



POST-GRADUATE RESIDENCY PROGRAM TRAINING MANUAL

D. Y. PATIL MEDICAL COLLEGE, KOLHAPUR

**D. Y. PATIL EDUCATION SOCIETY,
(Deemed to be University)
KOLHAPUR**

PREFACE

Postgraduate medical education deals with work-place and competency-based training of the medical graduate in selected specialties under supervision. During the three years of the program, the graduate is trained not only in professional skills and knowledge but also in the associated areas of communication, medical ethics, medicolegal issues and research.

The Medical Council of India prescribes a curriculum which is available on the website accessible at <https://mciindia.org/ActivitiWebClient/rulesregulations/pg> **Medical Education Regulations 2000**. The delivery of this curriculum is the responsibility of individual institutions and differs in emphasis, style and variety depending on the local conditions, patient population and available facilities.

Post Graduate Residency Program Training Manual is the outcome of a felt need to characterize the PG training program in this institution for the benefit of the candidate. This manual is the first step in outlining the various aspects of the program. It addresses the themes of outcomes, educational resources, self-directed learning, assessment of trainees, addressing all domains of learning at higher levels, administration and governance, facilities and specific themes of the individual

departments. It also specifies expectations from the PG student during study.

A clear outline of the program details as they are executed in this institution provides reassurance, clarity and confidence to students. This will also serve as a guide for the departments as they plan and improve on their program delivery.

A reliable way to improve things is to measure them. This first step is of great significance as we proceed to providing to society well-trained professionals and well-rounded persons capable of providing health care relevant to local circumstances and needs.

The faculty of the post-graduate departments of the D. Y. Patil Medical College have done a yeoman task in conceiving, elaborating and creating the Post Graduate Residency Program Training Manual.

Dr. Shimpa Sharma

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ACKNOWLEDGEMENT

This Manual has been possible only with the support, encouragement and efforts of many.

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This work would not have been complete without the support and guidance of the Dean of D. Y. Patil Medical College, Dr. R. K. Sharma.

I extend sincere thanks to Registrar Dr. V. V. Bhosale, Finance Advisor Mr. S. P. Kole and Finance Officer Mr. Sridhar Raj Anantha Narayanaswamy.

I take this opportunity to proffer thanks to the Heads of Departments of Anaesthesia, Dermatology, General Medicine, General Surgery, Obstetrics & Gynecology, Ophthalmology, Orthopedics, Otorhinolaryngology, Psychiatry and Radiology. Their efforts and diligence are reflected in the departmental manuals which will serve both students and faculty.

I would be remiss if I did not thank all faculty members who have contributed in preparing the

manual, designing the curriculum/syllabus or executing the delivery as per the design. I also thank our post-graduate students, both past and present, who have helped us over the years to tweak the program to suit the demands of the curriculum and needs of students.

I wish to acknowledge the efforts of my office staff who have exerted assiduous efforts in ensuring the accuracy of the document. The administrative staff at the University and the Medical College have been both accommodating and responsive for which I thank them.

Dr. Shimpa Sharma

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C O N T E N T S

Sr. No.	Departments	Page No.
1	Anaesthesiology	
2	Dermatology, Venerology & Leprosy	
3	General Medicine	
4	General Surgery	
5	Obstetrics & Gynaecology	
6	Ophthalmology	
7	Orthopaedics	
8	Oto-Rhino-Laryngology	
9	Psychiatry	
10	Radio-Diagnosis	

BACKGROUND

Improvements and innovations are built on the rock-bed of the present and the never-ending desire to improve on the prototype. Education, in its rapidly evolving avatar, has been home to improvements and innovations at global and national levels. Newer regulations and guidelines present cutting-edge demands on institutions, faculty and students alike. However, vast expanses of education take place within and beyond the ambit of regulations, even in structured medical programs. There is a continuous awareness at institutional level, of the need to refine and distill existing systems to improve the efficiency and reliability of the deliverables.

“Appearance blinds, whereas words reveal”. These words of Oscar Wilde underline the felt need for a clear and scrupulous rendition of the current processes in the institution with regards to the Post Graduate Residency Program. Consolidation of various processes and activities of the departments in one compendium was considered desirable and beneficial on many fronts.

GOALS

The Post Graduate Residency Program Training Manual aims to contribute to the provision of “quality education and skill development in health sciences for development of professional human resources” as delineated in the Mission of the D Y Patil Education Society [Institution deemed to be University].

OBJECTIVES :

The objectives of this manual are

1. To clearly outline various aspects of the program to aid precise and organized execution of its goals
2. To provide to faculty a realistic and documented representation of the program to enable identification of its strengths and weaknesses
3. To serve as a baseline for the program from which innovations, improvements and changes can be instituted
4. To provide to the post graduate student a synopsis of the program the student is going to undertake.
5. To create a template for evaluation of the program delivery through student feedback, multi-source feedback and other forms of programmatic evaluation

The various sections of the manual have been prepared by the respective Departments based on practices currently followed. The exercise of documentation of the intent, elaboration, execution and monitoring of the various activities serves to provide an insight to department functioning. Reflection is often the launch pad of problem-solving and change.

"Change will not come if we wait
for some other person or some other time.
We are the ones we've been waiting for.
We are the change that we seek"

Barack Obama



Department of
Anaesthesiology

The Department of Anaesthesiology comprises of experienced and dedicated team of faculties working in a team for patient care, education and research. Recognition for intake of four candidates /year for post graduate course i.e. MD in Anaesthesia has been granted since 2007. Till date 46 post graduates successfully completed the course.

Goal : To improve an anaesthesiologist to excel in skill and knowledge to become an ideal perioperative physician and intensivist.

Mission : To provide learning environment that facilitates the exchange of information on the practice of anaesthesia individual members and non-members through continuing education program as a whole.

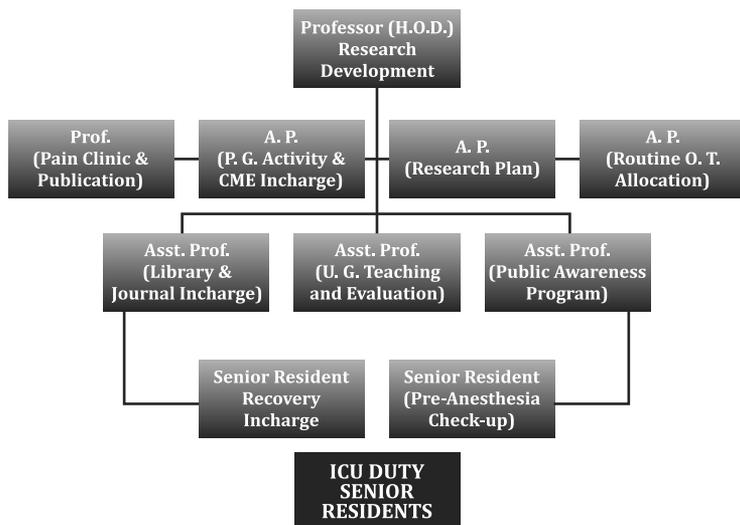
Objectives :

- To train the postgraduate student in Quality care that is professionally planned, implemented, evaluated and administered in an efficient, cost effective manner and provide safe anaesthesia for all.
- To train knowledgeable and skilled personnel care to meet the patients' individual needs during their stay in operating theatre. A safe and therapeutic environment will be provided for patients and personnel. Proper equipment and Supplies for all operative procedures.
- To train and facilitate participation of postgraduate students in continuing in-service education for personnel doing various jobs in operating department.
- To train medical staff in skills of disaster and trauma management.
- To promote imparting of good communication between members of the multidisciplinary teams

Departmental Functioning & Governance

Department of Anaesthesiology

Governance



Various sub committees under the leadership of the departmental head do the job of academic and administrative matters. Faculties shoulder various responsibilities like teaching- learning (T-L) evaluation, planning for yearly programs & CMEs. Quarterly meetings are conducted for all these departmental activities & the residents are also part of these committees. Senior faculties are assigned the work of research/ publication and guide the juniors in the process of selection of topics for dissertation and its submission.

Work Progress :

We have adequate clinical work of anaesthetic procedures that has increased from around 13000 in 2012 to 18000 by

2016. We are moving ahead with the objectives of providing quality care by multidisciplinary approach in giving safe balanced anaesthesia and keeping goals to impart knowledge to the students and encourage them for research work.

Student Support Systems :

- Student Guardianship Program, Counselling Center, Psychologist, De-addiction Center.
- Post Assessment Counselling
- Ensure that policies of anti-ragging, anti-sexual harassment are followed.
- Refresher courses facilitated for PGs

Curriculum :

- The syllabus has been structured as per MCI guidelines for postgraduate students for MD Anaesthesia. Keeping pace with the medical & technological advancement and suggestions from curriculum committee, Peer members, as well as to remain in tune with global trends, the syllabus has been redesigned in 2017 with addition of new topics on Pain management consisting of headaches, neuralgias, acute / chronic pain conditions, labour analgesia & cancer pain and interventional pain procedures. Use of USG in anaesthesia etc.
- First year resident undergoes structured orientation programme which is introduced at the beginning of their tenure in anaesthesia. They are exposed to hands on training of different techniques of airway management, regional anaesthesia on the mannequins, before they practice on the patients. This module is targeted to ensure equity and to bring them on a common platform.

- All the scheduled academic activities Pre & post-anaesthesia rounds/Case presentation/seminars/Journal reading/guest lectures/CME/workshops are compulsory to attend except in special situations like emergency or health problem when it can be excused. Atleast 80% attendance is compulsory for all the residents.
- All residents are expected to become Associate Members of national association – Indian Society of Anaesthesiologists (ISA).

Evaluation :

- Evaluation is a continuous process and reaffirmed at the end of each term by the faculties. The senior residents evaluate the juniors. At the end of term faculties meet and discuss the strengths and weaknesses with the residents following filling of the evaluation and feedback forms. The patients care, anaesthesia techniques, communication skills, opinion of paramedics, nursing staff, patients & relatives is taken into consideration.
- **Learning Objectives :** Are standard distributed over six term period including thesis work. They are expected to complete during three years period.
 - Perioperative care of all types of surgical patients.
 - Intensive Care rotation
 - Medical Knowledge of the subject
 - Practice based learning of the anaesthesia skills.
 - Interpersonal and communication skills
 - Evidence based and research oriented practices

- Professionalism
- Rotations with fixed duration are not required but nine general competencies (disease management, patient assessment and preoperative preparation, intraoperative care, postoperative patient care and pain management, resuscitation and emergency management, practical anesthetic procedures/skills, quality management and health economics, anesthesia non-technical skills, professionalism and ethics, and education, self-directed learning, research) and the eight specialty types of surgical patients.

Exam Pattern : At the end of three years tenure of residency there will be university examination for postgraduate degree in anaesthesia (MD Anaesthesia)

Theory papers : 4 (100/paper)	: 400 Marks
Practical	: 300 Marks
Long case (1)	: 120 Marks
2 short cases –60 marks each	: 120 Marks
Orals : (25 each /table)	: 100 Marks
Oral Viva	: 60 Marks

Core Strengths of the Anaesthesia Programme :

Education Excellence

- Experienced and dedicated team of Faculty Staff who are trained in medical educational technology, many of whom are fellows in cardiac, critical care and Pain management.

- Detailed curriculum, comprehensive training and rigorous formative evaluations, poised to prepare our Residents for All India entrance examinations and international certification in anaesthesia, critical care and pain.
- Outstanding examination preparatory teaching programme, emphasising on consistent learning and mentoring.
- Excellent simulation training facilities with keen Faculty with repute in simulation training.
- Expertise in the Medical Education that promotes professionalism, excellence in medical education & research.
 - Well-equipped OTs , Anesthesia Equipment & L-T methods.
 - Adequate clinical work with innovative practices, and good exposure to students.
 - Research on various newer airway gadgets like V-laryngoscopes & Bronchoflex, Intubating LMAs.
 - Advanced Pain Interventions possible due to availability of Fluroscopy/CT/USG as well as Radiofrequency & Ozone.

Research Excellence

- Strong research heritage in our University Department, with opportunities in Basic, Clinical and Translational Research.
- Mentor Supervisors who actively promote and facilitate research activities, with a focus on research development journey rather than outcomes.

- Opportunities for start-up programmes and collaboration with other departments and faculty members.
 - We look forward to have research on use of Air in anaesthesia practice.
 - USG for regional anaesthesia & intraoperative , echocardiography.
 - Scope to get trained in cardiac A, Transplant A & Bariatric A as we are going to have superspeciality surgical procedures in near future.
 - Further increase in basic life support & awareness programs.
 - Attending International conferences & Workshops.
 - Ongoing publications in International/national Indexed Journals and projects.

Clinical Excellence

- Emphasis on patient safety and risk management. Use of sound judgement in deciding the plan of anaesthesia and perioperative care.
- Use of advanced technology for minimizing anaesthesia risks and complications and better surgical outcome. Postgraduates have more contact with patients during their first two years of training.
- One integrated training site with all essential anaesthetic subspecialty exposure including obstetrics, paediatrics, cardiac, neuro-anaesthesia, critical care-ICU and interventional Pain procedures.

- Rich and diverse caseload, unsurpassed source of elective and emergency training materials.
- Emphasis on evidence-based practice of anaesthesia and constant upgrading of anaesthetic practice through audits and research.
- Collaborate effectively with other departments, discuss the difficulties in planning patients care and educate the patients and relatives for safe conduct of plan and recovery.
- Students are exposed to community oriented programmes such as public awareness through camps, street programs and world anaesthesia day celebration on 16th Oct where they give information about advances in anaesthesia, basic life support and chronic pain management.

Anaesthesia Residency Educational Goals :

Department of Anaesthesia aims to prepare the resident a highly competent in conduct of Anaesthesia by the end of training and get certified with the degree of MD in Anaesthesia ,where on completion they can proceed for further fellowship or superspecialty courses or go in private practice or carrier in academic Institutions. This goal is attained by progressive graded curriculum of study and the clinical experience in patients care and responsibilities through successive stages.

Specific items of interest included: duration of post-medical school training, minimum case number or rotation requirements, use of competency-based curriculum, faculty supervision, duty hour limits and national in-training written exams.

First year Residency :

Program focuses on the comprehensive and holistic learning of patient care management in the form of pre-anaesthesia check-up - art of history taking, physical examination and coming to provisional diagnosis.

