the matter will be placed before the statutory body.
- iv. Continuous Internal Assessments would be submitted by the supervisor considering the followings: is for evaluation 6 months before the completion of training.

## WORKPLACE BASED ASSESSMENTS

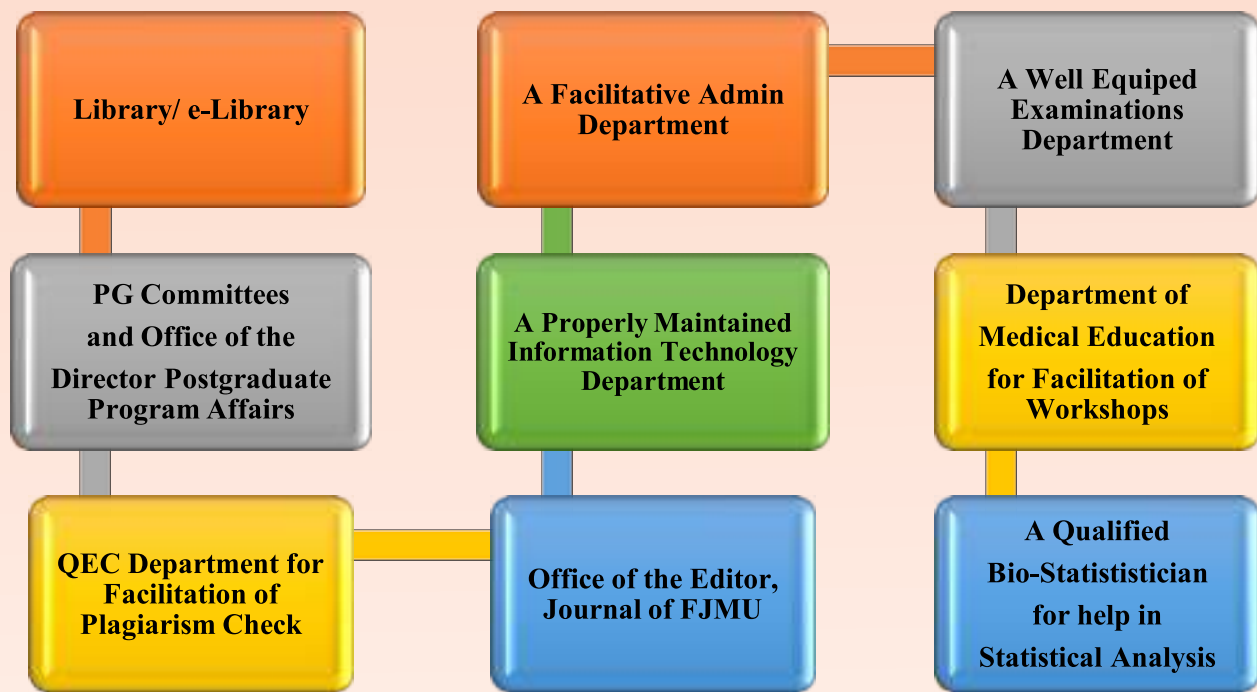
- a) Generic and Specialty Specific Competency Assessments
- b) Multisource Feedback Evaluation

## ASSESSMENT OF CANDIDATES' TRAINING PORTFOLIO

- a) Candidate's Training Portfolio includes Logbook, CIS, Multisource feedback and evidence of participation in co-curricular activities (conferences, seminars, clinical meetings, etc.)
- b) The 3 monthly Continuous Internal Assessment Form will be submitted by the supervisor in sealed envelope/ online to the Registrar's Office for record and appropriate action. While taking rotational training, CIS proforma will be submitted by the respective supervisor after completion of rotation.
- c) Data will be submitted to the Office of the Registrar, on three-monthly-basis. Yearly performance report will be compiled by computing the average of submitted reports.
- d) A cumulative score of 75% is required to pass the yearly Continuous Internal Assessments.
- e) Supervisors will certify that candidates have fulfilled their credit hours to secure these marks.
- f) Record will be maintained in the Registrar's office. Candidate and Supervisor will be communicated about the cumulative annual CIS at yearly interval. Copy of annual CIS reports will be submitted to Examinations Department for computation at the end of training.
- g) The cumulative score of all training years will be added together to provide a final cumulative score of Continuous Internal Assessments by the examination department.
- h) Based on formula of 10% weightage for Continuous Internal Assessment, 100 marks in the final examination would be added from cumulative Continuous Internal Assessments.
- i) Thesis evaluation will carry 400 marks.

## INSTITUTIONAL FACILITIES AND LEARNING OPPORTUNITIES

- During the training of MD/ MS residents, they are provided following learning resources and opportunities:



## INSTRUCTIONAL TOOLS AND STRATEGIES

The postgraduate trainees of MD/ MS undergo training in the affiliated/ constituent hospitals of Fatima Jinnah Medical University or hospitals of other medical universities approved for structured training in allied specialties for fulfilment of requirement of the relevant program.

<b>Lectures and presentations</b>	
<b>Out Patient Department</b>	
<b>Case presentations during ward rounds</b>	
<b>Journal clubs</b>	
<b>Clinicopathological conference</b>	
<b>Multidisciplinary Team Meetings</b>	
<b>Assignments</b>	
<b>Morbidity and Mortality Meetings</b>	
<b>Seminars, conference, workshops, symposia</b>	
<b>Teaching and training of undergraduates and junior trainees</b>	
<b>Continous Internal Assessments</b>	
<b>Rotational Placements</b>	
<b>Synopsis Writing</b>	
<b>Thesis Writing</b>	
<b>Training for TOACS/ OSCE/ OSPE/ Clinical Slides/ Histopathology Slides</b>	
<b>Surgical Skills (Both Minor &amp; Major Procedures)</b>	



## **BOARDS & COMMITTEES**

Various boards and committees related to PGRs include Departmental Boards of Studies, Boards of Faculties, Institutional Review Board, Ethics Review Committee, Board of Advanced Studies & Research, PGR Grievance Committee, PGR Counselling Committee, Research Grant Committee, Plagiarism Standing Committee and Disciplinary Committee.

## **LIBRARY**

FJMU Main Library has a collection of 12000 Reference books for PGRs and Faculty Members. PGs can access these books through their HODs as per library rules. During the year 20-21, almost 95 more reference books have been added to the collection.

Around thirty-five National and International hard copy peer-reviewed medical journals, covering basic sciences, major disciplines of medicine and surgery are on the regular list for study and research. The library has a rich archival collection of medical journals.

Besides that, more than 16000 full-text international journals encompassing all the major disciplines related to health sciences and medical education are accessible at e-library as provided under HEC digital library program through Pakistan Education and Research Network (PERN). At present, e- library has twenty terminals situated at different places inside the university campus.

A ready reference facility for postgraduate study and research as “walk-in service” is available in the library + during all working days.

## **HOW TO USE HEC DIGITAL LIBRARY**

### **DIGITAL LIBRARY**

Digital Library is a collection of electronic resources that provides direct/ indirect access to a systematically organized collection of digital objects.

### **HEC DIGITAL LIBRARY**

- HEC National Digital Library (DL) is a program to provide access to international scholarly e- literature.
- Providing access to high quality, peer-reviewed journals, databases, articles and e-Books across a wide variety of disciplines to researchers within public and private universities in Pakistan and non-profit research and development organizations.
- It provides 50,000 online full text e-books in addition to more than 23,000 e-journals

### **TYPES OF E-RESOURCES PROVIDED BY HEC DIGITAL LIBRARY**

1. Full Text  
In full text, the whole journal/ book can be downloaded.
2. Partial Full Text  
Selected articles can be downloaded.
3. Table of Contents/abstracts only  
Only content of books/ journal and abstracts can be read online.



## GETTING START WITH HEC DIGITAL LIBRARY

- Open your browser e.g. Internet Explorer, Mozilla Firefox, Google Chrome etc.
- Type: [www.digitallibrary.edu.pk](http://www.digitallibrary.edu.pk) in the address bar.
- Click on Institutes
- Click on Public Sector Universities
- Click on Khyber Punab
- Click on Fatima Jinnah Medical College/ SGRH OR
- Type the below URL in address bar
- <http://www.digitallibrary.edu.pk/gangaram.html>

## ACCESSIBLE E-RESOURCES TO FATIMA JINNAH MEDICAL UNIVERSITY, LAHORE

After typing the above URL, following e-resources will be displayed and these e-resources can be accessed within the premises of Fatima Jinnah Medical University i.e. in the Library, all the departments and offices of Faculty.