BASIC ANAESTHESIA TRAINING PROGRAM

- Orientation: On admission during first term the postgraduate students undergo following basic anaesthesia training program with skill lab manikins and simulators conducted by our faculties.
- Informed consent taking.
- Development of communication skills, respect for the religious and cultural needs of the patient. Respect patients privacy and legal aspect of confidentiality. Do not discuss the issues related to patient care in public.
- Presenting cases to senior resident and faculty.
- Proper writing on pre-anaesthesia chart and medical records.
- Attending post anaesthesia assessment rounds and record keeping for vitals, pain and postoperative findings.

Day	Topic
1.	Introduction
2.	Preanaesthesia Checkup
3.	Consent Taking
4.	Monitoring in Anaesthesia
5.	General Anaesthesia
6.	Anaesthesia Work Station
7.	Airway Equipment's
8.	Regional Anaesthesia Techniques
9.	Upper Limb Blocks
10.	Lower Limb Blocks
11.	Spinal Epidural Techniques (Skill Lab)
12.	Pediatric Caudal Epidural Anaesthesia (Skill Lab)
13.	Intubation/Lma Insertion Training on Mannequin (Skill Lab)
14.	Bsl/Acts (Skill Lab)
15.	Training on Mannequin (Skill Lab)

- Get familiar with Web based resources such as Pubmed, Webmed etc for getting knowledge in the subject and preparation of seminars.
- Residents will read the textbook and prepare the seminars with PPT presentation under the guidance of senior residents.
- Discuss the topics of dissertation with seniors and select it under the guidance of the faculty. Timely submission of the research topic for ethical clearance. Conduct pilot cases for the proposed dissertation.
- Attend the term ending examination and postassessment counselling by the faculties.
- Any kind of harassment by the senior residents or colleagues from other departments.
- Development of basic skills like -
 - Getting familiar with the OT rules
 - Starting an IV line, IM Premedication, RT Insertion etc.
 - Applying various Monitors on patients inside OT
 - Preparation of Anaesthesia Machine in OT
 - Preparation of Emergency tray for Airway Management and Cardiac Drugs.
 - Coming prepared with theoretical knowledge of the relevant anatomy and anaesthesia method for the surgical cases in OT.
 - Helping the seniors in general anaesthesia and regional anaesthesia techniques.
 - Attend & participate in departmental academic activities /conferences & programs

Second Year Residency :

- Residents are expected to provide appropriate and up-to-date patient care preoperatively. Show compassionate, ethical approach to patient care and respectful attitude towards faculties of all the concerned departments.
- Become familiar with pre-anaesthesia or referral consultations with other speciality like medicine, pediatric, cardiology, radiology etc. Record consults in timely manner. Be present when discussion of the surgical and anaesthetic management is going on.
- Familiar with the monitoring equipment and their applications.
- ICU orientation and observation of the post operative patients shifted in ICU.
- Present the case to chief resident and faculty so as to decide the plan of anaesthesia and postoperative care.
- Become familiar with routine minor and major operative procedures in OT.
- Develop leadership skills and teach the juniors and Interns that helps to become role model for juniors and Interns. Need to communicate professionally at a more advanced level with other consulting services and with patient's families. Conflicts may arise reflecting residents, faculties and department that should be tackled courteously with discussion.
- On table patients assessment, recheck of records ,X-RAYS, Blood Investigations and arrangements for blood and blood products for the case.
- Explaining risk consent to the patients & relatives.

- Understand the methods of invasive monitoring. Preparation for advanced monitoring like Intraarterial, central venous, BIS Defibrillator backup etc.
- Learning about monitoring and mechanical ventilation in ICU, weaning, maintenance and vital support of the patient. Completing rotational residency in ICU and teach and supervise the juniors.
- Understand the mechanics, indications and interpretations of hemodynamics such as CVP, Wedge pressure, cardiac output, SVR etc.
- Understand basic respiratory physiology, lung compliance, ARDS, oxygen therapy, goals in patients on ventilator, blood gas interpretations.
- Cardiac arrhythmias- Ischemia, pulmonary embolism and its management.
- Attending decompensating patients' in ICU/ wards or casualties for basic life support and transfer of the patient to ICU. Coordinate the patients care with trauma and surgical team. Understand that critical care patients require multidisciplinary approach. If situation is urgent call for help by activating rapid response team, senior physician or faculty from others department. Demonstrate sensitivity and responsiveness of cultural Issues and participate in Informed consent.
- Coordinate and supervise first year residents.
- Appreciate the strength and weaknesses of the juniors, counsel them privately. Do not insult in front of other juniors or colleagues.
- Become more familiar with advanced surgical technologies like endoscopies/laparoscopy, extensive

and emergency surgeries and anaesthesia.

- Inform morbidities, post anaesthesia complications, mortality and attend the meetings to discuss with faculties.
- Maintain all anaesthesia records and log book.
- Participate in bedside clinics and UG clinics.
- Continue gaining medical knowledge by participation in academic programs of the department such as seminars/case presentations.
- Prepare more In-depth for the research work and conduct cases related to the dissertation topic besides others. Review of research work permitted by the Ethical committee. Under guidance of the teacher review of ongoing dissertation cases and maintaining record of the observations.
- Use of library for textbooks/E resources for studies and attend term ending examination.
- Participate in residents as teacher workshops.
- Participate in research work and publication with the faculties.

Third Year Residency :

- Become leader in all aspects of patient care and establish continuity of patient care. Be aware about your position as head of responsibilities so behave professionally with everyone around.
- Professional secrecy regulations and privacy policies are to be understood and comply with departmental policies.

- Supervise all aspects of patient care during perioperative period.
- Prepare team for pre and post-anaesthesia rounds by the faculty.
- Coordinate the care for ICU and surgical patients. Diagnosis and management of respiratory failure, paralysed patients for ventilator support, management of ICU sedation, Pain ,ICP monitoring and treatment of raised ICP and seizures.
- Understand importance of glucose control and management of diabetic coma patients. Understand that critical care patients require multidisciplinary approach.
- Supervise the juniors for the anaesthesia procedures and guide them during conduct of skillful procedures and anaesthesia techniques.
- Submission of the notes and reviews for record of advanced or challenging anaesthesia techniques.
- Entering the cases in Log Books.
- Monitoring Anaesthesia related medical news, information about notices pertaining to the department.
- Present morbidities and mortalities on monthly meets.
- Coordinate the clinical activities in the department for case presentations/seminars/group discussions and for multidisciplinary conferences.
- Clinical assignments to juniors.
- Assist faculty in daily clinical and educational activities.
- Participate in 'Resident as Teachers 'workshop conducted by department.

- Preparation for the formal discussions and presentations using library, IT & other resources.
- Establish themselves as leader and diplomats of the department and the residency program and become role model for others.
- Participate in research work and publication with the faculties.
- Final review of Log book and dissertation with the PG guide and Submission of dissertation for assessment.
- Attending preliminary & final examination.

Acknowledgements

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- Medical Council of India
- American Board of Internal Medicine
- Academy of Medical Royal College
- Australian Medical Council
- Cureus 2017. Comparing Anaesthesiology Residency Training Structure and Requirements in Seven Different Countries on Three Continents



Department of
**Dermatology,
Venerology &
Leprosy**

Dermatology including Venereology [STD] and Leprology is an important basic clinical specialty. Considerable advances have taken place in the understanding of dermatological disorders and their treatment. Leprosy is still a public health problem of considerable magnitude in the country. The STDs are showing worldwide increase in incidence with new dimensions added to it.

There is a dearth of trained personnel in the specialty. Very few medical colleges impart sufficient knowledge about these diseases at undergraduate level and postgraduate courses are not available in all medical colleges.

D.Y Patil Medical College, Kolhapur is known for its excellence in all specialties particularly in achieving high academic standards. The curriculum of MD Dermatology has been designed matching the other clinical specialties at the institute. An attempt has been made to give a comprehensive training to the postgraduates including basic subjects and recent advances.

DEPARTMENT GOALS :

Research :

- 1) Provide increased opportunities for medical students to participate in research.
- 2) Arrange ample funding for cutting-edge research.
- 3) Ensure adequate space for research for future expansions.
- 4) Increase funding from sources other than Government and Autonomous bodies.

Education :

- 1) Reform the medical curriculum to incorporate the challenges posed by a rapidly changing medical world.
- 2) Allow for more patient care in the first two years of specialty graduation
- 3) Better incorporate new technologies and medical science into the curriculum.
- 4) Increase multidisciplinary learning.
- 5) Foster professionalism and communication skills among all levels of learners: medical students to clinicians.
- 6) Expand the use of new technologies as teaching tools.
- 7) Online learning tools.
- 8) Focus on faculty development.
- 9) Attain resources to recruit and retain the very best faculty.
- 10) Improve diversity among the faculty.
- 11) Ensure faculty are motivated to meet teaching requirements.

Patient care :

- 1) Emphasize patient safety and risk management
- 2) Expand the use of technology to improve efficiency and effectiveness
- 3) Support patient access initiatives
- 4) Allow postgraduate students more patient contact in their first two years

- 5) Provide longitudinal patient contact for students, spanning across the three-year curriculum.

Service to the community :

- 1) Enhance community outreach programs
- 2) Better integrate and organize community service initiatives into the curriculum.

LEARNING OUTCOMES :

At the end of this training a candidate should be able to :

- 1) Diagnose and manage independently common skin diseases, sexually transmitted diseases and leprosy.
- 2) Manage independently and efficiently all medical emergencies related with skin, leprosy and venereal diseases.
- 3) Adopt preventive measures at individual and community levels against communicable skin ,venereal diseases and leprosy.
- 4) Teach requisite knowledge and laboratory skills to other medical /paramedical team members.
- 5) Adopt a compassionate attitude towards the patients (and their families) under his/her charge.
- 6) Critically evaluate and initiate investigation for solving problems relating to skin, venereal disease and leprosy.
- 7) Demonstrate comparative knowledge of various modes of topical therapy.

- 8) Demonstrate the mode of action of commonly used drugs, their doses, side-effects/ toxicity, indications and contraindications and interactions.

SKILLS TO BE LEARNT :

- 1) History taking for dermatology, venereology and leprosy.
- 2) Describe cutaneous findings in dermatological terms in a systematic way.
- 3) Evaluate and manage the common diseases in dermatology and have a broad idea on how to approach uncommon diseases.
- 4) Evaluate and manage STD cases.
- 5) Evaluate and manage HIV positive cases.
- 6) Systemic examination relevant for dermatologic condition.
- 7) Perform simple, routine investigative and laboratory procedures required for making the bed side diagnosis.
- 8) Maintain basic skills like pulse, blood pressure and auscultation learnt in MBBS.
- 9) Care of dermatologic emergencies like TEN, Pemphigus, necrotic ENL, angioedema, drug reactions etc.
- 10) Management of pediatric cases with skin diseases.
- 11) To achieve adequate skills for tests done in side laboratory in day-to-day practice and be familiar with other sophisticated investigations.

EVALUATION :

The evaluation is a continued process and is reaffirmed at the end of each term. Residents are evaluated by the faculty. The senior residents participate in the evaluation of the junior residents. At the end of the rotation and /or the term, the faculty meeting assesses the strengths and weaknesses of the residents. Evaluation forms are completed and the residents are encouraged to meet with the faculty at the conclusion of the rotation. Feedback is distributed during the rotation such that resident can address deficiencies.

GOALS AND OBJECTIVES :

This is the proposed framework of the competency-based goals and objectives for the DERMATOLOGY, VENEREOLOGY & LEPROLOGY services. Many aspects of these competencies are general and apply equally to all the related services.

Learning Objectives : The learning objectives are standard and are basically six core competencies. The resident is expected to complete these objectives independently as well as conjointly during his tenure in a term wise framework. The six core elements are :

- 1) Patient Care
- 2) Medical Knowledge
- 3) Practice-based learning and improvement
- 4) Interpersonal and Communication Skills
- 5) Professionalism
- 6) Systems-based practice

COMPETENCY - I : PATIENT CARE

GOALS AND OBJECTIVES 1/10**PGY1 - Term 1**

- Develop and perfect the art of history taking, physical examination
- Understand the initial approach and develop a differential diagnosis for the new patient.
- Develop a treatment plan.
- Present the patient to the senior resident and the attending Faculty
- Write daily notes on the assigned patients.
- Entries into medical record should be legible, and the signature should be followed with a stamp or name.
- All notes should explain the need for continued hospitalization.
- The notes will be read by the faculty member and countersigned. The residents will be given feedback by the faculty on the progress notes.

GOALS AND OBJECTIVES 2/10

- Understand the chain of command.
- Inform senior resident and Faculty of new admissions, or changes in status of patients already on the service.
- When in doubt, call senior colleagues, Senior Resident or Faculty.

- In an emergency, call for help from any available internees, resident, nurse, medical social worker and inform the responsible Faculty.

GOALS AND OBJECTIVES 3/10

PGY1 - Term 2

- Improve in the clinical and didactic skills developed as a PGY1- Term 1
- Consultations : Become familiar with evaluation process of patient referred for consultation from the casualty (ED) or from other services.
- Develop a differential diagnosis, treatment plan for consulted patients
- Present the patient to the senior or the chief resident, and the Faculty. Immediately upon seeing the patient, place a consult on the chart, and inform the primary service that the patient has been seen. It is acceptable not to have a finalized plan of care in the initial note, as long as the patient is assessed promptly by the senior/chief resident, and the surgical Faculty, and the plan of care is not only defined and finalized but also communicated to the primary service.
- Become credentialed in minor and moderate procedures.
- Become familiar with the new technologies,
- Develop leadership skills to become role model to your interns
- Teach the medical students.

PGY2 - Term 1

- Continue to improve skills developed as a junior resident.
- Assume a more visible supervisory and leadership role in the dermatology team.
- Become the resident responsible for the consultations on your service
- Coordinate and supervise PGY1s evaluative and consultative services and skills.
- Become an active liaison between the primary service, chief residents, and the surgical Faculties.

GOALS AND OBJECTIVES 4/10

- Show graded and progressive levels of complexity and responsibility by more participation in the basic and clinical sciences curriculum and clinical assignments of the junior residents.

PGY2 - Term 2

- Improvement of skills developed in earlier years.
- Become credentialed in all tiers of invasive procedures.
- Establish complete responsibility of running the service under the direction of the supervising Faculty.
- Coordinate all conferences and clinical activities in collaboration with the Organizing Residents or Faculty responsible.
- Coordinate care for all patients on the service unit and referral consultations

- Coordinate the in-house and outpatient experience that will assure optimal continuity of care.
- Present morbidities and mortalities on the service at the monthly meetings
- Participate in the selection process for the case presentation.

PGY3

- Supervise all aspects of management of the Dermatology patients in the respective unit
- Provide leadership to the entire team of the residents and medical students
- Assist faculty in daily clinical and educational activities of the department.
- Act as a teaching assistant to the junior residents, when appropriate under the supervision of the Faculty
- Coordinate the multidisciplinary conferences with other services and assignment of the presentations to the senior and junior residents.
- Establish total continuity of care, and accept responsibility for the patients in the unit,
- Assure that the outpatient experience for every rotation that optimizes the continuity of care.
- Assure that all clinical assignments in the chief year will be at the integrated sites.

COMPETENCY - II : MEDICAL KNOWLEDGE

All scheduled Seminars, Case presentations, Journal readings, Grand rounds, CME's, Workshops, Skill Courses, Conferences are "protected time" from routine clinical duties. Only in an event of a medical emergency the resident will be excused from attending these sessions.

GOALS AND OBJECTIVES 5/10

PGY1 - Term 1

- The academic sessions are pre-planned programs
- All residents are expected to attend at least 80% of sessions
- All residents, except those on call, are expected to attend the out of campus academic activities.
- All residents are encouraged to read up on the topic in advance.
- Power Point presentations from each session are available on the Department's computer for review and preparation for the Department's assessments and quizzes.
- All residents are expected to participate in the Core Curriculum meetings.
- The senior residents will assign aspects of the presentation that will be appropriate for the level of the resident.
- The resident is expected to become a Provisional Life member (PLM) of the Indian Association of

Dermatologists, Venereologists & Leprologists (IADVL) to be eligible to participate in the academic activities of IADVL.

- The resident is expected to read the assigned topic and be prepared for the session for each topic-specific meeting.
- Residents will receive orientation from the senior residents on the service and the Faculty in charge as to where and when the sessions are held.
- The residents at all levels are expected to read standard Dermatological texts and journals.
- All categorical residents will participate in the term theory examination. Residents are expected to achieve a score of no less than 50 % marks. After receiving scores, residents should review their results, and direct self-learning based on the results
- Residents are expected to teach medical students.

PGY1 - Term 2

The requirements above for the first term serve as the foundation from which the residents will acquire the habits for life-long learning and critical self-evaluation. The resident will be assigned presentations commensurate with increased knowledge, ability and maturity.

- Residents should begin reading of Dermatology journals and focus on both Problem based and Broad based Dermatology knowledge
- Reading focused on particular surgeries or clinical problems they encounter

- Focus reading for potential research opportunities
- Concentration on the basic science in preparation for the examinations
- Preparation for the assigned cases
- Expand teaching responsibilities to medical students and interns

GOALS AND OBJECTIVES 6/10

PGY2

- Continue to build on the medical knowledge foundation of the previous two terms
- Prepare more in-depth, researched preparation for the assigned cases.
- Preparation of the Power Point presentation for the seminar or other session.
- Reading of the standard dermatological texts, DOS curriculum, and supplemented by the journals.
- Preparation for the exam.
- Preparation for presentations at departments and multi-speciality conference.
- Utilization of web-based resources, such as Pub Med, WebMD, and on-line journals
- Teaching of the medical students and junior residents.
- Preparation for and participation in the terminal theory and mock oral examination, which is patterned by DOS.
- Review of Research work allotted & permitted by ethical committee.

PGY3

- Building on the medical knowledge foundation of the previous two years
- Preparation of the Power Point presentation for the seminar or other session.
- Assist junior residents in preparation and execution of the talks, anticipate questions
- Preparation for the Morbidities and Mortalities.
- Conferences to be attended
- Presentation of the cases at the case presentation and grand rounds.
- Help choose the cases to present, who will present, and schedule the presentation
- Begin preparation for the PG examination after completion of the residency.
- Participation in the “Residents as Teachers” workshop.
- Didactic sessions with the Guide (faculty advisor)
- Practical sessions with the Guide (faculty advisor)
- Finalization and submission of dissertation and other research project undertaken during residency
- Bring the program to the junior residents and medical students

COMPETENCY - III : PRACTICE BASED LEARNING AND IMPROVEMENT

GOALS AND OBJECTIVES 7/10

PGY1

The residents are expected to utilize their own experience and assimilation of the scientific data for learning, reflection, and patient care improvement.

- Use internet resources, as well as the standard Dermatology texts to optimize learning.
- Develop on-going personal learning projects, which includes: dissertation, data compilation and completion.
- Maintenance of accurate, timely, and updated performance log book
- Maintenance of accurate, up-to-date credentialing for invasive procedures
- Timely submission of the dissertation review for documentation of credentialing (Topic Selection & Ethical clearance)
- Incorporation of all formal presentations into Teaching Portfolios/CV's
- Review of term examination results and learn about topics which were not answered correctly, to direct self-study
- Participation in evidence-based, campus wide, DOS Core Curriculum.
- Use the Department's patient care portfolios to reflect on.

- The care rendered to the patient in the context of the global health care environment
- The resident's appreciation of own contribution to the care of the patient.
- Review of the faculty and senior residents filled assessment form/ monthly evaluation to understand the resident's own weaknesses and strengths.
- Assure participation in meeting and discussing with the faculty guide/mentor/advisor, and the HOD during regularly scheduled meetings for the evaluations, and plan of correction if needed.

PGY2

- Continue to develop Practice-based Learning and Improvement from the prior years.
- Evaluations : As more opportunities present to evaluate the performance of residents our feedback and evaluations carry more importance, and will allow for objective evaluation.
- Through feedback, deficiencies are better understood and the strengths will become more apparent. Residents should therefore take the opportunity and thoroughly review their evaluations, and use them as an objective guide for improvement.
- For identified deficiencies, residents should track the changes in evaluations for that topic. Also, consultation with their mentor to help institute change is encouraged.
- If a technical deficiency is noted on the evaluation, residents should use the department's resources, and

faculty to work on the particular deficiency.

- Leadership skills
- Resident at this level should become a leader to the junior residents, and students. Active teaching, using techniques from our ‘Resident as Teachers’ program, of topics or skills will reinforce knowledge on particular topics.
- Teaching skills
- Participate in the Department’s ‘Residents as Teachers’ program. Faculty based, resident based and even video-based sessions are valuable tools to understand individual style when presenting, and the associated strengths and weaknesses.
- Using the techniques assimilated in these workshops to become a more effective teacher and a leader.
- Preparation for the formal discussions and presentations using the library, information technology, other resources available at the department and the on-line resources by the Residents to participate in seminars and conferences.
- Since Power Point presentations are presented at a formal meeting, and is a resource to anyone looking for the information on the topic, residents are encouraged to make them coherent, concise and accurate.

GOALS AND OBJECTIVES 8/10

PGY3

- Assimilate into daily practice the lessons of the prior years, and build on this foundation the life-long practice

of learning, reflection, and humility.

- Residents are responsible for junior residents and students on their service
- Residents establish themselves as leaders and diplomats of the Department and its residency program, and should realize that they will leave a legacy of their chief year. They are encouraged to make their legacy one that the students and junior residents will aspire to emulate.

COMPETENCY - IV : INTERPERSONAL AND COMMUNICATION SKILLS

PGY1

- From the beginning of training, residents are expected to develop communication skills that result in effective and professional communication with patients, patients' families and members of the health care team. They are expected to
- Participate in the outpatient clinics and ward rounds.
- Take appropriate history and performing a physical exam.
- Document accurate and appropriate information in the patient's medical record.
- Create the plan of care and presentation of the patient to the faculty member in charge of the patient.
- Initiate the plan of care discussion with the patient
- The resident should be present when the Faculty assesses the patient and discusses the disease process and plan of care with the patient.

- Residents should participate in the discussion with the patient's family members.
- When asking for consultation or any investigation, residents should provide accurate information to the consulting service
- Hand writing must be legible, and the signature should be followed with a stamp or name.
- Effectively and professionally communicate with all members of the health care team, including
- Discharge planning for admitted patients.
- Provide the necessary information to the social service, Public relation officers, and when necessary assistance with the required forms in preparation for the discharge.
- Residents should appreciate and respect different ethnic and religious beliefs of the patients.
- When needed, should use the translation services
- The residents are expected to be teachers and role models to the medical students, and extensive series of workshops entitled "Residents as Teachers" would be undertaken by the department with assistance from the Dean's office.

GOALS AND OBJECTIVES 9/10

PGY2 - Term 1

- As the level of clinical responsibility increases, the importance of the ability to communicate effectively will become more important.

- Residents at this level will be seeing patients in the Emergency Department, and as consultants for in-house patients.
- When a consultation is requested, the response to the consultation must be prompt and courteous to the referring service. Remember that you are building habits and frequently relationships that will become important to you in the future.
- Assess the patient, and in a non-emergent situation allow yourself time to think.
- Don't feel pressured to come up with the immediate diagnosis, or plan of care.
- Seek opinions from your seniors and other physicians if needed.
- Reflection and thought are very useful to the Dermatologist and the patient.
- Do not be influenced by the opinion of others, and evaluate the patient and the data independently, without any preconceptions.
- Discuss your impression with the patient, the referring team, and the senior chief resident or a Faculty.
- These concepts hold true for evaluating the patients anywhere in the hospital, or in the outpatient facility.
- If the situation is urgent, immediately summon help. You always have an option of calling for help from senior physicians around you, calling a code or activating the Rapid Response Team and even calling Consultant outside your Unit/Dept/Institute. Make sure your supervising residents and Faculty know the situation.

PGY2 - Term 2

- Based on the foundation of information and experience acquired in the junior years, residents at this level need to communicate professionally and effectively at a more advanced level.
- The outline above should be reviewed.
- Accurate communication with residents at all levels, students, different services, and Faculties is more important than ever.
- Remember that frequently the information you will have to convey will be to those with less experience than you.
- Be patient! Remember that you had less experience in the recent past. Always be a teacher to those less experienced, in a professional and not condescending manner.
- Write timely and legible consultations.
- Resident as role models is important- you should assist junior residents with acquiring good communication skills.
- Communicate with the patients and when appropriate the patient's families courteously and professionally.
- Remember that most times these will be lay people, who are in a stressful environment and sick. Effectively communicate with the vocabulary that will be understandable to the patient. Request a translator if needed.

- Communicate with consulting services courteously, professionally and accurately. Conflicts may arise, and management of these conflicts reflects on the resident, the service, the Faculty, the Departments and our entire profession.

GOALS AND OBJECTIVES 10/10

PGY3

- Become a leader of the team using graduated experiences of the prior years.
- Being a leader requires delicacy, skills of diplomacy, and profound respect for the patients and all members of the health care team.
- Appreciate the strengths and weaknesses of your team. It is easy to work with the “good” residents. Working with the average resident will challenge your skills as a leader, and a communicator.
- Be patient!
- Most residents will perform the tasks well, with supervision, guidance and appropriately timed and tempered feedback and critique.
- If you have to counsel or reprimand a junior resident do it privately.
- Do not insult anyone! We work in the environment that is diverse and cultural sensitivities should be taken into account when we talk to the patients and other health care team members.

- If you have a disagreement with any member of the health care team, attempt to resolve it amicably and not in the presence of a patient.
- Inform the supervising Faculty any unresolved matters.
- Always act professionally and withdraw from a potentially troublesome situation



Department of
**General
Medicine**

GENERAL GOALS

The main goal of the training program is to produce physicians with the necessary knowledge, skill and attitude to diagnose and manage in a cost-effective manner, a wide range of clinical problems in internal medicine as seen in the community and in secondary/tertiary care setting. Special emphasis is placed on the relatively common and treatable disorders. Possession of clinical skills required for making a diagnosis is given utmost importance.

As a result of training in General [Internal] Medicine, the physician should become competent in the use of the various diagnostic tests, selection in a cost-effective and goal-oriented manner and should be able to interpret their results intelligently and in context.

In addition, a physician trained in General [Internal] Medicine should have adequate skills in communication at various levels and in all common clinical situations. The physician needs to be familiar with the basic principles of teaching and trained in formal teaching of juniors and undergraduates. Although maximum emphasis in the training program is given to the acquisition of skills necessary for diagnosis, management and primary and secondary prevention of medical disorders, it is considered desirable for the Junior Residents to be familiar with the fundamentals of research methodology. In order to be considered a competent internist, a resident in medicine must possess humanistic qualities, attitudes and behavior necessary for the development of appropriate patient-doctor relationship.

SPECIFIC AIMS AND OBJECTIVES

As a result of the training under this program, at the end of 3 years of postgraduate training, a resident must acquire the following knowledge, skills and competencies:

- 1) A thorough knowledge of epidemiology, natural history, pathological abnormalities, clinical manifestations, principles of management and latest guidelines of management of a large variety of systemic medical disorders of adults and elderly, affecting any organ system
- 2) A thorough knowledge of epidemiology, natural history, pathological abnormalities, clinical manifestations, principles of management and latest management guidelines of a large variety of infectious diseases, especially those commonly seen in this country.
- 3) A thorough knowledge of the practical aspects and methods of prevention and protection against nosocomial infections from (i) patient-to-patient (ii) patient-to-health care worker (HCW) (iii) HCW-to-patient; in any health care setting.
- 4) Thorough knowledge, skill and competence to diagnose correctly and manage rationally a wide range of clinical problems of general internal medicine, using traditional methods of recording an accurate and thorough history and performing a detailed physical examination.
- 5) Skills and competence to conduct himself/herself ethically during the process of collecting the relevant data base, and be able to establish a healthy doctor-patient relationship by maintaining a sympathetic

attitude and upholding the dignity of the patient. He/she must have learnt the skills of promoting verbal communication with the patient and winning his/her confidence.

- 6) Skill and competence to choose and interpret correctly the results of the various routine investigations necessary for proper management of the patient. While ordering these investigations, a resident must be able to understand the sensitivity, specificity and the predictive value of the proposed investigation, as well as its cost-effectiveness in the management of the patient.
- 7) Skills and competence to perform in routine and specialized situations the commonly used diagnostic procedures, namely, lumbar puncture; bone marrow aspiration/biopsy; biopsies of the liver, nerve, muscle, skin, kidney & pleura; fine needle aspiration cytology of palpable lumps; aspiration of pleural, pericardial, abdominal or joint fluid; take an electrocardiogram tracing, and be able to interpret their findings.
- 8) Skill and competence to choose and interpret correctly the results of specialized investigations including radiological, ultra-sonographic, biochemical, haemodynamic, electrocardiographic, electrophysiological, pulmonary functional, hematological, immunological, nuclear isotope scanning and arterial blood gas analysis results.
- 9) Skill and competence to provide consultation to other medical and surgical specialties and subspecialties, whenever needed.