### 1. ASSOCIATION OF COMPUTING MACHINERY

- The ACM contains full-text from **28 ACM Journals** and Transactions, **10 ACM Magazines**, over **40 ACM Special Interest Newsletters**, **15 non-ACM journal** and publications and over **100 annual conference proceedings**.
- Content strengths include all areas of Information Technology, with full archival content for all ACM publications.
- Click on this link to access ACM: <http://dl.acm.org/>

### 2. E-LIBRARY

- eBrary offers a wide variety of content across many subject areas, especially in business and social sciences. It acquires integrated collections of eBooks and other content. ebrary continues to add quality eBooks and other authoritative titles to their selection from the world's leading academic and professional publishers.
- Users will be able to copy paste each page and print up to 40 pages at a time.
- **41,800 e-Books** will be accessible.
- Click on this link to access e-Brary: <http://site.ebrary.com/lib/hec2/home.action>

### 3. PROJECT MUSE

- Project MUSE provides online access to **430 full-text journals from 108 publishers** in humanities and social sciences. MUSE pricing meets library needs around the world.
- Click on the given link to access Project MUSE: <http://muse.jhu.edu/>

### 4. SPRINGER LINK

- SpringerLink provides access to **503 full-text Springer-Verlag Journals** and **738 full-text journals** formerly published by Kluwer Academic Publishing.
- One of the world's leading information services for Science, Technical and Medical journals.
- Click on the given link to access Springer Link: <http://link.springer.com/>

## 5. TAYLOR AND FRANCIS

- Taylor & Francis has grown rapidly over the last two decades to become a leading international academic publisher. More than **1000 journal titles** in a full range of disciplines are available.
- Click on the given link: <http://www.tandfonline.com/page/looking-for-something>

## 6. UNIVERSITY OF CHICAGO PRESS

- All those journals of Chicago Press, which are available in J-Store are accessible to Islamia College Peshawar:
- To access click on this link: [www.jstore.org](http://www.jstore.org)

## 7. WILEY-BLACKWELL JOURNALS

- Since the Blackwell-Synergy merger with Wiley-Interscience, all the journals available to HEC consortium are now available through Wiley-Interscience.
- Online database containing over **1,234 journals** in science, technology, medicine, humanities and social sciences.
- To access click on this link: [www3.interscience.wiley.com](http://www3.interscience.wiley.com)

## 8. IET DIGITAL LIBRARY

- IET digital library offers over **20 research journals** and letters in electrical and electronic engineering Electrical including Telecommunications; Power; Control; Radar; Circuits; Materials; Life sciences related research & IT. 10 of IET digital library journals are impact factor.
- To access this library, click on: <http://digital-library.theiet.org/>

## 9. INSTITUTE FOR OPERATIONS RESEARCH AND THE MANAGEMENT SCIENCES (INFORMS)

- The Institute for Operations Research and the Management Sciences (INFORMS) is the largest professional society in the world for professionals in the field of operations research (O.R.).
- INFORMS publishes **12 scholarly journals** that describe the latest O.R. methods and applications and a membership magazine with news from across the profession.
- To access click on the given link: <http://pubsonline.informs.org/>

## 10. EMERALD

- Emerald is a dynamic database comprising over **150 titles** in the fields of "Management, Information Science and Engineering".
- The Emerald full-text collection features over **58,000 articles** from titles published by Emerald.
- Flagship titles such as Management Decision, European Journal of Marketing, Journal of Documentation, Leadership & Organization Development Journal, The TQM Magazine and Industrial Robot.
- To access this resource, click on this link: <http://www.emeraldinsight.com/>

## 11. PAKISTAN RESEARCH REPOSITORY

- Pakistan Research Repository is a project of the Higher Education Commission to promote the international visibility of research originating out of institutes of higher education in Pakistan. The aim of this service is to maintain a digital archive of all PhD theses produced indigenously to promote the intellectual output of Pakistani institutions. It provides a free, single-entry access point to view the manuscript of research executed, and distribute this information as widely as possible.

- The repository which is currently being populated with content has already made the full-text of PhD theses available in high-quality digitized format, whilst further theses are in process of digitization. Higher Education Commission has introduced a systematic mechanism for the collection and digitization of all the theses produced so far in Pakistan.
- Provides access to more than **7000 full text theses** produced in Pakistan.  
Click on the given URL to access Pakistan Research Repository <http://eprints.hec.gov.pk>

### **DEPARTMENT OF MEDICAL EDUCATION (DME)**

DME facilitates the PGRs by holding regular workshops which are mandatory for their training during the program. Various other workshops, symposia, seminars, and conferences are held providing learning opportunities to the PGRs during their training. Moreover, DME organizes workshops and courses for Supervisors, Faculty, and Allied Healthcare Professionals.

### **QUALITY ENHANCEMENT CELL (QEC)**

Quality of training in the Postgraduate Programs is monitored by the QEC through regular PGR and Faculty Surveys according to HEC Guidelines. QEC facilitates learning activities by holding workshops and seminars for healthcare professionals, including PGRs, Faculty, and Allied Professionals. The Biostatistician at QEC facilitates PGRs and Faculty staff in selecting appropriate research design, methodology and statistical tests for their proposals. QEC maintains a close liaison of PGRs, University Officials, including Director Postgraduate Programs Affairs, Deans, Registrar, and Conveners of various Committees related to PGR Training, Monitoring and Research, and Higher Education Commission (HEC). Updated quality-related Policies, Guidelines, Surveys and helping material is available on QEC section of FJMU website. ([http://www.fjmu.edu.pk/Quality\\_enhancement\\_cell](http://www.fjmu.edu.pk/Quality_enhancement_cell)).

### **OFFICE OF RESEARCH, INNOVATION AND COMMERCIALIZATION (ORIC)**

ORIC facilitates the research-related policies, activities, marketing and opportunities. ORIC officials facilitate PGRs in organizing/ presenting their research for grants and marketing.

### **JOURNAL OF FATIMA JINNAH MEDICAL UNIVERSITY (JFJMU)**

JFJMU is the official journal of FJMU, published regularly on quarterly basis. In addition to providing a local platform for research publication, the journal staff provides guidance to PGRs in getting their research submitted to HEC-recognized impact factor journals. The Journal is available on JFJMU section of University Website. (<http://www.fjmu.edu.pk/Journal>).

### **DEPARTMENT OF EXAMINATIONS (FJMU)**

The Department of Examinations, FJMU is conducting the Professional Examinations as per national and international standards. Paper assessment and MCQs response forms are assessed digitally by OMR machine software. Currently we are taking biometric attendance of all students before commencement of all the papers of professional examinations. Furthermore, verification of documents and issuance of Detailed Marks Certificates (DMC's), Transcripts, Degrees & Certificates. Online Examination Admission Software is being used with the collaboration of Punjab Information Technology Board (PITB). All FJMU registered students can download their Examination Admission Form, Bank Challan and Roll No. Slip from Online portal through their login. (<http://dev-fjmu.punjab.gov.pk>)

## UNIVERSITY ACCOMMODATION

A purpose-built accommodation, for both male and female PGRs, is one of the top priorities of the University and substantial progress has been made in this respect. At present, only a limited accommodation facility is available for female PGRs. Preference is given to foreign nationals and trainees from far-flung areas. University does not offer any married accommodation.

## LEAVE POLICY

University strictly follows the Government Policy regarding leaves, including maternity leaves, during the training period. Details are available in PPM for PGRs.

(<https://health.punjab.gov.pk>).

## UNIVERSITY DISCIPLINE

All such offences that are committed/ observed/ reported in the institution, attached hospitals and hostel premises come under the FJMU Disciplinary Rules and Regulations. The matter is initially reported to the Director Postgraduate Programs Affairs who calls a meeting of the Postgraduate Affairs Committee. The Committee holds an enquiry following PPM Guidelines and related Statutes and Rules & Regulations of the University. The Committee then submits the findings and recommendations to the competent authority for appropriate action.

## PLAGIARISM POLICY

- I. The university strictly follows the plagiarism policy of Higher Education Commission of Pakistan (HEC) for synopsis/ thesis/ research publication. The Policy is available on the official website of FJMU ([http://www.fjmu.edu.pk/qec\\_plagiarism\\_policy](http://www.fjmu.edu.pk/qec_plagiarism_policy)).
- II. Plagiarism Standing Committee of the University deals with reported/ identified plagiarism on case-to-case basis.

## THESIS SUBMISSION AND EVALUATION

- I. The candidate will submit his/ her thesis at least 06 months before the completion of training.
- ii. The thesis along with a certificate of approval from the supervisor will be submitted to the office of the Director Postgraduate Program Affairs who would record the date/ time etc. and get it received from the Controller of Examinations within 05 working days of receiving.
- iii. The Controller of Examinations will ensure that Thesis is complete in every respect.
- iv. The Controller of Examinations will send the thesis to 4 examiners approved by the university statutory bodies for evaluation.
- v. The supervisor is not included as an examiner of the candidate and cannot take part in the evaluation of thesis.
- vi. The Controller of Examinations will make sure that the thesis is submitted to examiners in appropriate manner.
- vii. The thesis evaluation is expected to be completed by the examiners within a period of 06 weeks. Additional 2 weeks may be granted in case of unexpected delay in evaluation.
- viii. In case of difficulty in finding an examiner in selected cases, the Vice Chancellor may, in consultation with the concerned Dean, appoint a minimum of three examiners for evaluation of thesis.
- ix. The Total Marks of thesis evaluation will be 400 and 60% marks will be required to pass the evaluation. The resident is required to get at least 50% marks from each evaluator. The thesis will be considered accepted only if the cumulative score of all the examiners is 60%.

## COMPLETION OF TRAINING

The clinical training will end at completion of stipulated training period. However, the candidate will become eligible to appear in the Final Examination only after acceptance of thesis.

## CHANGE OF SUPERVISOR

In case of retirement/ transfer/ long leave/ death of the supervisor, the candidate must apply for change of supervisor within one month to the Director Postgraduate Program Affairs. The case will be evaluated in the FJMU Postgraduate Affairs Committee and alternate supervisor, preferably in the same unit, will be suggested. Change of supervisor is subjected to acceptance by the new supervisor.

## FINAL/ EXIT EXAMINATION

### Eligibility Criteria:

To appear in the Final Examination, the candidate is required to have submitted:

- a) The result card of passing Intermediate Examination
- b) The certificate of completion of training issued by the supervisor
- c) The certificate of achieving a cumulative score of 75% in Continuous Internal Assessments of all training years
- d) The Letter of Thesis Approval issued by the **Controller of Examinations**
- e) No dues certificate from all relevant departments including library, hostel, cashier etc.  
evidence of submission of examination fee

## FINAL EXAMINATION SCHEDULE AND FEE

- a) Final examination is held twice a year unless some natural/ national disaster prohibits from holding the examinations.
- b) The candidate has to satisfy eligibility criteria before permission is granted to take the examination.
- c) Examination fee may be reviewed at periodic intervals by the university.
- d) The examination fee once deposited cannot be refunded/ carried over to the next examination under any circumstances.
- e) The Controller of Examinations will issue an Admittance Card with a photograph of the candidate on receipt of prescribed application form, documents satisfying eligibility criteria and evidence of payment of examination fee. This card will show the Roll Number, date/ time and venue of examination.

## COMPONENTS OF EXIT/ FINAL EXAMINATION

Written Part of Final Examination	500 Marks
Clinical & Oral Part of Final Examination	500 Marks
Contribution of CIS to the Final Examination	100 Marks
Thesis Evaluation	400 Marks
<b>Total Marks</b>	<b>1500 Marks</b>

## DECLARATION OF RESULT AND SUCCESSFUL COMPLETION OF PROGRAM

For the declaration of result:

- The candidate will have to score minimum 50% marks in written and 50% marks in the clinical and oral examination with a cumulative score of 60%, to be declared successful in the Intermediate Examination. Cumulative score of 60% marks to be calculated by adding up secured marks of each component of the examination and then calculating its percentage.
- The written part result will be valid for three consecutive attempts for appearing in the clinical & oral part.
- The MD/ MS degree shall be awarded after success in the final examination.
- A maximum total of ten consecutive attempts/s chances (availed or un-availed) or a period of 5 years after completion of requirement, whichever is earliest, would be allowed in the Exit/ Final Examination.

### General Clauses

- Fee for application form, Prospectus (Manual for Postgraduate Trainees) and processing charges can be revised periodically by the university.
- In all the MD/ MS Examinations, the candidate has to pass the theory examination before appearing in the clinical, oral or practical examinations.
- All the rules regarding leave/s, freezing of training, change of specialty, migration/ transfer of the resident shall be followed as per CIP/ PRP policies.
- The residents are supposed to apply for any elective rotations at least 2 weeks before the commencement of the particular rotation. He/ she will not be allowed to join the new place of rotation until he/ she produces office orders from the concerned Medical Superintendent



## PREPARATION OF SYNOPSIS

### 1.TITLE

The title should be brief, informative, specific and reflect the main objectives of study conveying maximum information in minimum words. Superfluous phrases or expressions such as 'an investigation into' must be avoided. It should be informative, should state the subject not the conclusion and convey main issue of the study and preferably the type of study. It should be frequently reviewed and reassessed, and 'final title' is usually the last sentence to be written when the paper is finished.

### 2.INTRODUCTION

The aim of writing an introduction is to gain the attention of reader by giving sufficient information to outline the problem addressed in the study. The introduction must be short, easy to read and to the point. It is focused on building a rationale for study and consists of four fundamental parts; including a brief review of the main subject of the study, shortcomings of previous studies, aim of the study and the scope of the study. Review may vary in length from few sentences to a couple of paragraphs. It is supported by major and more recent references on the subject. Researcher then builds a rationale for the study by addressing the problems, knowledge gaps, limitations, and shortcomings of reviewed studies. The rationale must be strong and very clear, and the results should provide addition to or strength to the existing knowledge. Rationale is followed by aims and objectives.

### 3.AIMS & OBJECTIVES

**Aims** are statements of intent and are usually written in broad and introductory terms. Aims describe what researcher hopes to achieve at the end of the project. Sentences stating the aim of study are usually written as brief and to the point statement.

*Example: Aim of this study is “to investigate factors associated with partner violence”.*

**Objectives** are specific statements that define measurable outcomes written in strong positive statements. Objectives outline the specific steps that researcher will take to achieve the research aim. Objectives should be **SMART**. This means: **Specific** – be precise about what researcher is going to do, **Measurable** – researcher will know when goals have been achieved, **Achievable** – a less ambitious but completed objective is better than an over-ambitious one that one cannot achieve. **Realistic** – does researcher have the necessary resources to achieve the objectives, e.g. – funds, time, skills, facilities, resources, etc., and **Time bound** – determine when each stage needs to be completed including time to allow for unexpected delays. It is advised to resist temptation to put too many objectives or over-ambitious objectives. Objectives are stated in 'action verbs', e.g., to collect, to measure, to determine, to compare.... etc.

After statement of the primary objective, secondary objectives may be written. Primary objective is the main outcome that is being measured in the research and equates the main research question. Secondary objectives are other constructs being tested by the research that may clarify findings from the primary objective or show potential additional effects.

*Example:*

*Primary objective of this study is “to determine the degree of protection that is attributable to the new vaccine in a study population by comparing the vaccinated and unvaccinated groups”. Secondary objective of the study is “to study the cost-effectiveness of this programme”.*

## 4. RESEARCH QUESTION

The research question is a structured question asked by the researcher about a subject of interest based on a problem that the scientific community has not solved. The problem can be defined as a situation that has invalid, disputed or insufficient results for the generation of conclusions (knowledge gap). A research question is a question that a study or research project aims to answer. This question often addresses an issue or a problem, which, through analysis and interpretation of data, is answered by the research. Researcher needs to frame a single research question around which to focus the study plan. The question should be clearly stated and usually specifies the population to be studied, the intervention to be implemented and other circumstantial factors. A good research question describes the population of interest, is of interest to the scientific community and potentially to the public, has clinical relevance and furthers current knowledge in the field. It must be compliant with the standards of institutional and national research and ethical standards. Use of the **FINER criteria** in the development of a good research question may be helpful. **F** - Feasible (Adequate number of subjects, Adequate technical expertise, Affordable in time and money, Manageable in scope) **I** - Interesting (Getting the answer intrigues investigator, peers and community), **N** - Novel (Confirms, refutes or extends previous findings), **E** - Ethical (Amenable to a study that institutional review board will approve), and **R** - Relevant (To scientific knowledge, To clinical and health policy, To future research).

*Example: How does low-intensity pulsed ultrasound (LIPUS) compare with a placebo device in managing the symptoms of skeletally mature patients with patellar tendinopathy?*

## 5. HYPOTHESIS

The researcher formulates a hypothesis as an expectation concerning the relationship between the variables in the research project. Broadly, there are two types of hypotheses, null and alternate. The null hypothesis: where the researcher makes a statement of no difference from an expected outcome. In the alternate hypothesis: the researcher makes a statement that a true difference does exist between expected and obtained outcomes. However, it must be kept in mind that descriptive studies do not carry or involve any hypothesis. Hypothesis is developed from the research question before the start of the study. A well-designed research hypothesis guides: decisions on study design, population, data to be collected, data analysis, time frame.

**PICOT** format may be used while framing a hypothesis — consider the **P**opulation of interest, **I**ntervention being studied, **C**omparison group (or to what is the intervention being compared), **O**utcome of interest, and **T**iming — over what time frame will the study take place, what is the appropriate follow up time to assess outcomes?

*Example: In adults in a psychiatric clinic with moderate major depression (as per Hamilton test) (P), is oral fluoxetine 20–80 mg (I) more effective than two sessions a week of cognitive/ behavioral therapy (C) in improving health-related quality of life (O) 12 months after starting therapy (T)?*

Descriptive studies may not involve a hypothesis. It is usually needed in the following study designs:

- i. All interventional studies
- ii. Cohort
- iii. Case Control
- iv. Comparative Cross Sectional

## 4. OPERATIONAL DEFINITIONS:

These are the definitions of terms specifically telling how they will be measured e.g.:

**I. Morbidity:** It encompasses a number of aspects such as prolonged hospital stay, severe pain, immediate complications, and long-term sequelae. A researcher must define how a vague term will be measured.