- 10) Skill and competence to function effectively in varied clinical settings, namely, ambulatory care, out-patient clinic, in-patient wards, or emergency/critical care.
- 11) Skill and competence to make sound decisions regarding hospitalization, or timely referral to other consultants of various medical subspecialties recognizing his limitations in knowledge and skills in these areas.
- 12) Proficiency in selecting correct drug combinations for different clinical problems with thorough knowledge of their pharmacological effects, side-effects, interactions with the other drugs, alteration of their metabolism in different clinical situations, including that in the elderly.
- 13) Skill and competence to administer intensive care to seriously ill patients in collaboration with specialists from other areas. Should have acquired adequate skills in cardiopulmonary resuscitation, endotracheal intubation, setting up a central venous line, using a defibrillator, and providing basic ventilator support. The resident in medicine must become familiar with the basic monitoring equipment in the critical-care area of the medicine ward and should be able to interpret the information provided by the correctly.
- 14) Skill and competence to advise on the preventive, restorative and rehabilitative aspects of medicine, including those in the elderly, so as to be able to counsel the patient correctly after recovery from an acute or chronic illness.
- 15) Skill and competence to understand research methodology in clinical medicine and to undertake a

critical appraisal of the literature published in various medical journals and be able to apply the same in the setting in which the resident is working.

- 16) Introduction to research methodology is considered desirable for the residents so that they can understand the concepts of validity and generalizability of the observed findings. All competent internists must keep themselves in touch with current medical literature. Moreover, they should be able to judge whether the observations reported in the literature would be applicable to their setting or not.
- 17) Skill and competence to work cohesively in a team of medical and paramedical personnel and maintain discipline and healthy interaction with the colleagues.
- 18) Skill and competence to communicate clearly and consciously, and teach other junior residents, medical students, nurses and other paramedical staff, the theory as well as the practical clinical skills required for the practice of medicine.

ADMINISTRATIVE SET-UP

MEDICAL UNITS

To simplify the functioning and for ensuring that all the faculty members of the department participate equally in the general internal medicine teaching and patient – care program, the 150 beds of the department of Medicine have been equally divided amongst five clinical units. The fifteen beds with facilities for critical care are commonly shared amongst units.

Each Unit is managed by the Head of Unit along with the other members of the Units as prescribed by the Medical Council of India.

Each Unit will have one Junior Resident from each year of the training program. The duties of the residents are determined by the Unit Head in accordance with the training program as approved by the Medical Council of India.

Admission day: Admission day for a unit starts from 8.00 am of the OPD day and ends at 8.00 a.m. of the next day.

FUNCTIONS OF THE MEDICAL UNITS

The clinical units in the department of medicine have the following main functions:

- 1) Provide casualty-emergency consultation coverage for all the patients attending Casualty with problems of general internal medicine on days when the unit is "On-Call".
- 2) Provide coverage for the Out-patient service in the mornings on fixed days in a week.
- 3) Provide In-patient admission and management facilities to all the patients who get admitted from the out-patient, casualty-emergency or get transferred to general medicine beds from other clinical areas of the hospital; on the days when that medical unit is "on-call".
- 4) Although the 5 clinical units in medicine function in close co-ordination, and cooperation, each unit has independent beds (except the critical care beds which will be shared by all the 5 units). These units are entirely independent in matters related to admission, in-patient care and discharge.

SPECIALTY CLINICS

There are 7 officially recognized specialty clinics being run under the aegis of the department of medicine. These are as follows :

Sl. No.	Name of the Clinic	Day	Place
1	Cardiology	Everyday	Cardiology OPD
2	Nephrology		Med OPD
3	Gastroenterology		
4	Haematology		
5	Rheumatology		
6	Endocrinology		
7	Neurology		

Faculty members with interest/expertise/training in the subspecialty, irrespective of the General medicine unit to which they may be attached, attend and run these clinics.

INVESTIGATIONS

Residents will be guided and helped in acquiring theoretical and practical knowledge on following investigations and their interpretation and applications in clinical situations:

- ECG, TMT, Holter monitoring
- Daily glucose monitoring with glucometer
- Hemodialysis
- Renal biopsy

- External cardiac massage & Use of defibrillator
- Emergency IV canula insertion and cutdown
- Emergency Nasogastric tube insertion
- Gastric lavage in case of poisonings
- Thoracocentesis and thoracic tube insertion
- Insertion of self-retaining urinary catheter (both in males and females)
- CVP line insertion
- Assisted ventilation
- Arterial puncture and canulation of internal jugular, and subclavian.
- Use of aerosol nebulisers
- Tracheostomy.

RESIDENCY TRAINING PROGRAM

The training program is planned in a graduated manner with progressively increasing level of training, responsibility and expectation of outcomes. At all times, residents are encouraged to seek assistance, opinions or advice from colleagues, seniors and faculty members.

To enable optimum and efficient patient care, it is necessary to work as in integral part of a health-care team. Cooperation, collaboration, sharing responsibilities and work, accountability, diligence, proper communication and harmonious interpersonal relationships are vital ingredients necessary to form a congruous and productive team.

RESIDENT RESPONSIBILITIES

CLINICAL RESPONSIBILITIES :

The daily routine for a medicine resident starts at 8.00 am every day. At all times the resident is expected to work within the ambit described by the Hospital and College rules, University Guidelines, the Medical Council of India, prevalent medicolegal laws and ethical principles.

Residents' responsibilities may be discussed under the following headings.

1. O.P.D. Services
2. In-patient care
3. Emergency duties

OPD Services

Each Unit resident posted in the medicine department would have one/two OPD days/week.

OPD starts at 9.00 am every day except Sundays and holidays. Residents must be in their OPD cubicle by 9.00 am sharp.

The following guidelines may be helpful for optimal and efficient functioning in the medical OPD.

- Residents are expected to take assistance of senior colleagues, Senior Resident and faculty at any time in case of perceived or actual dilemma or difficulty.
- Residents should see patients one-by-one on first come first service basis to avoid confusion.

- Care should be taken to ensure privacy and ethical considerations are followed at all time.
- They should evaluate each patient and write the observations on the OPD card with date and signature.
- OPD card is a legal document admissible in a court of law and should be treated as such.
- Investigations should be ordered as and when necessary using prescribed forms. All investigation form should be carefully and completely filled. Short history, findings and clinical assessment should be clearly outlined on forms meant for radiology, pathology and Cardiology.
- Resident should consult the consultant regarding diagnosis and the management of any case. Patient requiring admission according to resident's assessment should be shown to the consultant for evaluation.
- Patient requiring immediate medical attention should be sent to the casualty services with details of the clinical problem clearly written on the card. Consultant on duty in OPD should be fully apprised of the case in person All hemodynamically unstable patients should preferably be escorted to the casualty by the resident.
- Patients should be clearly explained as to the nature of the illness, the treatment advice and the modus operandi for getting the investigation done.
- Residents should specify date and day when the patient has to follow-up.
- No Medical Representative should be entertained only after completion of all OPD work.

In-Patient Care

Each junior resident is responsible and accountable for all the patients admitted under his care.

The following are the general guidelines for the junior residents in the ward.

- Maintain regular and accurate record of the work-up of the case and patient progress
- Organize patient's investigations, ensure all reports are in the file and collect the reports, if necessary.
- Bedside procedures for therapeutic or diagnostic purpose must be recorded.
- Present a precise and comprehensive overview of the patients' case and condition in clinical rounds to facilitate discussion with consultants.
- Obtain opinion of specialists of other disciplines, if considered necessary by the senior resident and/or consultant.
- To evaluate the patient twice daily (and more frequently if necessary) and maintain a progress report in case file along the lines mentioned above.
- To establish rapport with the patient to be able to communicate the nature of illness, any instructions and further plan of management *.
- To write instruction about patients' treatment clearly in the file along with time, date and with legible signature of the resident **.

- To carefully inspect treatment chart of patient daily to check whether physician's instructions are being carried out correctly.
 - To hand over responsibility of the patients to the resident on duty, verbally and in written before returning for the day.
 - To plan out the work and the next day in advance to facilitate functioning and avoid delays.
 - To coordinate the logistic aspect of ward work with the team and ensure harmonious working relationships.
- * Relatives of the patient should be frequently and appropriately apprised of the clinical progress.*
- ** Treatment chart in the file and staff's treatment book should be frequently tallied and corrected if necessary.*

Emergency Duty Day :

Following guidelines should be observed by the resident during the admission day.

- Routine ward work and discharge of patients should be completed by 9.00 am of the admission day.
- Patients admitted during OPD hours must be attended to in the wards immediately. Resident should Inform the doctor on ICU duty about any newly admitted sick patients, giving detailed verbal and written over, including proposed plan of management. Staff on duty should be fully detailed about drugs and I.V. fluid orders of the sick patient(s).
- Immediately after the OPD, all admitted patients must be reviewed to identify any serious matters needing urgent attention.

- Vital signs should be immediately recorded in the case sheet as soon as a resident examines a patient. Immediate medical care should be provided if patient is sick. Urgent investigations should be sent, if considered necessary.
- Resident should work up the patient in detail and be ready with the preliminary necessary investigations reports for the evening discussion with the consultant on call.
- Senior Residents are expected to monitor and supervise all work done by their juniors and assist them where necessary.
- During clinical round, JR should present relatively sicker patient first, to avoid delay in the management.
- After clinical round, resident should plan out the investigation for the next day in advance, fill up the forms of the investigations and put them in the staff's record book, after having apprised her/him.

Doctor on Duty

Duty days for each Junior Resident are allotted according to the duty roster made by the concerned unit in charge. No change is permissible unless it is by a mutual consent and in such event unit in charge should be duly informed.

Resident on duty has to report for duty punctually and take detailed over from the previous doctor on duty with especial reference to sick patients.

The resident on duty for the admission day should know in detail about all sick patients in the wards, and relevant problems of all other patients, so that he could face an

emergent situation effectively. Admission during night should be worked up and managed according to the suggested guidelines, with intensive monitoring of sick patients.

In morning, detailed over (written and verbal) should be given to the next resident on duty. This practice should be rigidly observed.

If a patient is critically sick, discussion about management may be done with consultant at any time, e.g. before or after usual time or evening round.

Care of Sick Patients

Care of sick patients in the ICU takes precedence over all other routine work for the doctor on duty. Patients in critical condition should be meticulously monitored round the clock and records maintained. Treatment alterations should be done by doctor on duty in consultation with the Consultant, if necessary.

ICU Posting should hone the following skills:

- Providing assisted ventilation using correct modes and strategies using modern ventilations, prevent various complications including barotrauma and make correct decision regarding weaning.
- Compute various parameters of lung mechanics and gas exchange.
- Insert central venous lines using Triple lumen catheters, record haemodynamic invasive methods.
- To look after the nutritional requirements of the patients.

OTHER CLINICAL RESPONSIBILITIES

Discharge of the Patient

Patient should be informed about his/her discharge about 24 hours in advance. It should be planned in such a manner that patient vacates bed by Noon. Certainly, discharge on Sundays and other holidays are to be avoided.

Some guidelines for preparing a discharge summary:

- Discharge summary should be precisely, but comprehensively, written. It should be noted that this document is carried by the patient wherever he/she goes for consultation, or follow-up. Hence, incomplete or incorrect information should be avoided.
- Apart from giving salient points in history and examination, resident should record important management decisions, and ensuring hospital course in a proper manner.
- Investigations should be properly written, giving dates and numbers of various pathological and radiological tests.
- Complete diagnosis, complications and procedures done during hospital stay should be duly recorded.
- Most important part of the discharge summary is the final advice given to the patient. Complete details of dietary advice (preferably with a diet chart), mobilization plan, and instructions regarding activity or exercise should be written, names of drugs, and dosage should be legibly written, giving the timing and duration of treatment.

- Patient should be briefed regarding date, time and location of OPD/Clinic for the follow up visit.
- Three copies of discharge summary should be made, one for the patient, second to be attached in the case sheet, and third for unit record or for the follow-up OPD.

Discharge summary made by Junior Resident should be carefully checked and corrected by the Senior Resident.

In Case of Death

In case it is anticipated that a particular patient may not survive, relatives must be informed about the critical condition of the patient beforehand. In the event of death of a patient inform the nearest available relative and explain the nature of illness. Follow up death summary should be written in the file.

In cases with medicolegal cases filed, death certificate has to be prepared in triplicate and handed over to mortuary with the body. Also, inform the local police authorities immediately. No death certificate is given to the relatives if the deceased had a medico-legal case.

In case Autopsy is required

Autopsy should be attempted for all patients especially so if patient died of undiagnosed illness, unexpected deaths and in conditions where the diagnosis may have a bearing on the health of the relatives/hospital staff.

Post-mortem is routinely done in the event of medico-legal cases.

Resident should explain the procedure to the relatives emphasizing the need.

Bedside Procedure

Various bedside procedures like pleural tap, ascetic tap, liver biopsy, kidney biopsy and bone marrow examination etc. need to be performed by a medical resident if indicated for diagnosis and management of the patient. The following guidelines should be observed strictly:

- Verify the indication for the procedure with consultant. Record this in the case sheet. Rule out contraindications like low platelet count, prolonged prothrombin time, etc.
- Plan the procedure during routine working hours, unless it is an emergency. Special containers for collecting the samples should be ensured before starting the procedure.
- Explain the procedure with its complications to the patient and his/her relative and obtain written consent on a proper form.
- Shift the patient to the procedure room taking care to inform relatives at the time.
- Perform the procedure under strict aseptic precautions using standard techniques. Emergency tray containing essential drugs, with IV fluid bottles and cardiac defibrillator should be made ready near the bed of the patient.
- Dispatch sample(s) in appropriately labelled containers with complete investigations forms.

- Make a brief note on case sheet with the date, time, nature or procedure and immediate complications, if any.
- Monitor the patient and watch for complication(s)
- Write the reports of the procedure performed with lab reference number in the case sheet.