**Efficacy:** The resident is required to specify how he/ she will measure the efficacy. It can be measured by:

- i. Time taken in relief of symptoms which may be pain, fever, cough, heartburn etc.
- ii. Taking into account the number of side effects
- iii. Time taken for complete recovery

#### 4. PATIENTS AND METHODS

The section of Patients and Methods consists of five fundamental parts, with a full description of the materials, of the methods, of the design of the study, of the statistical methods used and of ethical considerations (ethical approval, informed consent, conflict of interest, etc.). For studies involving animal/inanimate subjects, researcher may use Materials and Methods. For studies involving healthy participants, researcher may write Subjects and Methods.

This part of synopsis is written under following heads:

- i. **Study design:** Mention the name of the appropriate study design.
- ii. **Setting:** Name and place where the research work is to be conducted.
- iii. **Duration of study:** How long will the study take with dates?
- iv. **Sample size:** How many patients will be included? If there are groups, it should be clearly mentioned. Provide justification for selecting sample size.
- v. **Sampling technique:** Type of sampling technique employed.
- vi. **Sample selection:**
  - a. Inclusion Criteria: On what basis will patients be inducted in the study?
  - b. Exclusion Criteria: On what basis will patients be excluded from the study?
- vii. **Data collection procedure:** Brief description of how study data will be collected. This includes mention of data collection instrument (e.g., questionnaire/proforma), brief account of procedure adapted (e.g., history, examination, investigations, intervention (drugs/operation/procedure, etc.), parameters studied, confounding factors.
- viii. **Data analysis procedure:** statistical tests applied to measure the outcome parameters, dealing with confounding variables, and software used for data entry and analysis of data.

#### OUTCOME AND UTILIZATION

Describe in which way the expected results of your study can be useful in designing and delivery of healthcare system.

#### 9. ETHICAL CONSIDERATIONS

Ethical considerations apply to all types of health research. This part should include any informed consent required, ethical approval by a committee, the funding source, a conflict-of-interest statement, and a statement about compliance with the Declaration of Helsinki for animal studies (if applicable).

Two important documents (Informed consent form and Ethics checklist) must be appended to the proposal at the time of submission of synopsis to the Ethics Committee for approval. Moreover, issue of Conflict of Interest, wherein the researchers should furnish a statement regarding the same, must be included under this head.

**THE INFORMED CONSENT FORM** (informed decision-making): A consent form, where appropriate, must be developed and attached to the proposal. It should be written in English and Urdu or prospective participants' mother tongue and in simple language which can be easily understood by the study participant. The use of medical terminology should be avoided. Special care is required when participants are illiterate. Informed consent should explain why the study is being done and why the

study is being done and why the participant has been asked to participate. It should describe, in sequence, what will happen during the study, providing enough detail for the subject to gain a clear idea of what to expect. It should clarify whether or not the study procedures offer any benefits to the participant or to others, and explain the nature, likelihood and treatment of anticipated discomfort, side effect, complications or adverse effects, including psychological and social risks, if any. Where relevant, a comparison with risks posed by standard drugs or treatment must be included. If the risks are unknown or a comparative risk cannot be given it should be so stated. It should indicate that the subject has the right to withdraw from the study at any time without, in any way, affecting his/her further medical care. It should assure the participant of confidentiality of the findings.

**ETHICS CHECKLIST:** The proposal must describe the measures that will be undertaken to ensure that the proposed research is carried out in accordance with the World Medical Association Declaration of Helsinki on Ethical Principles for Medical research involving Human Subjects. The list must answer the following questions:

- I. Is the research design adequate to provide answers to the research question? It is unethical to expose subjects to research that will have no value.
- II. Is the method of selection of research subjects justified? The use of vulnerable subjects as research participants needs special justification. Vulnerable subjects include those in prison, minors and persons with mental disability. In international research it is important to mention that the population in which the study is conducted will benefit from any potential outcome of the research and the research is not being conducted solely for the benefit of some other population. Justification is needed for any inducement, financial or otherwise, for the participants to be enrolled in the study.
- III. Are the interventions justified, in terms of risk/ benefit ratio? Risks are not limited to physical harm. Psychological and social risks must also be considered.
- iv. For observations made, have measures been taken to ensure confidentiality?

## **10. REFERENCES**

References should be written in Vancouver style as recommended by the ICMJE (International Committee of Medical Journal Editors).

## **11. DATA COLLECTION INSTRUMENT**

The researcher must attach, as an annex, the proforma or questionnaire with the help of which he/ she intends to collect data. The proforma/ questionnaire must match the objectives and must not contain irrelevant sections like inclusion and exclusion criteria etc.

## **12. SCHEDULE/ PHASING**

In order to achieve the desired objectives of the study, divide your work plan into different phases in a tabular form.

## **13. FORMAT OF SYNOPSIS:**

In order to achieve the desired objectives of the study, divide your work plan into different phases in a tabular form.

1. Language: English
2. Text: should be in a single column and black in color
3. Page size: Page size should be A4
4. Margins: The left margin should measure 1.5 inches. The right, bottom and top margins should each measure 1 inch

5. Line spacing: Line spacing, of all text, including bibliographic references, should be 1.5. Figures, tables and their captions (if any) should be single-spaced. Line spacing should be 6 points (before and after) between the paragraphs
6. Font style: Times New Roman font style should be used
7. Font size: should be 12 points in main body text
8. For figures, tables, captions and charts, a font size of 10 points is to be used
9. Headings and sub-headings: Headings should appear at center of the page, all in capitals, bold 14-point font, sub-headings should be left aligned, all-in capitals, bold and 12-point font
10. Word count: Limit the word count to 1000 words, excluding references and annexures.
11. Page numbering: Page numbers should be placed at the center bottom of the page. Page numbers must be in the same font and font size as used for text. Except for the title page, page numbers must be placed on each page of the synopsis. All pages of the synopsis should be numbered consecutively in Arabic numerals in Page 1 of 11 format.
12. Abbreviations: Generally, the researcher should avoid using abbreviations. When used always write full words initially with abbreviation in parenthesis. Later may use the same abbreviation. Common abbreviations used in medical terminology like CBC, LFT, ECG, BUN, etc. may be used. However uncommon/unknown abbreviations must not be used. In case abbreviations are used it is preferable to provide a list of abbreviations used in the synopsis.
13. References: Not more than 15 References. Most (75%) of the References should be from last 5 years and must include some national/local study/studies related to research subject.

## *Sample Synopsis Template*

### **TITLE OF SYNOPSIS**

**(UPPER CASE, TIMES NEW ROMAN, FONT SIZE 14, BOLD)**

A SYNOPSIS SUBMITTED TO FATIMA JINNAH MEDICAL UNIVERSITY LAHORE

IN PARTIAL FULFILLMENT OF THE REQUIREMENT

FOR THE DEGREE OF

**(UPPER CASE, TIMES NEW ROMAN, FONT SIZE 12)**

**MASTER OF -----**

IN

**DISCIPLINE**

**(UPPER CASE, TIMES NEW ROMAN, FONT SIZE 14, BOLD)**

By

**Name of Student**

**(Title Case, Times New Roman, Font Size 12, Bold)**

**REGISTRATION NUMBER**

**(UPPER CASE, TIMES NEW ROMAN, FONT SIZE 12, BOLD)**

Supervisor

**Name of Supervisor**

**(Title Case, Times New Roman, Font Size 12 - Bold)**

Co-Supervisor

**Name of Co-Supervisor**

**(Title Case, Times New Roman, Font Size 12 - Bold)**



**FATIMA JINNAH MEDICAL UNIVERSITY LAHORE-PAKISTAN**

**(UPPER CASE, TIMES NEW ROMAN, FONT SIZE 14, BOLD)**

**(MONTH & YEAR)**

**(UPPER CASE, TIMES NEW ROMAN, FONT SIZE 12, BOLD)**



## Synopsis Approval Pathway

### Departmental Board of Studies (DBOS)

1<sup>st</sup> Monday of every month



### Board of Faculty (BOF)

2<sup>nd</sup> Monday of every month



### Institutional Review Board (IRB)/ Ethics Review Committee (ERC)

3<sup>rd</sup> Saturday of every month



### Board of Advanced Studies and Research (BASR)

Last Saturday of every month



### Research Grant Committee

(If required)

## SUPERVISOR'S INTERNAL ASSESSMENT/ EVALUATION PROFORMA FOR MD/ MS Programs

(The Candidate would prompt his/ her supervisor to submit his/ her completed assessment proforma every 3 months or on completion of rotation of any duration)

### The Registrar

Fatima Jinnah Medical University, Lahore

Name of PG Trainee: \_\_\_\_\_ Session: \_\_\_\_\_ Specialty: \_\_\_\_\_

University Reg. No.: \_\_\_\_\_ Date: From \_\_\_\_\_ To \_\_\_\_\_

1	<b>Generic Competencies:</b>		<b>Maximum Marks: 100</b> <b>Passing Percentage: 75%</b>	<b>Component Scores</b>	<b>Score Achieved</b>
	i	Patient Care		20	
	ii	Medical Knowledge and Research		20	
	iii	Practice and System-Based Learning			
		▪ Journal Clubs		4	
		▪ Audit Projects		4	
		▪ Medical Error Investigation and Root Cause Analysis		4	
		▪ Morbidity/ Mortality/ Review Meetings		4	
		▪ Awareness of Health Care Facilities		4	
	iv	Communication Skills			
		▪ Informed Consent		10	
		▪ End of Life Decisions		10	
	v	Professionalism			
		▪ Punctuality and Time Keeping		4	
		▪ Patient Doctor Relationship		4	
		▪ Relationship with Colleagues		4	
		▪ Awareness of Ethical Issues		4	
		▪ Honesty and Integrity		4	
2	<b>Specialty Specific Competencies:</b>		<b>Maximum Marks:100</b> <b>Passing percentage: 75%</b>		<b>Score Achieved</b>
	Operative Skills/ Procedural Skills				
3	<b>Multisource Feedback Evaluation:</b>		<b>Maximum Marks:100</b> <b>Passing percentage: 75%</b>		<b>Score Achieved</b>
4	<b>Candidates Training Portfolio</b>		<b>Maximum Marks:100</b> <b>Passing percentage: 75%</b>	<b>Component Score</b>	<b>Score Achieved</b>
	i	Logbook of Operations and Procedures		25	
	ii	Record of Participation and Presentation in Academic Activities		25	
	iii	Record of Publications		25	
	iv	Record of Results of Assessments and Examinations		25	

Marks Obtained in Percentage \_\_\_\_\_ Signature of Supervisor \_\_\_\_\_

Name & Stamp \_\_\_\_\_

## PREPARATION OF THESIS

### 1. Number of Copies:

Six copies (five for Examination Department and one for Office record) of the thesis shall be submitted by the candidate in accordance with the University Regulations.

### 2. Printing/ Format/ Page Numbering:

A laser quality printer should be used for final submission.

#### **Paper/ Layout**

**Paper size:** Final copy of the Thesis must be printed on International Standard A4 size paper (8.27" x 11.69")

**Paper type:** Paper should be white, easy to read and reproduce (at least 80 g).

**Page spacing:** Should be printed on one side of paper (not back-to-back).

**Line Spacing:** The text should be in one-and-a-half (1.5) line spacing in English.

**Margins:** At least 3.5cm on the binding edge, 1.5cm on the opposite edge and 2cm each at the top and bottom.

#### **Font size:**

- i. Chapter Title (Upper Case, Times New Roman, Font Size 14, Bold)
- ii. Headings (Title Case, Times New Roman, Font Size 14, Bold)
- iii. Sub-headings (Title Case, Times New Roman, Font Size 12, Bold)
- iv. Body text (Title Case, Times New Roman, Font Size 12, Normal)

(Font size of 10 may be used for references, appendices, charts, drawing, graphs, captions, footnotes, examples and tables).

**Page Numbering:** Page number is not required on the Title page. Preliminary pages of the thesis i.e., those preceding the 'Text' (Certificates, Acknowledgement, Declaration, List of Abbreviations, Table of Contents, List of Appendices, List of Figures, List of Tables and Abstract) are to be numbered in lower case Roman numerals i.e. (i), (ii), (iii) etc. Pages of the Text itself and of all items following the text i.e., Introduction, Materials and Methods, Results, Discussion, Conclusions, Appendices, Tables and References should be numbered consecutively throughout in numeric numbers i.e., 1, 2, 3 etc. beginning with number 1 on the first page of the first chapter or Introduction and shown in the middle at the bottom of each page. Page number should not be shown on the Title Page.

### 3. Layout of Script

The text should be printed in 1.5 spaces. Only footnotes, long quotations, table captions, figures, legends and similar special material may be single-spaced. Reference entries should also be single-spaced (1.5 space between entries).

### 4. Title Page:

The Title Page should have the same composition as given under synopsis guidelines with the exception of the word **Thesis** in place of **Synopsis**. The month and year shown on the title page should be those in which the thesis is submitted to the University.

### 5. Abstract:

An abstract should be included in each copy of the thesis. It must not exceed 500 words. The abstract should be a miniature version of the thesis. It should include brief introduction including rationale and objectives of the study, patients and methods, results, conclusion and keywords.

## **6.Assembling the Thesis:**

The thesis should be assembled in the following order:.

- a.Title page
- b.Certificate by the Supervisor
- c.Acknowledgment
- d.Dedication Page
- e.List of Abbreviations
- f.Table of Contents
- g.List of Appendices
- h.List of Figures
- i.List of Tables
- j.Structured Abstract
  - Introduction
  - Patients and methods
  - Results
  - Conclusions
  - Key words
- k.Text with following Chapters

## **PART I**

REVIEW OF LITERATURE: May include relevant headings like:

- Anatomy
- Pathophysiology
- Etiopathogenesis
- Clinical Features
- Diagnosis
- Review of available Treatment Modalities with emphasis on what the candidate has chosen for research

## **PART II**

PRESENT STUDY:

- Aims and objectives
- Patients and methods in detail
- Results
- Discussion
- Conclusion/s
- Limitations
- Recommendations

1. Tables and Figures (Tables and Figures should be incorporated on separate pages)

- m. References
- n. Annexures

**7.Length of Thesis:** Must not exceed 200 pages.

### **8.Thesis Binding:**

The colors prescribed for MD/ MS thesis binding are specified as given against each Degree

<b>Degree</b>	<b>Thesis Color</b>	
<b>MD</b>	<b>Dark Blue</b>	
<b>MS</b>	<b>Dark Red</b>	

The spine of the bound thesis should show “MD/ MS Thesis” on top across the width of the spine, name of the candidate in the middle along the length of the spine and the year of submission across the width at the bottom.

**SAMPLE OF THESIS APPROVAL CERTIFICATE**  
**FROM SUPERVISOR**

**CERTIFICATE**

It is hereby certified that this thesis is based on the results of experiments carried out by (Name of candidate) and it has not been previously presented for (MD, MS) Degree.

Dr. (Name of candidate) has done this research work under my supervision. He/ She has fulfilled all the requirements and is qualified to submit the accompanying thesis for the degree of (Name of degree)

Name of Supervisor: \_\_\_\_\_

Designation: \_\_\_\_\_

Signature with Date: \_\_\_\_\_

Institute: \_\_\_\_\_



## **SAMPLE OF DECLARATION SHEET**

### **DECLARATION OF AUTHENTICATION**

I certify that the research work presented in this thesis, to the best of my knowledge, is my own. All sources used and any help received in the preparation of this thesis have been acknowledged. I hereby declare that I have not submitted this material, either in whole or in part, for any other degree at this or any other institution.

**Signature of PG Trainee** \_\_\_\_\_

## SAMPLE OF DEDICATION PAGE

### DEDICATION

This thesis is dedicated to my parents, \_\_\_\_\_

and \_\_\_\_\_, great role models and friends, and my brothers,

\_\_\_\_\_

and \_\_\_\_\_ and the rest of the family, for always

believing in me, inspiring me, and encouraging me to reach higher in order to achieve my goals.

Signature of PG Trainee \_\_\_\_\_

## SAMPLE OF CONTENTS PAGE

<b>Part-I</b>		
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## SAMPLE OF TABLES

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## SAMPLE OF ABBREVIATION PAGE

### List of Abbreviations

*(Alphabetical Order)*

<b>AG</b>	<b>alfalfa hay grain diet</b>
<b>BH</b>	<b>bromegrass hay diet</b>
<b>CAMP</b>	<b>cyclic adenosine monophosphate</b>
<b>CCK</b>	<b>cholecystokinin</b>
<b>Cl-</b>	<b>chloride</b>
<b>CO<sub>2</sub></b>	<b>carbon dioxide</b>
<b>CoA</b>	<b>coenzyme A</b>
<b>DNA</b>	<b>deoxyribonucleic acid</b>
<b>EGF</b>	<b>epidermal growth factor</b>
<b>GIT</b>	<b>gastrointestinal tract</b>
<b>GUD</b>	<b>gastric ulcer disease</b>

## The Purpose of Abstract Page

This page is written to present a brief summary of the study (maximum one page) in a way that allows the readers to get a clear idea of the contents and to decide whether to read the entire thesis or not. Nothing else is written on the Abstract Page. It should be structured abstract that is written after completion of the thesis in English

## Example of an Abstract Page

### Abstract:

#### BACKGROUND

The emergence of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)-----  
-----  
-----

#### METHODS

In this phase 2a–b trial in -----  
-----  
-----

#### RESULTS

Of 6324 participants who underwent screening, 4387 received at least one injection of vaccine or placebo. Approximately 30% of the participants were seropositive for SARS-CoV-2 at baseline.  
-----  
-----

#### CONCLUSIONS

The NVX-CoV2373 vaccine was efficacious in preventing Covid-19, with higher vaccine efficacy  
-----  
-----  
-----

#### KEY WORDS:

-----  
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## FORMAT OF TABLES/ FIGURES/ PHOTOMICROGRAPHS/ PHOTOGRAPHS/ DRAWINGS

(Note: Tables and Figures should be printed on separate pages.)