Investigational Facilities and their utilization

The hospital is well-equipped with a variety of investigations available. However, it is the responsibility of the resident to requisition only the relevant investigations after a careful analysis of the clinical problem. The approach should be positive (to confirm the clinical diagnosis) rather negative (to exclude some remote possibility). The so-called “routine” investigations must be kept to a minimum. The habit of not planning investigations and sending routine samples in “EMERGENCY” must be strongly discouraged.

Medico-Legal Responsibilities of the Residents and Interns

- As mentioned in the beginning of this document, Residents and Interns are advised to
- Carefully read and learn the medico-legal responsibilities as related to their day-to-day work in the hospital.
- Familiarize themselves with the various documents and forms for various situations.
- Be very sure of the formalities and steps involved in making the correct death certificates, mortuary slips, medico-legal entries, requisition for autopsy etc.

- Be fully aware of the ethical angle of their responsibilities and should carefully learn how to take legally valid consent for the different hospital procedures/therapies etc.

ACADEMIC RESPONSIBILITIES

During Residency, post Graduate is not only expected to provide proper patient care, he/she is also supposed to acquire academic knowledge and skills in the field Medicine.

Requirement of Thesis :

Each student registered in the postgraduate program for his MD degree must submit the final, bound thesis, duly signed by the guide, head of department and Dean, six months before he/she is due to appear for the final MD examinations.

This thesis is based on a research project conducted entirely by the student under the guidance of a University-appointed Guide. The guide, who is a senior faculty member, shall assist the student in topic selection and enable him to understand the methodology of conducting the study and handle challenges.

The protocol of the study is to be prepared within the time period prescribed by the University [usually within 3 months of admission] and presented before the Institutional Research Committee. Once approved by the IRC, it is submitted to the Institutional Ethics Committee. Only after approval by the IEC is the student [resident] permitted to start work on the research project.

The thesis written by the residents are evaluated and graded by two external examiners in terms of research design,

methodology employed, analytical methods used, and validity of the conclusions reached. Although these grades are not added to the theory or clinical assessment, acceptance of thesis as being satisfactory is a pre-requisite for a resident to be able to take the M.D. Examination.

Case Discussions

This teaching activity is done daily during clinical ward rounds and ICU rounds. However, individual case discussions must be encouraged and supported.

Medical Ethics & Medicolegal aspects

Case discussions, lectures, guest lectures are conducted to acquaint the resident with the basic principles and applications of medical ethics and the law on medical practice.

Journal Clubs

This is important teaching activity is held on every Monday afternoon in Medicine seminar room. An article chosen by the resident in consultation with an appointed faculty member is presented. The resident is expected to use the departmental format and discuss the article. All other residents are expected to participate in the discussion.

Long case presentation

Every Tuesday afternoon in wards, one residents examines a case in detail for discussion first. Other residents are also informed to enable them to examine the case selected. The selected resident then presents the case to a faculty member. The format used for the examination is to be followed during the presentation.

Seminar

Every Wednesday in Seminar room. Faculty members from the department of medicine act as moderators for these seminars. The JRs must contact the preceptors at least 1 week before the proposed seminar and carefully chalk out the out-line of the presentation. They must search adequately through the literature and work under the close guidance and supervision of their moderator(s) and rehearse adequately in advance in order to give a satisfactory presentation with in terms of content and delivery. One resident prepares a 40-min discussion on the allotted topic under the guidance of the moderator. All residents are supposed to attend it regularly. Residents other than the presenter are also expected to prepare on the topic and participate in the ensuring discussion.

Short case presentations

Every Thursday afternoon one residents examines a case in detail for discussion first. Other residents are also informed to enable them to examine the case selected. The selected resident then presents the case to a faculty member. The format used for the examination is to be followed during the presentation.

Group discussion

First Saturday of every month in seminar room lead by one of the teacher

Clinical Audit

Second Saturday of every month in seminar room, on rotation every unit presentation and discussion is done.

Theory Lecture

Third Saturday of every month in seminar room theory lecture on selected topic will be delivered by one faculty member.

Guest lecture

Fourth Saturday of every month in seminar room, prominent guest faculty is invited to deliver guest lecture.

Clinics-Pathological Conference (CPC)

Residents are expected to prepare and attend all CPCs conducted in the hospital. The resident asked to present at the CPC must be well-prepared with the case details, sequence of events, rationale for decisions taken and other aspects of the case.

Other Research Activities

A resident is free to involve himself/herself with other ongoing research activities with any consultant of the department.

Resident as Teacher

Residents are expected to serve as teachers and mentors to undergraduate students, junior residents and nursing students. In the final [3rd] year, a resident is expected to guide and mentor the juniors in clinical, administrative, academic and affective areas of medical practice.

ASSESSMENT & EVALUATION

ASSESSMENT OF RESIDENTS

Evaluation of residents for their knowledge and acquisition of attitudes, skills and competencies is a continuous process throughout their 3-year period of training. Evaluation of certain attributes such as interpersonal relationships, professional responsibility, sensitivity to patient's need for comfort, ethical behaviour etc. is closely observed by the teaching faculty during the day-to-day clinical work of the resident. In addition annual formative exams are conducted. Methods such as multi-source feedback, Mini-CEx may be used to assess student progress.

Final M D Examination

This is conducted at the end of the 36 months of residency training.

A student is eligible to appear for the final MD examination if the thesis submitted is approved by external examiners and internal examiners.

The final MD exam consists of a written examination, a clinical examination to assess the clinical competencies and skills, and a viva voce examination.

The examination is conducted by two internal examiners with the help of two external examiners from outside the state. Candidates are recommended for the award of M.D. only after they have exhibited acceptable level of competence in all the areas of knowledge, attitudes and skills being evaluated by the examiners and the teaching faculty.

The content of knowledge which is evaluated in the theory examination includes basic sciences as applied to medicine, epidemiology, etiopathogenesis, pathology and clinical manifestations of diseases processes, principles of therapeutics, principles of the management of medical diseases with particular emphasis on newer concepts and recent advances.

Theory: Conducted at the end of 36 months, the examination will consist of 4 theory papers of 100 marks and 3 hours duration each.

Paper	Duration	Marks	Topics
I	3 hours	100	Basic Sciences as applied to medicine
II	3 hours	100	Cardio-vascular system, Respiratory system, Nephrology, Rheumatology, Immunology, Infectious diseases, Dermatology.
III	3 hours	100	Gastroenterology, Nervous system, Psychiatry, Hematology, Oncology, Endocrinology, Miscellaneous
IV	3 hours	100	Recent Advances in General Medicine

Written examination is conducted by the University based on the guidelines of the Medical Council of India and as approved by the Academic Council.

Clinical examination :

This is aimed at assessing the clinical skills of the candidate and diagnostic reasoning. Entirely objective evaluation of these skills is neither feasible nor desirable. However, in

order to test the various skills, the examiners may evaluate the candidates on a structured format, namely, history taking, physical examination, diagnostic reasoning, choice of diagnostic investigations, general management strategies, and general attitude and demeanor towards the patient and the examiners. Patient material selected for examination is usually sufficiently representative of the type of patients for whom an internist may be called upon to give an opinion. The examinations consists of 2 Long cases [1 Neurology], 2 Short cases [one from ICU], 4 table vivas based on ECG, radiological films, investigational reports [PFT, ABG, EEG, etc.], laboratory reports, instruments, drugs, emergencies and pedagogy.

ANNEXURE I

A relevant case work-up and good record keeping is the key to good patient care. Record keeping may be uninteresting and laborious but is the cornerstone in the effective and efficient management of the patient.

Case work up

All the cases admitted under the charge of Junior Resident in-charge need to be worked up in detail including clinical, social, personal family and occupational aspects of history. Patients should be examined in detail with special reference to the involved system(s). The resident should make his own diagnosis with differential diagnosis giving full justification for each differential diagnosis. The case is discussed with the consultant and the rounds

File Keeping

For each admitted patient, a case record file with face sheet

is to be meticulously maintained. The following sequence, if properly recorded, may lead to uniform and meaningful medical information.

Page 1 : Face sheet

1. The details of the patient's name, age, sex, nationality, religion, date of admission, IPD/OPD Number, address etc. are to be filled in.
2. On admission, Provisional Diagnosis needs to be entered after the initial work up.
3. If there are any previous admission, the corresponding IPD No. (s) and date (s) of admission should be entered in the column.
4. At the time of discharge, the final diagnosis, secondary diagnosis and complications need to be entered e.g. Appropriate ICD code No. for the disease should also be entered.
5. Operative procedures, if any, with brief note on anaesthesia given, should be recorded.
6. Result - The appropriate column on the face sheet need to be ticked or rounded.
7. All the face sheets at discharge, or at the time of death need to be properly filled in and must be duly signed by the resident.

Plans are recorded under three categories-

- i) Diagnostic i.e., laboratory tests, radiological studies consultations, continued observation etc.
- ii) Therapeutic i.e., medications, diet, surgery etc.

- iii) Patient education i.e., instruction of the patient in various aspects of self-care, education regarding the goal of therapy, the prognosis that has been given etc.

Page 3

Treatment chart; following should be duly recorded. The treatment chart should preferably be written in capitals, so that there are fewer problems in understanding, by other doctors, and paramedical staff.

- i) Date and time of prescription
- ii) Name, strength, dosing pattern of the drug duration of treatment, and changes in above, if any.
- iii) Instructions regarding fluid, electrolyte and nutrition
- iv) Nursing care instructions
- v) Doctor's name with signature and designation

The treatment chart should be rewritten, if major changes are ordered. Resident should supervise and check effective translation of the order by staff nurses on daily basis.

Page 4-5 : Investigation Chart

- i) Investigations chart with date, time (if relevant), nature of investigations, result, normal range (if it is not mentioned in the form or is not a routine investigations).
- ii) This chart (if nor already available in a typed format) should be spaced out over 2-3 pages to avoid crowding of various investigations.
- iii) Reports of radiological investigations should be comprehensively written giving, data and number of X-rays or scans.

- iv) Similarly, while writing the histopathology/ cytopathology reports, the respective laboratory names should be clearly mentioned.
- v) The discussion on these investigations in various conferences should be duly recorded.
- vi) ECG's should be serially pasted and detailed.

Page 6 : Consultant's Opinion with Date and Time

Page 6-10 : History and Examination (or more pages, if required)

Page 11 : (Onwards)

Progress notes should be entered daily for all patients and round the clock for sick patients with special reference to the following points;

- i) Vital signs.
- ii) New symptoms or signs.
- iii) Effect or side effect of any drug(s).
- iv) Investigation plan for the day.
- v) Procedures done with reference to nature, time, date, technique used and post intervention monitoring.
- vi) Any blood product received with mention of blood group, reference number, and adverse reactions, if any.

Assessment of the clinical problems and proposed plan of action based on clinical status of the patient over last 24 hours.



Department of
General Surgery

The Departmental strategies are as follows :

Research :

- Focus on safety as the number one priority in human subjects research
- Maintain a competitive edge in technology
- Engage industry to improve technology transfer
- Provide increased opportunities for medical students to participate in research
- Promote the bench-to-bedside principles DOS was founded upon
- Maintain ample funding for cutting-edge research
- Ensure adequate space for research is reserved in new buildings
- Increase funding from sources other than Government and Autonomous bodies

Education :

Integrate a focus on safety into all academic activities

- Reform the medical school curriculum to incorporate the challenges posed by a rapidly changing medical world :
 - Allow for more patient care in the first two years of medical school
 - Foster the bench-to-bedside ideals upon which DOS was founded
 - Better incorporate new technologies and medical science into the curriculum
- Increase multidisciplinary learning

- Foster professionalism and communication skills among all levels of learners: medical students to physicians
- Expand the use of new technologies as teaching tools:
- Ensure adequate space for teaching is reserved in any new buildings and ample funds are secured
 - Focus on faculty Simulation Center
 - Online learning tools
- development
 - Clarify promotion tracts, placing equal emphasis on the importance of scholarly achievement in teaching, as well as research and patient care
 - Attain resources to recruit and retain the very best faculty
 - Foster multidisciplinary interactions across DOS
 - Improve diversity among the faculty
 - Ensure faculty are motivated to meet teaching requirements

Patient Care :

- Emphasize patient safety and risk management
- Expand the use of technology to improve efficiency and effectiveness
- Support patient access initiatives
- Allow medical students more patient contact in their first two years

- Provide longitudinal patient contact for students, spanning across the four-year curriculum

Service to the Community :

- Enhance community outreach programs
- Better integrate and organize community service initiatives into the curriculum
- Collaborate across all educational entities of DOS to improve community health

General Surgery Residency Educational Goals

The educational goal of the General Surgical Residency Training Program of the DOS Program is to prepare the resident to become a highly competent board certified general surgeon. On completion of their training our graduates will be equally qualified to: attain placement in a surgical subspecialty fellowship, pursue a career in academic surgery, or enter private practice, rural or metropolitan.

This goal is attained by means of a progressively graded curriculum of study and clinical experience under the guidance and supervision of the faculty. Progression continues through succeeding stages of responsibility for patient care to culminating in complete management of patient care at the senior/chief level.

- 1) Use sound judgment to guide surgical decision making based upon a firm ethical base.
- 2) Manage surgical disorders based on a thorough knowledge of basic and clinical science.

- 3) Attain and perfect surgical skills necessary to be a competent surgeon.
- 4) Communicate effectively with patients and their families regarding life altering decisions.
- 5) Respect the cultural and religious needs of patients.
- 6) Collaborate effectively with colleagues and other health professionals.
- 7) Teach and discuss surgical issues with colleagues, residents, medical students, and other health care providers.
- 8) Educate patients and their families about the patient's health needs.
- 9) Provide cost-effective care to surgical patients.
- 10) Value life-long learning as a prerequisite to maintaining surgical knowledge and skill.

Evaluation

Residents are evaluated by the faculty. The senior residents participate in the evaluation of the junior residents. End-of-the-rotation faculty meetings assess the strengths and weaknesses of the residents. Evaluation forms are completed and the residents are encouraged to meet with the faculty at the conclusion of the rotation. Feedback is distributed during the rotation such that resident can address deficiencies. The faculty takes into account patient care, operative techniques, attitude and communication with others. The opinions of paramedical personnel, patients, families, and others are considered during the evaluation process. The residents are encouraged to provide feedback to the faculty regarding the strengths and weakness of the surgical experience on the Gastrointestinal Surgery service.