### I) Tables

Tables should capture information concisely and display it efficiently; they should provide information at any desired level of detail and precision. Including data in tables rather than text frequently makes it possible to reduce the length of the text.

**Table 1:** Summary statistics of age (years) between study groups

		Study Groups	
		Case	Control
Age (years)	N	40	40
	Mean	28.33	27.73
	SD	4.81	4.44

### ii) FIGURES

Figures should be numbered consecutively according to the order in which they have been cited in the text. For radiological and other clinical and diagnostic images, as well as pictures of pathology specimens or photomicrographs, use high-resolution photographic image files.

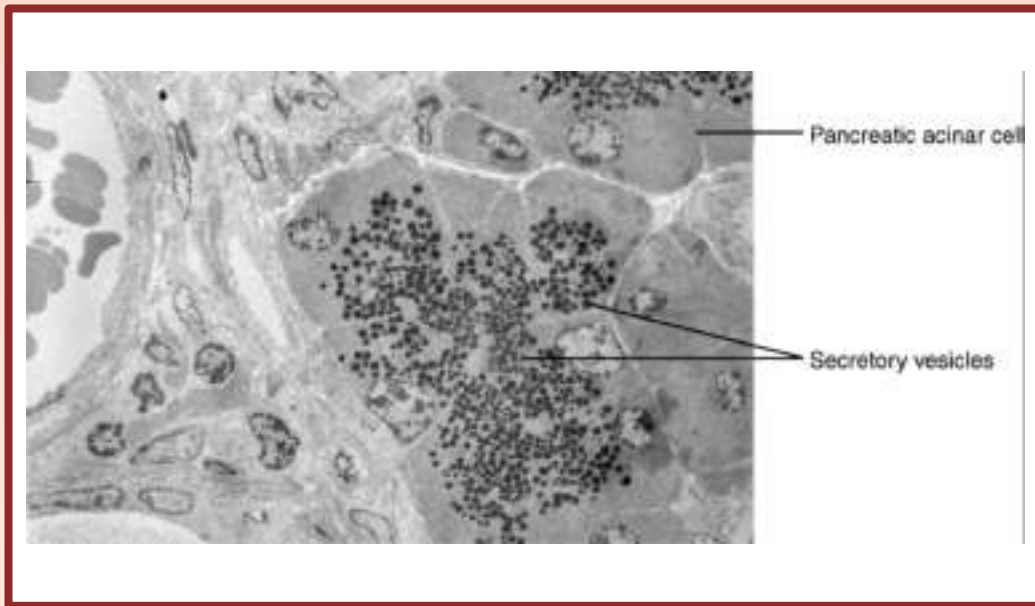


**Figure 1: A toe island fillet flap. (A)** A fillet flap, which was converted to an island, was used to resurface the area where the first metatarsal had been partially resected previously. Here it will be remobilized to replace an area of dysfunctional scar. **(B)** After resection of the scar. **(C)** The flap was mobilized and inset.



### iii)PHOTOMICROGRAPH:

Photomicrographs should have internal scale markers. Symbols, arrows, or letters used in photomicrographs should contrast with the background. Explain the internal scale and identify the method of staining in photomicrographs



Caption: The pancreatic acinar cells produce and secrete many enzymes that digest food. The tiny black granules in this electron micrograph are secretory vesicles filled with enzymes that will be exported from the cells via exocytosis. LM  $\times 2900$ .

(Micrograph provided by the Regents of University © 2012)

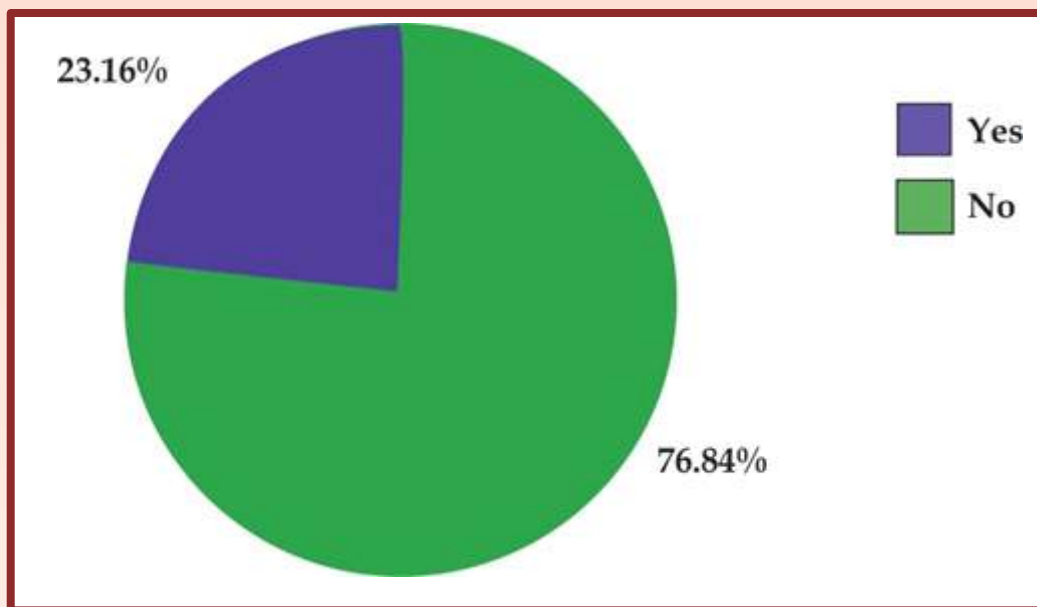
URL:<https://cnx.org/contents/FPtK1zmf@8.108:q2X995E3@12/The-Cell-Membrane>

Version 8.25 from the Textbook OpenStax Anatomy and Physiology Published May 18, 2016

#### iv)HOW TO PRESENT STATISTICS IN GRAPHIC FORM IN THESIS

1. Must be appropriately numbered.
2. Must be referred to in text (e.g., Figure 1 depicts efficacy of oyster reefs as natural breakwaters, scores on several counts)
3. The informative title should clearly describe what to expect in the graph.
4. The axes must be labelled clearly.
5. Key must be provided to identify what each element in the graph stands for.
6. The figure legend at the bottom should demonstrate the graph's key points.
7. A note at the bottom must be provided acknowledging the source, if the graph is taken from some other study/book.
8. The graph should be 2-dimensional, with no clutter.

#### Example of a pie-chart:



**Figure 1:**Relative frequencies of acne scar in 18-year-old adolescents (n = 2.414)

### Example of a bar graph:

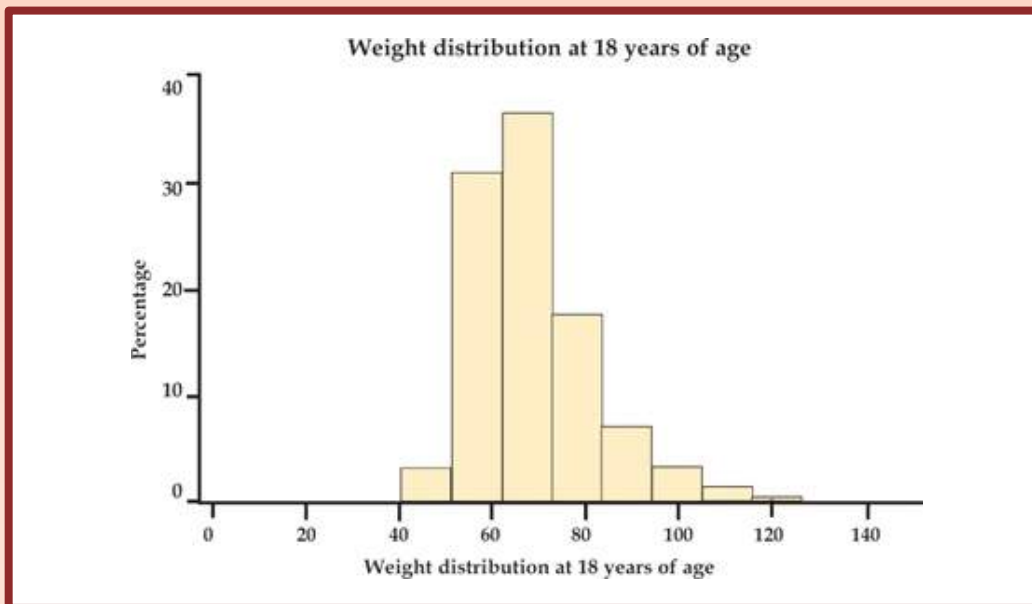


Figure 1: weigh distribution at 18 years of age among youngsters from the city of Pelotas. Pelotas (n=2.194)

### Example of a graph from a source:

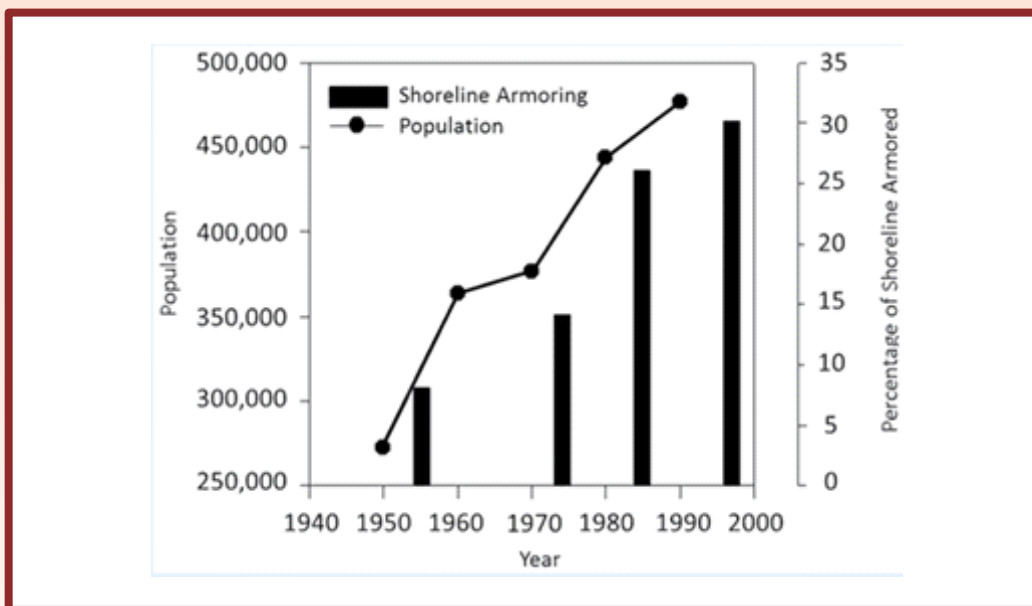


Figure 1. Population Growth and shoreline armoring in Mobile Bay, Alabama

Adapted with permission from Douglass and Pickel 2016, this figure depicts the rate and extent of shoreline armoring in Mobile Bay. The vertical bars in the main graph show the proportion of armoring while the line depicts the increasing population levels for Mobile and Baldwin Counties.

## REFERENCES GUIDELINES

### Vancouver style of reference is recommended for thesis.

References are **numbered in the text**, either in line with the text within brackets (1) or using superscript<sup>1</sup>, in the order in which they appear. A reference which is cited more than once is given the same number. The references are then listed at the end of a statement in numerical order.

#### 1. Standard journal article

Halpern SD, Ubel PA, Caplan AL. Solid-organ transplantation in HIV-infected patients. *N Engl J Med*. 2002 Jul 25;347(4):284-7.

If there are more than six authors, list the first six authors, followed by et al. (Note: NLM now lists all authors.):

Rose ME, Huerbin MB, Melick J, Marion DW, Palmer AM, Schiding JK, et al. Regulation of interstitial excitatory amino acid concentrations after cortical contusion injury. *Brain Res*. 2002;935(1-2):40-6.

**Optional:** Addition of a database's unique identifiers, such as the PubMed PMID, for the citation:

Forooghian F, Yeh S, Faia LJ, Nussenblatt RB. Uveitic foveal atrophy: clinical features and associations. *Arch Ophthalmol*. 2009 Feb;127(2):179-86. PubMed PMID: 19204236; PubMed Central PMCID: PMC2653214.

**Optional:** Addition of a clinical trial registration number:

Trachtenberg F, Maserejian NN, Soncini JA, Hayes C, Tavares M. Does fluoride in compomers prevent future caries in children? *J Dent Res*. 2009 Mar;88(3):276-9. PubMed PMID: 19329464. ClinicalTrials.gov registration number: NCT00065988.

#### 2. Organization as author

Diabetes Prevention Program Research Group. Hypertension, insulin, and proinsulin in participants with impaired glucose tolerance. *Hypertension*. 2002;40(5):679-86.

#### 3. Both personal authors and organization as author (List all as they appear in the byline.)

Vallancien G, Emberton M, Harving N, van Moorselaar RJ; Alf-One Study Group. Sexual dysfunction in 1,274 European men suffering from lower urinary tract symptoms. *J Urol*. 2003;169(6):2257-61.

#### 4. No author given

21st century heart solution may have a sting in the tail. *BMJ*. 2002;325(7357):184.

#### 5. Article not in English

Ellingsen AE, Wilhelmsen I. Sykdomsangst blant medisins- og jusstudenter. *Tidsskr Nor Lægeforen*. 2002;122(8):785-7. Norwegian.

**Optional:** Translation of article title (MEDLINE/PubMed practice):

Ellingsen AE, Wilhelmsen I. [Disease anxiety among medical students and law students]. *Tidsskr Nor Lægeforen*. 2002 Mar 20;122(8):785-7. Norwegian.

## **6. Volume with supplement**

Geraud G, Spierings EL, Keywood C. Tolerability and safety of frovatriptan with short- and long-term use for treatment of migraine and in comparison, with sumatriptan. *Headache*. 2002;42 Suppl 2:S93-9.

## **7. Issue with supplement**

Glauser TA. Integrating clinical trial data into clinical practice. *Neurology*. 2002;58(12 Suppl 7):S6-12.

## **8. Volume with part**

Abend SM, Kulish N. The psychoanalytic method from an epistemological viewpoint. *Int J Psychoanal*. 2002;83(Pt 2):491-5.

## **9. Issue with part**

Ahrar K, Madoff DC, Gupta S, Wallace MJ, Price RE, Wright KC. Development of a large animal model for lung tumors. *J Vasc Interv Radiol*. 2002;13(9 Pt 1):923-8.

## **10. Issue with no volume**

Banit DM, Kaufer H, Hartford JM. Intraoperative frozen section analysis in revision total joint arthroplasty. *Clin Orthop*. 2002;(401):230-8.

## **11. No volume or issue**

Outreach: bringing HIV-positive individuals into care. *HRSA Careaction*. 2002 Jun:1-6.

## **12. Pagination in roman numerals**

Chadwick R, Schuklenk U. The politics of ethical consensus finding. *Bioethics*. 2002;16(2):iii-v.

## **13. Type of article indicated as needed**

Tor M, Turker H. International approaches to the prescription of long-term oxygen therapy [letter]. *Eur Respir J*. 2002;20(1):242

Lofwall MR, Strain EC, Brooner RK, Kindbom KA, Bigelow GE. Characteristics of older methadone . maintenance (MM) patients [abstract]. *Drug Alcohol Depend*. 2002;66 Suppl 1:S105..

## **14. Article containing retraction**

Feifel D, Moutier CY, Perry W. Safety and tolerability of a rapidly escalating dose-loading regimen for risperidone. *J Clin Psychiatry*. 2002;63(2):169. Retraction of: Feifel D, Moutier CY, Perry W. *J Clin Psychiatry*. 2000;61(12):909-11.

Article containing a partial retraction:

Starkman JS, Wolder CE, Gomelsky A, Scarpero HM, Dmochowski RR. Voiding dysfunction after removal of eroded slings. *J Urol*. 2006 Dec;176(6 Pt 1):2749. Partial retraction of: Starkman JS, Wolter C, Gomelsky A, Scarpero HM, Dmochowski RR. *J Urol*. 2006 Sep;176(3):1040-4.

## **15. Article retracted**

Feifel D, Moutier CY, Perry W. Safety and tolerability of a rapidly escalating dose-loading regimen for risperidone. *J Clin Psychiatry*. 2000;61(12):909-11. Retraction in: Feifel D, Moutier CY, Perry W. *J Clin Psychiatry*. 2002;63(2):169.

Article partially retracted:

Starkman JS, Wolter C, Gomelsky A, Scarpero HM, Dmochowski RR. Voiding dysfunction following removal of eroded synthetic mid urethral slings. *J Urol*. 2006 Sep;176(3):1040-4. Partial retraction in: Starkman JS, Wolder CE, Gomelsky A, Scarpero HM, Dmochowski RR. *J Urol*. 2006 Dec;176(6 Pt 1):2749.

### **16. Article republished with corrections**

Mansharamani M, Chilton BS. The reproductive importance of P-type ATPases. *Mol Cell Endocrinol.* 2002;188(1-2):22-5. Corrected and republished from: *Mol Cell Endocrinol.* 2001;183(1-2):123-6.

### **17. Article with published erratum**

Malinowski JM, Bolesta S. Rosiglitazone in the treatment of type 2 diabetes mellitus: a critical review. *Clin Ther.* 2000;22(10):1151-68; discussion 1149-50. Erratum in: *Clin Ther.* 2001;23(2):309.