LEARNING OBJECTIVES

- i) Core Competency - Patient Care
- ii) Core Competency - Medical Knowledge
- iii) Core Competency - Practice-based learning and improvement
- iv) Core Competency – Interpersonal and Communication Skills
- v) Core Competency – Professionalism
- vi) Core Competency - Systems-based practice

GOALS AND OBJECTIVES

These are the competencies based goals and objectives for the General Surgery services. Many aspects of these competencies are general and apply equally to all services.

Patient Care

PGY1- Term 1

GOALS AND OBJECTIVES 1

- Develop and perfect the art of history taking, physical examination
- Understand the initial approach to the surgical patient, and develop a differential diagnosis for the new patient, or one for a new problem on a patient already on the surgical service
- Develop a treatment plan
- Present the patient to the senior resident and the attending Faculty

- Write daily notes on the assigned patients, and all patients on whom the individual resident was the operating surgeon or the first assistant.
- Entries into medical record should be legible, and the signature should be followed with a stamp or printed name.
- Notes should reflect all sections of the SBAR, SOAP acronyms, or other hospital-accepted routes of communication (**SBAR**-Situation, Background, Assessment, and Recommendation. **SOAP**-Subjective, Objective, Assessment, Plan).
- All notes should explain the need for continued hospitalization.
- Patients should have pain assessment- the resident should assess the degree of pain on an appropriate scale and document it on the progress note.
- **The notes will be read by the faculty member and countersigned. The residents will be given feedback by the faculty on the progress notes.**

GOALS AND OBJECTIVES 2

- Understand the chain of command on the surgical service:
- Inform senior resident and attending of new admissions, or changes in status of patients already on the service.
- When in doubt, call senior resident, chief resident or attending on the service.
- In an emergency call for help from any available resident, nurse, code team escalation and inform the responsible attending

- Develop basic surgical clinical skills: Phlebotomy, IV line placement, Nasogastric tube placement, Suturing and knot tying

GOALS AND OBJECTIVES 3

- Recognition and correct application of various surgical devices, i.e. retractors,
- stapling devices.
- Assistance in the operating room.
- Complete credentialing in Tier I invasive procedures.

PGY – Term 2

- Improve in the clinical and didactic skills developed as a PGY1
- Consultations.
- Become familiar with evaluation process of patient referred for consultation from the ED or from other services
- Develop a differential diagnosis, treatment plan for consulted patients.
- Present the patient to the senior or the chief resident, and the surgical attending. Immediately upon seeing the patient, place a consult on the chart, and inform the primary service that the patient has been seen. It is acceptable not to have a finalized plan of care in the initial note, as long as the patient is assessed promptly by the senior/chief resident, and the surgical attending, and the plan of care is not only defined and finalized but also communicated to the primary service.

- Become credentialed in Tier II and if possible in Tier III invasive procedures.
- Improve on the basic surgical skills, i.e. suturing, knot tying, use of mechanical staplers.
- Develop understanding of commonly performed surgical operations and their related anatomy, (e.g. inguinal herniorrhaphy, hemorrhoidectomy, soft tissue tumor resection, cholecystectomy).
- Become familiar with the new technologies, i.e. laparoscopic equipment, sonography, sentinel lymph node biopsy.
- Develop leadership skills to become role model to your interns Teach the medical students
- Check X-Rays, blood work, understand how to interpret basic films In addition to ward rounds, round on and legibly document visits to the patients you operated on every day consults for your service.

PGY 2 – Term 1

- Continue to improve skills developed as a junior resident.
- Assume a more visible supervisory and leadership role in the surgical team.
- Become the resident responsible for the consultations on your service
- Coordinate and supervise PGY1s evaluative and consultative services and skills.

- Become an active liaison between the primary service, chief residents, and the surgical attendings.
- Become credentialed in the TIER III invasive procedures, and some of the Tier IV procedures.
- Become familiar with the more extensive surgical procedures, i.e. colectomy, exploratory laparotomy, basic and some of the advanced laparoscopic techniques and procedures.

GOALS AND OBJECTIVES 4

- Show graded and progressive levels of complexity and responsibility by more Participation in the basic and clinical sciences curriculum clinical assignments of the junior residents

PGY 2 – Term 2

- Improvement of skills developed in earlier years.
- Become credentialed in all tiers of invasive procedures.
- Establish complete responsibility of running the service under the direction of the supervising surgical attending.
- Coordinate all conferences in collaboration with the site director or attending responsible.
- Coordinate care for all patients on the service and consults.
- Scrub in operations on cases of complexity and variety suitable for the most senior resident on the service.
- Coordinate the in-house and outpatient experience that will assure optimal continuity of care.

- Present morbidities and mortalities on the service at the monthly meetings
- Participate in the selection process for the case presentation

PGY 3

- Supervise all aspects of management of the surgical patients on the respective services
- Provide leadership to the entire team of the surgical residents and medical students
- Assist faculty in daily clinical and educational activities of the department.
- Act as a teaching assistant to the junior residents, when appropriate under the supervision of the surgical attending
- Coordinate the multidisciplinary conferences with other services and assignment of the presentations to the senior and junior residents.
- Establish total continuity of care, and accept responsibility for the patients on the service, and even those on whom the chief resident was the operating surgeon on other services (e.g. when on call or covering other service).
- Assure that the outpatient experience for every rotation that optimizes the continuity of care.
- Assure that all clinical assignments in the chief year will be at the integrated sites.

- The operative cases will be of complexity appropriate for the chief resident.

GOALS AND OBJECTIVES 5

Medical Knowledge

All scheduled Seminars, Case presentations, Journal readings, Grand rounds, CME's, Workshops, Skill Courses, Conferences are "protected time" from routine clinical duties. Only in an event of a medical emergency the resident will be excused from attending these sessions.

PGY1 – Term 1

- The sessions are program-wise
- All residents are expected to attend 80% of sessions
- All residents, except those on call, are expected to attend the out of campus academic activities.
 - All residents are encouraged to read up on the topic in advance.
 - Power Point presentations from each session are available on the Department's computer for review and preparation for the Department's assessments and quizzes.
- All residents are expected to participate in the Core Curriculum meetings.
 - The senior residents will assign aspects of the presentation that will be appropriate for the level of the resident.

- The resident is expected to become a associate member of the ASI to be eligible to participate in the academic activities of ASI.
- The resident is expected to read the assigned topic and be prepared for the session
- For each topic-specific meeting.
 - Residents will receive orientation from the senior residents on the service and the faculty in charge as to where and when the sessions are held.
- The residents at all levels are expected to read standard surgical texts and journals.
- All categorical residents will participate in the term theory examination
 - Residents are expected to achieve a score of no less than 75% marks
 - After receiving scores, residents should review their results, and direct self-learning based on the results
- Residents are expected to teach medical students
- Residents are expected to come to the operating room prepared to discuss the particular case, regional anatomy, pathophysiology, steps of the operation.

PGY1 – Term 2

- The requirements above for the first term serve as the foundation from which the residents will acquire the habits for life-long learning and critical self-evaluation. will be assigned presentations commensurate with increased knowledge, ability and maturity.

- Residents should begin reading of surgical journals and focus on both
 - Broad based surgical knowledge
 - Reading focused on particular surgeries or clinical problems they encounter
- Focus reading for potential research opportunities after the concentration on the basic science in preparation for the exam

GOALS AND OBJECTIVES 6

- Preparation for the assigned cases
- Expand teaching responsibilities to medical students and interns

PGY2

- Continue to build on the medical knowledge foundation of the previous two terms
- Prepare more in-depth, researched, preparation for the assigned cases.
- Preparation of the Power Point presentation for the seminar or other session.
- Reading of the standard surgical texts, DOS curriculum, and supplemented by the journals.
- Preparation for the exam.
- Preparation for presentations at the departments and multi-specialty conferences
- Utilization of web-based resources, such as PubMed, WebMD, and on-line journals

- Teaching of the medical students and junior residents.
- Preparation for and participation in the semi-annual mock oral examination, which is patterned by DOS.

PGY3

- Building on the medical knowledge foundation of the previous two years
- Preparation of the Power Point presentation for the seminar or other session.
- Assist junior residents in preparation and execution of the talks, anticipate questions
- Preparation for the Morbidities and Mortalities Conferences at each rotation site.
- Presentation of the cases at the case presentation and grand rounds.
- Help choose the cases to present, who will present, and schedule the presentation
- Begin preparation for the PG examination after completion of the residency.
- Participation in the “Residents as Teachers” workshop.
- Didactic sessions with the Guide (faculty advisor)
- Practical sessions with the Guide (faculty advisor)
- Bring the program to the junior residents and medical students

Practice-based Learning and Improvement

PGY1

The residents are expected to utilize their own experience and assimilation of the scientific data for learning, reflection, and patient care improvement.

- Use internet resources, as well as the standard surgical texts to optimize learning.
- Develop on-going personal learning projects, which includes:
 - Dissertation data compilation and completion.
 - Maintenance of accurate, timely, and updated operative and performance log book

GOALS AND OBJECTIVES 7

- Maintenance of accurate, up-to-date credentialing for invasive procedures
- Timely submission of the dissertation review for documentation of credentialing
- Incorporation of all formal presentations into Teaching Portfolios/CV's
- Review of term examination results and learn about topics which were not answered correctly, to direct self-study
- Prepare for assigned elective operative cases by review of the regional anatomy, pertinent pathophysiology and steps of the surgical procedure.

- Come prepared to the OR- technically and in fund of knowledge
- Participation in morbidity and mortality conferences and the associated Quality Assurance process at each site.
- Participation in evidence-based, campus wide, DOS Core Curriculum.
- Use the Department's patient care portfolios to reflect on
 - The care rendered to the patient in the context of the global health care environment
 - The resident's appreciation of own contribution to the care of the patient.
- Review of the faculty and senior residents filled 1 assessment form/monthly evaluation to understand the resident's own weaknesses and strengths.
- Assure participation in meeting and discussing with the faculty guide/mentor/advisor, and the HOD during regularly scheduled meetings for the evaluations, and plan of correction if needed.

PGY2

- Continue to develop Practice-based Learning and Improvement from the junior years.
- Evaluations :
 - As more opportunities present to evaluate the performance of the senior residents our feedback and evaluations carry more importance, and will allow for an objective evaluation.

- Through feedback, deficiencies are better understood and the strengths will become more apparent. Residents should therefore take the opportunity and thoroughly review their evaluations, and use them as an objective guide for improvement.
- For identified deficiencies, residents should track the changes in evaluations for that topic.
- Also, consultation with their mentor to help institute change is encouraged.
- If a technical deficiency is noted on the evaluation, residents should use the department's resources (animal and inanimate labs), and faculty to work on the particular deficiency.
- Leadership skills
 - Resident at this level should become a leader to the junior residents, and students.
 - Active teaching, using techniques from our 'Resident as Teachers' program, of topics or skills will reinforce knowledge on particular topics.
- Teaching skills
 - Participate in the Department's 'Residents as Teachers' program. Faculty based, resident based and even video-taped sessions are valuable tools to understand individual style when presenting, and the associated strengths and weaknesses.
 - Using the techniques assimilated in these workshops to become a more effective teacher and a leader.

GOALS AND OBJECTIVES 8

- Preparation for the formal discussions and presentations using the library, information technology, other resources available at the department and the on-line resources.
- Residents participate in seminars and conferences.
 - Since Power Point presentations are presented at a formal meeting, and is a resource to anyone looking for the information on the topic, residents are encouraged to make them coherent, concise and accurate.

PGY3

- Assimilate into daily practice the lessons of the prior years, and build on this foundation the life-long practice of learning, reflection, and humility.
- Residents are responsible for running entire surgical services, resident schedules, cross covering of services, assignment of cases, coordination of care for patients.
- Residents are responsible for junior residents and students on their service
- Residents establish themselves as leaders and diplomats of the Department and its residency program, and should realize that they will leave a legacy of their chief year. They are encouraged to make their legacy one that the students and junior residents will aspire to emulate.

Interpersonal and Communication Skills.

PGY1

- From the beginning of training, residents are expected to develop communication skills that result in effective and professional communication with patients, patients' families and members of the health care team. They are expected to
 - Participate in the outpatient clinics and ward rounds.
 - Take appropriate history and performing a physical exam.
 - Document accurate and appropriate information in the patient's medical record.
 - Create the plan of care and presentation of the patient to the faculty member in charge of the patient.
 - Initiate the plan of care discussion with the patient
- The resident should be present when the attending assesses the patient and discusses the disease process and plan of care with the patient.
 - Residents should participate in the discussion with the patient's family members.
- When asking for consultation, residents should provide accurate information to the consulting service, such as when a radiological test is requested or a specialist is requested.
- Hand writing must be legible, and the signature should be followed with a stamp or printed name.

- Effectively and professionally communicate with all members of the health care team, including
 - Discharge planning for admitted patients.
 - Provide the necessary information to the social service, case managers, and when necessary assistance with the required forms in preparation for the discharge.
- Residents should appreciate and respect different ethnic and religious beliefs of the patients.

GOALS AND OBJECTIVES 9

- When needed, should use the translation services,
 - The residents are expected to be teachers and role models to the medical students, and extensive series of workshops entitled “Residents as Teachers” was undertaken by the department with assistance from the Dean’s office.

PGY2 – Term 1

- As the level of clinical responsibility increases, the importance of the ability to communicate effectively will become more important.
- Residents at this level will be seeing patients in the Emergency Department, and as consultants for in-house patients.
- When a consultation is requested, the response to the consultation must be prompt and courteous to the referring service. Remember that you are building habits and frequently relationships that will become

important to you in the future.

- Assess the patient, and in a non-emergent situation allow yourself time to think.
- Don't feel pressured to come up with the immediate diagnosis, or plan of care. Seek opinions from your seniors and other physicians if needed.
- Reflection and thought are very useful to the surgeon and the patient.
- Do not be influenced by the opinion of others, and evaluate the patient and the data independently, without any preconceptions.
- Discuss your impression with the patient, the referring team, and the senior/chief resident or a surgical attending.
- These concepts hold true for evaluating the patients anywhere in the hospital, or in the outpatient facility.
- If the situation is urgent, immediately summon help. You always have an option of calling for help from senior physicians around you, calling a code or activating the Rapid Response Team. Make sure your supervising residents and attendings know the situation.

PGY2 – Term 2

- Based on the foundation of information and experience acquired in the junior years, residents at this level need to communicate professionally and effectively at a more advanced level.
- The outline above should be reviewed.