### **18. Article published electronically ahead of the print version**

Yu WM, Hawley TS, Hawley RG, Qu CK. Immortalization of yolk sac-derived precursor cells. *Blood.* 2002 Nov 15;100(10):3828-31. Epub 2002 Jul 5.

## **BOOKS AND OTHER MONOGRAPHS**

### **1. Personal author(s) (Page No.....? )**

Murray PR, Rosenthal KS, Kobayashi GS, Pfaller MA. *Medical microbiology.* 4th ed. St. Louis: Mosby; 2002.

### **2. Editor(s), compiler(s) as author (Page No.....? )**

Gilstrap LC 3rd, Cunningham FG, VanDorsten JP, editors. *Operative obstetrics.* 2nd ed. New York: McGraw-Hill; 2002.

### **3. Author(s) and editor(s) (Page No.....? )**

Breedlove GK, Schorfheide AM. *Adolescent pregnancy.* 2nd ed. Wiecezorek RR, editor. White Plains (NY): March of Dimes Education Services; 2001.

### **4. Organization(s) as author**

American Occupational Therapy Association, Ad Hoc Committee on Occupational Therapy Manpower. *Occupational therapy manpower: a plan for progress.* Rockville (MD): The Association; 1985 Apr. 84 p.

National Lawyer's Guild AIDS Network (US); National Gay Rights Advocates (US). *AIDS practice manual: a legal and educational guide.* 2nd ed. San Francisco: The Network; 1988.

### **5. Chapter in a book**

Meltzer PS, Kallioniemi A, Trent JM. Chromosome alterations in human solid tumors. In: Vogelstein B, Kinzler KW, editors. *The genetic basis of human cancer.* New York: McGraw-Hill; 2002. p. 93-113.

### **6. Newspaper article**

Meltzer PS, Kallioniemi A, Trent JM. Chromosome alterations in human solid tumors. In: Vogelstein B, Kinzler KW, editors. *The genetic basis of human cancer.* New York: McGraw-Hill; 2002. p. 93-113.

## **ELECTRONIC MATERIAL**

### **1. CD-ROM**

Anderson SC, Poulsen KB. *Anderson's electronic atlas of hematology [CD-ROM].* Philadelphia: Lippincott Williams & Wilkins; 2002.



## 2. Journal article on the Internet

Abood S. Quality improvement initiative in nursing homes: the ANA acts in an advisory role. Am J Nurs [Internet]. 2002 Jun [cited 2002 Aug 12];102(6):[about 1 p.]. Available from: [https://journals.lww.com/ajnonline/Fulltext/2002/06000/Quality\\_Improvement\\_Initiative\\_in\\_Nursing\\_Homes.31.aspx](https://journals.lww.com/ajnonline/Fulltext/2002/06000/Quality_Improvement_Initiative_in_Nursing_Homes.31.aspx) Subscription required.

**Optional** presentation (omits bracketed phrase that qualifies the journal title abbreviation):

Abood S. Quality improvement initiative in nursing homes: the ANA acts in an advisory role. Am J Nurs. 2002 Jun [cited 2002 Aug 12];102(6):[about 1 p.]. Available from: [https://journals.lww.com/ajnonline/Fulltext/2002/06000/Quality\\_Improvement\\_Initiative\\_in\\_Nursing\\_Homes.31.aspx](https://journals.lww.com/ajnonline/Fulltext/2002/06000/Quality_Improvement_Initiative_in_Nursing_Homes.31.aspx)

Article published on the Internet ahead of the print version:

See # 18

**Optional** formats used by NLM in MEDLINE/PubMed:

Article with document number in place of traditional pagination:

Williams JS, Brown SM, Conlin PR. Videos in clinical medicine. Blood-pressure measurement. N Engl J Med. 2009 Jan 29;360(5):e6. PubMed PMID: 19179309.

Article with a Digital Object Identifier (DOI):

Zhang M, Holman CD, Price SD, Sanfilippo FM, Preen DB, Bulsara MK. Comorbidity and repeat admission to hospital for adverse drug reactions in older adults: retrospective cohort study. BMJ. 2009 Jan 7;338:a2752. doi: 10.1136/bmj.a2752. PubMed PMID: 19129307; PubMed Central PMCID: PMC2615549.

Article with unique publisher item identifier (pii) in place of traditional pagination or DOI:

Tegnell A, Dillner J, Andrae B. Introduction of human papillomavirus (HPV) vaccination in Sweden. Euro Surveill. 2009 Feb 12;14(6). pii: 19119. PubMed PMID: 19215721.

## 3. MONOGRAPH ON THE INTERNET

Foley KM, Gelband H, editors. Improving palliative care for cancer [Internet]. Washington: National Academy Press; 2001 [cited 2002 Jul 9]. Available from: <https://www.nap.edu/catalog/10149/improving-palliative-care-for-cancer>.

## 4. HOMEPAGE/ WEBSITE

eatright.org [Internet]. Chicago: Academy of Nutrition and Dietetics; c2016 [cited 2016 Dec 27]. Available from: <https://www.eatright.org/>.

## 5. PART OF A HOMEPAGE/ WEBSITE

American Medical Association [Internet]. Chicago: The Association; c1995-2016 [cited 2016 Dec 27]. Office of International Medicine; [about 2 screens]. Available from: <https://www.ama-assn.org/about/office-international-medicine>

## 6. DATABASE ON THE INTERNET

**Open database:**

Who's Certified [Internet]. Evanston (IL): The American Board of Medical Specialists. c2000 - [cited 2001 Mar 8]. Available from: <https://www.abms.org/verify-certification/>

## **CLOSED DATABASE:**

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## **9.DATASETS**

Dataset description article

Kraemer MU, Sinka ME, Duda KA, Mylne A, Shearer FM, Brady OJ, Messina JP, Barker CM, Moore CG, Carvalho RG, Coelho GE, Van Bortel W, Hendrickx G, Schaffner F, Wint GR, Elyazar IR, Teng HJ, Hay SI. The global compendium of *Aedes aegypti* and *Ae. albopictus* occurrence. Sci Data. 2015 Jul 7 [cited 2015 Oct 23];2:150035. Available from:

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Dataset deposit record: Citing Medicine format

Kraemer MUG, Sinka ME, Duda KA, Mylne A, Shearer FM, Brady OJ, Messina JP, Barker CM, Moore CG, Carvalho RG, Coelho GE, Van Bortel W, Hendrickx G, Schaffner F, Wint GRW, Elyazar IRF, Teng H, Hay SI. The global compendium of *Aedes aegypti* and *Ae. albopictus* occurrence [dataset]. 2015 Jun 30 [cited 2015 Oct 23]. In: Dryad Digital Repository [Internet]. Durham (NC): Dryad. 2008 Jan - . 3 files: 3.406 MB; 1.549 MB; 1.815 MB. Available from:

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Dataset deposit record: Simplified format

Kraemer MUG, Sinka ME, Duda KA, Mylne A, Shearer FM, Brady OJ, Messina JP, Barker CM, Moore CG, Carvalho RG, Coelho GE, Van Bortel W, Hendrickx G, Schaffner F, Wint GRW, Elyazar IRF, Teng H, Hay SI. The global compendium of *Aedes aegypti* and *Ae. albopictus* occurrence [dataset]. 2015 Jun 30 [cited 2015 Oct 23]. Dryad Digital Repository. Available from: <https://datadryad.org/resource/doi:10.5061/dryad.47v3c> Referenced in doi: 10.7554/eLife.08347

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Dataset repository: Simplified format

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Dataset: Simplified format

RxNorm [dataset]. April 4, 2016 Full Monthly Release. 2016 Apr 4 [cited 2016 Apr 18]. Available from: <https://www.nlm.nih.gov/research/umls/rxnorm/docs/rxnormfiles.html>

## 1.SOFTWARE ON THE INTERNET

A full citation for software on the Internet can follow the general guidelines in Item #43 for datasets or in [Citing Medicine, Chapter 24 for databases and retrieval systems. Software in other media such as CD-ROM is detailed in Citing Medicine, Chapter 21.](#)

Software: Simplified format

Publisher is optional and place of publication is not needed. Strive to include an Available from: note with a URL or a doi: xxxxxxx note. Other helpful notes can be added at the end such as a System Requirements note.

Hayes B, Tesar B, Zuro K. OTSoft: Optimality Theory Software. Version 2.3.2 [software]. 2013 Jan 14 [cited 2015 Feb 14]. Available from: <https://linguistics.ucla.edu/people/hayes/otsoft/>.  
Golda TG, Hough PD, Gay G. APPSPACK (Asynchronous Parallel Pattern Search). Version 5.0.1 [software]. Sandia National Laboratories. 2007 Feb 16 [cited 2016 Apr 4; downloaded 2010 Jan 5]. Available from: <https://dakota.sandia.gov/packages/hopspack>

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13.	Library	042-36306430	410
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