- Accurate communication with residents at all levels, students, different services, and attendings is more important than ever.
- Remember that frequently the information you will have to convey will be to those with less experience than you.
- Be patient! Remember that you had less experience in the recent past. Always be a teacher to those less experienced, in a professional and not condescending manner.
- Write timely and legible consultations.
- Resident as role models is important- you should assist junior residents with acquiring good communication skills.
- Communicate with the patients and when appropriate the patient's families courteously and professionally.

GOALS AND OBJECTIVES 10

- Remember that most times these will be lay people, who are in a stressful environment and sick. Effectively communicate with the vocabulary that will be understandable to the patient. Request a translator if needed.
- Communicate with consulting services courteously, professionally and accurately.
- Conflicts may arise, and management of these conflicts reflects on the resident, the service, the attending, the Departments and our entire profession.

PGY3

- Become a leader of the surgical team using graduated experiences of the prior years.
- Being a leader requires delicacy, skills of diplomacy, and profound respect for the patients and all members of the health care team.
- Appreciate the strengths and weaknesses of your team. It is easy to work with the “good” residents. Working with the average resident will challenge your skills as a leader, and a communicator.
- Be patient!
- Most residents will perform the tasks well, with supervision, guidance and appropriately timed and tempered feedback and critique.
- If you have to counsel or reprimand a junior resident do it privately.
- Do not insult anyone! We work in the environment that is diverse and cultural sensitivities should be taken into account when we talk to the patients and other health care team members.
- If you have a disagreement with any member of the health care team, attempt to resolve it amicably and not in the presence of a patient.
- Escalate to the supervising attending any unresolved matters.
- Always act professionally, and withdraw from a potentially more difficult situation.

- Report the matter to the supervising attending, day or night.

Professionalism

PGY1

- Residents are expected to be ethical and professional.
- Professionalism is expected in all clinical arenas—bedside, operating room, outpatient department, and hallways/elevators.
- Respect patient privacy.
- Do not discuss anything related to patient care issues in public places.
- Understand patient privacy issues and legal aspects of patient confidentiality.
- Lectures on physician impairment are arranged annually by the Department.
- These will define and address the prevalence of the problem, effects on a physician as a person and how it may potentially affect physician's personal life and impact the patient care.
- The residents are expected to act professionally towards all members of the health care team and other co-workers.

GOALS AND OBJECTIVES 11

If at any time any resident feels that they felt persecuted, harassed, or threatened in any form they should immediately report their concerns to the faculty member, unit in charge,

or his designee, or the HOD, and the appropriate action and referrals will be made.

- The Department's Annual lecture on physician stress, will help the resident to identify signs of stress in themselves and their colleagues.
- Timely record completion is expected, including
 - medical records, operative dictations, and discharge summaries
 - residency operative logs, submission of the credentialing notes and reviews for procedures
 - evaluations of rotations, annual evaluations of attendings and the program
- Remember that the hospital is the workplace for us, but for the patients it is temporary home.
 - Be respectful to the patients
 - Patients' areas are therefore their private space, which we enter out of necessity.
 - Knock on the door, if the door to the room is closed.
 - Most of the time there are many patients in the hall, and to get to the patient away from the door you will have to traverse the space of a person. A quick apology, a greeting and a smile will make the intrusion much less offensive.
 - Surgeons frequently make rounds in the very early hours, and with large teams. Try to awaken the patient gently, and ask permission to examine them.
 - Close the curtain, respecting the patient's privacy.

- Although frequently difficult to maintain privacy in a small room make every effort to do so.

PGY2

- Lead by example
 - Show compassionate patient care which is ethical and respectful.
- Demonstrate professionalism by preparation for the elective cases, pre-operative assessment of the patient, and conduct in surgery that is deferential to the patient and to the experience of the supervising attending. Follow the patient after the surgery with daily progress notes.
- Communicate with the attending surgeon daily to coordinate the post-operative care of the patient.
- When appropriate provide the patient with the pertinent information, deferring to the attending surgeon discussions dealing with difficult matters, such as complications, and prognosis and treatment plan in cancer patients.
- Be present when these discussions do take place, as this will provide you with the important lessons for the future. It is also usually comforting to the patient to see familiar faces when receiving bad news.
- Dress appropriately with attention to personal and hospital hygiene.

PGY3

- Lead by example

- At this stage of your training you are expected to be a leader in a professional organization.
- The position of a chief surgical resident perceived to be one of great power, responsibility and brevity.

GOALS AND OBJECTIVES 12

- But, there must be a sense of humility and appreciation that physicians are lifelong students at various stages of personal and professional development.
 - Treat your juniors as you wanted to be treated by your chief when you were an intern.
 - Treat your patients as you would want to be treated if you were in their place.

Systems-based Practice.

PGY1

- Residents are expected to demonstrate awareness
 - Differences between hospitals
 - Differences between health care systems, insurance companies
 - National QA initiatives such as the Joint Commission, core measures, Infection Control programs, DVT prophylaxis and must work effectively in their context.
- Resident's portfolios address the issues of resident's involvement in the care of a particular patient. It gives the resident an opportunity to reflect on how they contributed to the care of the patient in the contexts above and how they felt as a participant.

- Participation in the multiple multi-disciplinary conferences is valuable in demonstrating and teaching the residents the practice of medicine in the context of a global health care delivery.
- Case management conferences are important for demonstrating the close and necessary ties between clinical and other services, especially in the discharge planning arena.
- Familiarization with the MCI standards, National Patient Safety Goals, Department of Health Regulations are mandated and the instruction given.
- Professional Secrecy regulations, patient privacy issues are to be understood and respected. Instructions are given to the residents.
- Participation in the Department's Quality Assurance process is assured.
- The residents are required to comply with the department's administrative policies:
 - Operative Procedure log books
 - Submission of notes and reviews for credentialing for invasive procedures
 - Program and attendings' evaluations
 - Monitoring of the news and developments on the department's front, and periodic checking of the notices, as important communications are sent to the residents through these.

PGY2

- Participation in Department Quality Assurance projects,

such medicine reconciliation, perioperative use of antibiotics, DVT prophylaxis protocol implementation will provide the residents with valuable experience and appreciation of health care delivery in a more global context.

- Participation in discharge rounds will provide the residents with understanding of the discharge process, steps necessary to arrange for social services, arranging for the visiting nurse or home health aids.

GOALS AND OBJECTIVES 13

- Participation in multi-specialty conferences will offer the residents the unique opportunity to benefit from the knowledge and experience of the faculty members from different departments.
- The residents will be able to incorporate this acquired appreciation of the multi-specialty approach to patient care in their own practice.

PGY3

- Senior and chief residents are expected to not only understand the above issues of System- Based Practice, but also appreciate the differences at each site where they rotate, as every institution is unique. They should help the junior residents to navigate through the difficulties that working in an unfamiliar institution may pose.
- Participation in the institutional and department's quality assurance committees, such as Root Cause Analysis, where complex cases with an unexpected

outcome are discussed in a multispecialty group involving hospital and nursing administration in addition to the clinical services.

- Participation in the Resident Subcommittee of the GRC and CC and REC Committee provides our residents with hands-on involvement in charting the academic course of the institution. Residents' concerns are discussed, and then presented by the resident representative at the EC Committee.

GOALS AND OBJECTIVES 14

Goals and Objectives Surgical Critical Care (SICU)

Goals - Critical Care is an integral aspect of surgical training that brings together all of the skills of general surgery, including diagnostic techniques, operative techniques, and patient care. The goal of the ICU rotation is to provide PGY2 and PGY3 residents with understanding of the critically ill patient that allows them to provide safe, competent care. The rotation will give the resident the necessary background knowledge to care for the critically ill surgical patient as well as an understanding of the multi-disciplinary nature of critical care in the pre- and postoperative care of surgical patients.

Patient Care -

Residents will be expected to provide patient care that is effective, compassionate, appropriate and up to date for the treatment of the critical care surgical patient. The resident will learn the importance of a systematic approach to the patient as well as the technical skills necessary to perform

the common procedures encountered in the SICU.

PGY2

- Become familiar with the various modes of mechanical ventilation
- Understand the appropriate use of the various modes of ventilation
- Interpret flow, pressure and volume waveforms displayed on the ventilator.
- Understand and use various weaning techniques from the ventilator including criteria and techniques for extubation.
- Display the necessary skills to manage airways in the ICU.
- Display the necessary skills for safe placement of central lines
- Initiate appropriate treatment and diagnostic evaluations of an acutely decompensating patient.

PGY3

- Become a leader in the patients care team in the SICU
- Prepare the team for attending bedside teaching rounds
- Coordinate the care of the patient with the Trauma and General Surgery teams
- Supervise junior residents who are not credentialed in some invasive procedures and help them get credentialed.

- Log the non-operative trauma cases and complex cases into the log book.

Medical Knowledge

Residents will be expected to acquire knowledge regarding the anatomy, physiology and pathophysiology of the organ systems involved in critical care medicine.

GOALS AND OBJECTIVES 15

PGY2

The residents at the PGY2 and at the PGY3 levels will be exposed to the same clinical curriculum at the bedside rounds and didactic conferences. The PGY3 resident on the service is expected to be the leader of the team and teacher to the junior residents, as they have significant experience and knowledge acquired in the past years. Exposure and experience with Endoscopy, such as bronchoscopy, EGD and PEG under the direction of the surgical attendings provided.

- Cardiovascular System
 - Hemodynamic patterns and diagnostic workup of shock and cardiac failure
 - Diagnosing and managing Cardiac Arrhythmias
 - Diagnosis and management of Cardiac Ischemia and Infarction
 - Understand the concepts of oxygen delivery and consumption and be able to work with the formulas
 - Understand the mechanics, indications and interpretation of various hemodynamic parameters including CVP, Wedge, Cardiac Output, SVR

- Understand the impact of cardiovascular problems on other organ systems.
- Respiratory System
 - Understand basic respiratory physiology, including work of breathing, neural control of breathing, compliance and resistance.
 - Blood Gas interpretation, differential diagnosis and management (see renal section below)
 - Differential diagnosis and diagnostic approach to respiratory failure
 - Understand pathophysiology of obstructive and restrictive lung disease
 - Understand the cause, diagnosis and management of ARDS
 - Understand physiologic effects of mechanical ventilation on cardiovascular function.
 - Diagnosis and Management of Ventilator and Hospital acquired pneumonia as well as protective strategies to prevent them.
 - Prevention, Diagnosis and Management of Pulmonary Embolism.
- Neurologic
 - Understand the pharmacology and use of sedatives, pain medication and paralytics in the ICU
 - Understand the physiology, treatment and techniques of management of intracranial pressure as well as the indication for ICP monitoring

- Understand the diagnostic workup, pathophysiology and management of ICU delirium and decreased mental status
- Understand the differential diagnosis and workup of neurological deficits, Seizure management and diagnostic issues.
- Learn how to manage Closed Head Injuries in concert with neurosurgery.
- Endocrine
 - Understand the response to stress in the surgical patient
 - Understand the differential diagnosis, diagnostic approach and treatment of DKA and hyperosmolar coma.
 - Understand the importance of and techniques of glucose control in the ICU in both
 - diabetic and non-diabetic patients
 - Understand the concepts of relative adrenal insufficiency and its evaluation and management in critically ill patients.

GOALS AND OBJECTIVES 16

- Renal, acid-base and Electrolyte.
 - Understand the diagnostic workup and management of acute renal failure.
 - Understand the concepts of renal blood flow, clearance, and GFR.

- Understand the criteria and methods of hemodialysis
- Differential diagnosis and workup of electrolyte abnormalities as well as management
- Differential Diagnosis and workup of Acid-base abnormalities as well as management.
- Nutrition
 - Understand and be able to perform a nutritional assessment
 - Calculating caloric, protein and other nutritional needs
 - Understand the variety as well as placement techniques of a variety of enteral feeding tubes.
 - Understand the indications for TPN and be able to formulate TPN orders.
 - Understand the indications for enteral feeds and be able to write enteral feeding orders with indicated formulations.
 - Understand the unique nutritional needs of hepatic and renal failure patients.
- Gastrointestinal
 - Understanding the pathophysiology and management of hepatic cirrhosis including Portal Hypertension.
 - Understand the pathology, diagnosis and management of hepatic failure.
 - Understand the pathology, diagnosis and

management of pancreatitis as well as normal pancreatic anatomy and function

- Understand the differential diagnostic workup and management of GI Bleeding.
- The pathology and management of abdominal compartment syndrome.
- Hematologic
 - Understand the indications and usage of blood products.
 - Understand the workup and management of anemia
 - Understand the workup and management of hypercoagulable states and coagulopathies.
- Infectious Disease.
 - Understand the diagnosis, workup and management of septic shock.
 - Understand the importance of early goal directed therapy in sepsis
 - Understand the microbiology, pathology and treatment of infections in the surgical patients including, pneumonia, Intra-abdominal sepsis, catheter related sepsis and urosepsis
 - Understand the pharmacology, indications and appropriate use of antibiotics in the ICU including prophylactic use.

Practice Based Learning

PGY2

The SICU resident will re-evaluate their care of the patient and review relevant literature. Residents in the SICU will identify areas for improvement and implement strategies to continually improve their patient care.

GOALS AND OBJECTIVES 17

PGY3

The senior resident will assist the junior resident to evaluate and assess the junior resident's patient care. Portfolios entries are mandated for all residents.

Interpersonal and Communication Skills

PGY2

The care of the critical care patient is a complex multidisciplinary procedure that requires the coordination of many different disciplines. The resident should develop leadership skills that will enable him/her to maximize the effectiveness of the diverse critical care team. The resident should be able to develop interpersonal skills and communication skills that facilitate and result in effective communication across disciplines as well as an effective exchange of information between health care providers, families and administrators. The resident will learn to interact professionally and respectfully with the consulting physician and the primary care team. The resident will learn to maintain timely, complete and appropriate notes in the medical record.

PGY3

The senior resident on the service, the PGY3 is the team leader, under the supervising attending's leadership, for the care of the patient. The senior resident will coordinate the care, prepare the team for rounds, and communicate with the ancillary clinical services. The communication skills, leadership and professionalism are of paramount importance in the highly charged environment of the SICU. The senior resident will be guided by the seasoned full-time faculty.

Professionalism

PGY2

The ICU is a high intensity area and high stress area that requires the Critical Care Resident to behave professionally at all times. Residents are expected to

- Demonstrate respect, compassion and integrity in relationships with family, patients and staff
- Demonstrate sensitivity and responsiveness to cultural issues, age, gender, and religious differences
- Understand and be able to participate in the process of informed consent.
- Understand the ethical and legal issues that ICU patients including DNR, withdrawal of support, and end of life issues.

PGY3

- The senior resident on the service will provide the professional leadership and demeanor expected of a

surgical resident responsible for a high-volume and high-intensity service. The senior resident will act professionally towards the ancillary, and nursing staff. The senior resident will coordinate the care of the patient in the context of a multi-disciplinary team.

- Conflict resolution methods emphasized.
- The senior resident is expected to acquire and implement into the daily practice the methods of the “Residents as Teachers” workshops.

GOALS AND OBJECTIVES 18

System Based Practice

PGY2

The care of the critical care patient is a complex multi-disciplinary process that stretches the resources of the health care system. It is important the critical care resident to learn how to effectively call upon the wide range of system resources available while not wasting resources that are not needed or effective. The critical care resident must coordinate the care of the patient within this complex health care system.

PGY3

The senior resident on the SICU service will coordinate the discharge and transfer planning for the patients in the SICU, under the direct supervision of the supervising surgical attending.



Department of
**Obstetrics &
Gynaecology**

The specialty of OBS/GYN is devoted to the healthcare of women. Residency training in the department of OBS/GYN is thus directed towards managing normal and abnormal processes of the female reproductive system, including the medical and surgical treatment of gynaecologic disorders, pregnancy and childbirth and preventive medical care.

Residency training in OBS/GYN consists of three years. Each resident rotation emphasizes the development of analytical skills that would prepare the physician for an intellectual approach to problem solving. The department encourages the development of strategies that promote an atmosphere of learning and personal development. Special emphasis is placed on the acquisition of skills, values and attitudes needed in medical practice, more so than on the development of a short-sighted information-intensive approach, and build-up of factual information.

Educational objectives include promoting cognitive and behavioural learning through close and direct assistance and supervision by attending physicians, and weekly conferences and seminars.

Additional Goals

The aim of this curriculum is to provide physicians with a complete and adequate training in OBS/GYN. The introduction of technologic advances into the field of OBS/GYN has significantly changed the map of patient care, leading to a high influx of new diagnostic and therapeutic modalities. It is the department's priority to provide residents with an adequate exposure to such new technical advances in medicine, namely in the fields of endoscopic surgery and

assisted reproductive technology.

Residents are also required to handle and analyze complex information and data, and hence should be skilled in information and computer management, and knowledgeable in statistics.

Since residency is only a single aspect of a lifetime education, residents are encouraged to develop a life-long pattern of independent self-assessment in the cognitive and technical aspects of the practice, and develop strategies to continually improve the delivery of healthcare by attending to continuing medical education programs. Emphasis is also made on the development of a scientific mind that enables the physician to develop a pattern of learning that meets the demands of healthcare.

In addition to the development of cognitive and technical skills, the department is interested in promoting ethics. Residents are expected to function in an ethical and informed manner, and to be sensitive to the delicate psychological needs of patients. They should also demonstrate responsibility to patient education, and protect patients' confidentiality. Effective communication skills should be developed with patients and fellow colleagues. Resident physicians have the added responsibility to teach medical students and junior residents.

There are six competencies that the residents will be taught and evaluated of during their tenure in our program:

A. Patient Care

Residents must be able to provide patient care that is compassionate, appropriate and effective for the treatment

of health problems and the promotion of health.

B. Medical Knowledge

Residents must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioural sciences, as well as the application of this knowledge to patient care.

C. Practice-based Learning and Improvement

Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence and to continuously improve patient care based on constant self-evaluation and life-long learning.

D. Interpersonal and Communication Skills

Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families and health professionals. Residents are expected to communicate effectively with patients, families and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds

E. Professionalism

Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.

F. Systems-based Practice

Residents must demonstrate an awareness of and responsiveness to the larger context and system of healthcare, as well as the ability to call effectively on other resources in the system to provide optimal

healthcare. Residents are expected to work effectively in various healthcare delivery settings and systems relevant to their clinical specialty

Commitment of Faculty

- 1) As role models, we will maintain the highest standards of care, respect the needs and expectations of patients and embrace the contributions of all members of the healthcare team.
- 2) We will ensure that all components of the educational program for resident physicians, including our contributions, are of high quality.
- 3) We will nurture both the intellectual and personal development of residents by fostering academic excellence, exemplary professionalism, cultural sensitivity, and a commitment to maintaining competence through life-long learning
- 4) We will demonstrate respect for all residents without regard to gender, race, national origin, religion, disability or sexual orientation; and we will cultivate a culture of tolerance among the entire staff.
- 5) We will ensure that resident physicians have opportunities to frequently participate in various patient care activities and ensure that they are neither assigned excessive clinical responsibilities nor overburdened with services of little or no educational value.
- 6) We will provide resident physicians with opportunities to exercise graded, progressive responsibility for the care of patients, so that they can learn how to practice

their specialty and recognize when, and under what circumstances, they should seek assistance from colleagues thus allowing them to function effectively as members of the healthcare team.

- 7) In fulfilling the essential responsibility, we have to our patients, we will ensure that residents receive appropriate supervision for all of the care they provide during their training.
- 8) We will evaluate each resident's performance on a regular basis, provide appropriate verbal and written feedback and document achievement of the competencies required to meet all educational objectives.
- 9) We will ensure that resident physicians have opportunities to participate in required conferences, seminars and other non-patient care learning experiences and that they have sufficient time for self-learning essential for acquiring the knowledge, skills, attitudes and behaviors required for practice.
- 10) We will support residents in their role as teachers of other residents and of medical students.

Research Project

Each resident is required to take part in a clinical research project prior to graduation. All residents are required to present their proposals and are required to present their completed project. Completion of a research project and submission of a thesis is required in order to be eligible to appear in the University Exams. All residents are required to have at least one publication, a poster presentation

and a platform presentation of a paper during their three years. Research projects undertaken for the thesis could be presented on different for a.

Expectations

The expectations of this project are to establish and maintain an environment of inquiry and scholarship, including discovery, dissemination, application and mentoring. The goals of our resident research experience are:

- 1) To gain an understanding that medical progress is based on basic and clinical innovation and discovery
- 2) To develop critical thinking skills
- 3) To develop, understand and thoroughly discuss the basis for choices and decisions related to a resident's own research project
- 4) To gain an appreciation for measures of quality in research endeavors
- 5) To gain an appreciation and understanding of how collaboration and teamwork are essential for successful research

Educational Goals and Objectives

PG- 1st YEAR

Educational Objectives: During this year, training physicians acquire basic knowledge in OBS/GYN and develop a problem-solving approach to common obstetrical and gynecologic diseases and will get introduced to basic obstetrics.

DELIVERY SUITE AND OBSTETRICS ROTATIONS

GOALS AND OBJECTIVES :

General exposure to all aspects of inpatient obstetrics including intrapartum and postpartum management.

CORE COMPETENCIES :

Patient Care

- Manage patients on postpartum floor including all order writing, test ordering, discharges
- Participate in management of patients in Delivery Suite including admission, assessment of labor progress and fetal heart tracings
- Perform vaginal deliveries, assist in cesarean deliveries
- recognize common issues of pregnancy vs. emergency issues requiring further evaluation
- Insert IUDs during postpartum period
- Respond to emergencies arising in Delivery Suite, postpartum, antepartum services Medical Knowledge
- Understand maternal physiology and changes that occur in the antenatal, labor, and postpartum periods
- Understand prenatal care and routine screening
- Understand common antepartum complications and appropriate evaluation and management as outlined by PEC guidelines
- Know indications for admission Delivery Suite for observation vs. delivery

- Know stages of labour and be able to recognize normal and abnormal labour
- Understand indications for operative and cesarean delivery
- Understand and interpret intrapartum fetal heart tracing guidelines
- Perform OB ultrasound for dating, biophysical profiles
- Become adept at vaginal delivery and operative skills needed for cesarean delivery and laceration repair
- Understand possible postpartum complications of normal vaginal delivery and cesarean delivery
- Become familiar with post-operative care as relates to cesarean delivery
- Understand physiology of breastfeeding and be able to troubleshoot common related issues
- Learn principles of midwifery

Interpersonal and Communication Skills

- Be able to counsel patients regarding contraceptive options
- Work with Social Work team to optimize conditions for mother and child upon discharge, when applicable
- Communicate with patients and families in an urgent care setting
- Optimize care provided by healthcare team by communicating with nursing staff, anaesthesia, pediatrics.

- Master a standardized effective sign-out process for optimal transitions of care Professionalism.
- Demonstrate respect, compassion, integrity and responsiveness to needs of patients in labour and postpartum.
- Work with nursing towards common patient-centered care approach.
- Participate in Quality Improvement and Patient Safety initiatives Practice-Based Learning and Improvement.
- Prepare to discuss management of patients on service using evidence-based medicine.
- Participate in work and teaching rounds in Delivery Suite and postpartum care
- Attend Morning Conferences Systems-Based Practice.
- Attend M&M conferences to improve patient safety, learn from errors, become informed about complex medical issues.

AMBULATORY ROTATION

GOALS AND OBJECTIVES :

General exposure to common women's health issues in the outpatient setting.

CORE COMPETENCIES :

Patient Care

- Perform routine well-woman examinations with familiarization of periodic health assessment based on age

- Perform routine and high-risk OB care in the outpatient setting with attention to periodic screening
- Exposure to women's healthcare in comprehensive setting
- Exposure to non-OB/GYN specialties related to women's health (Dermatology, Gastroenterology, Breast)
- Common medical problems (diabetes, hypertension, hypercholesterolemia) and how they affect the reproductive system
- Routine OB screening tests and timing
- Become familiar with OBS ultrasound—First trimester screening and Level 2
- Know screening options for genetic disorders in pregnancy
- Become familiar with benign breast disorders
- Understand diagnosis and treatment of breast cancer

Interpersonal and Communication Skills

- Eliciting accurate, focused, appropriate history and performing thorough physical exam
- Understanding the needs of the well-woman presenting for an outpatient visit and incorporating education, preventive medicine into a meaningful encounter
- Professionalism
- Maintaining a professional appearance
- Introducing self to patient and/or family
- Develop and maintain habits of punctuality and efficiency

- Work with attending physicians to shadow, model encounters Practice-Based Learning and Improvement
- Demonstrate responsiveness to instruction and feedback
- Use knowledge from textbooks, websites, and up-to-date studies to guide patient care Systems-Based Practice
- Understand patient referrals and interaction between ambulatory centers/ subspecialty clinics.

GYNAECOLOGY ROTATION

GOALS AND OBJECTIVES :

Exposure to all aspects of gynaecology.

CORE COMPETENCIES :

Patient Care

- Scrub on operating room cases, primarily outpatient cases, hysteroscopy, basic laparoscopy
- Perform endometrial biopsy, IUD placement
- Participate in postoperative care for Benign Gynecologic surgery patients as well as inpatient admissions
- Participate in postoperative care for Urogynecology and REI patients as well as inpatient admissions
- Care for OB/GYN patients in the outpatient setting
- Participate in preoperative counseling: counsel patients regarding medical vs. surgical management of benign gynecologic conditions

Medical Knowledge

- Become familiar with abdominal wall opening and closure
- Be familiar with suture selection
- Know principles of electrosurgery
- Understand and execute surgical procedures including: basic laparoscopy/ hysteroscopy, D&E, CKC
- Know medical and surgical management of abnormal intrauterine pregnancy, ectopic pregnancy
- Know diagnosis, medical and surgical management of lower tract infections vs. upper tract infections/ PID
- Understand the menstrual cycle and differential diagnosis for alterations of
- Know options for treatment of acute vaginal bleeding
- Postoperative management and treatment of complications

Interpersonal and Communication Skills

- Work with other services to provide emergency and/or consult care appropriately under supervision of senior resident
 - Preoperative counseling and informed consent for hysteroscopy, laparoscopy, D&C, BTL
 - Offer a team-based approach to patient-centered care with attending, resident, nurse practitioner
 - Address advanced directives for gynecologic admissions
- Professionalism

- Review procedures and patient history prior to participation in surgical procedure
- Respond to consult requests in a timely manner
- Participate in medical student education Practice-Based Learning and Improvement
- Participate in work and teaching rounds

Systems-Based Practice

- Attend M&M conferences to improve patient safety, learn from errors, become informed about complex medical issues
- Be familiar with criteria for inpatient hospitalization and review daily to ensure proper utilization of resources

PG 2nd YEAR

Educational Objectives :

1. PGYII residents are trained to develop a practical and comprehensive approach to general obstetrics (including antepartum, intrapartum, and postpartum management and care) and family planning (including contraception). They also learn the basic technical skills for normal and operative obstetrical birth. Residents also acquire a complete understanding of routine screening in gynecology and preventive medicine.
2. They are requested to organize and present weekly Journal Clubs, using an analytical approach to recent developments in the field.

DELIVERY SUITE

GOALS AND OBJECTIVES :

Continued general exposure to all aspects of obstetrics with focus on operative vaginal deliveries and cesarean delivery, maternal and fetal assessment and development of labor management skills especially in patients with high-risk pregnancies.

CORE COMPETENCIES :

Patient Care

- Actively manage laboring patients admitted to Delivery Suite
- Participate in operative vaginal deliveries and complicated cesarean deliveries
- Participate in management of antepartum patients admitted to Delivery Suite
- Care for OBS/GYN patients in the outpatient setting

Medical Knowledge

- Understand normal and abnormal labor as well as indications for operative and cesarean delivery
- Know management of term and preterm delivery with associated medical complications
- Become familiar with principles of Obstetric anesthesia
- Be familiar with obstetric emergencies and team-based management i.e. shoulder dystocia, stat cesarean delivery, postpartum hemorrhage, breech

Interpersonal and Communication Skills

- Communicate with patients and families in an urgent care setting
- Optimize care provided by healthcare team by communicating with nursing staff, anesthesia, pediatrics
- Master a standardized effective sign-out process for optimal transitions of care

Professionalism

- Demonstrate respect, compassion, integrity, and responsiveness to needs of patients in labor and postpartum
- Work with nursing towards common patient-centered care approach
- Communicate with senior residents and faculty with regards to changes in patient status
- Participate in Quality Improvement and Patient Safety initiatives

Practice-Based Learning and Improvement

- Prepare to discuss management of patients on service using evidence-based medicine
- Participate in work and teaching students and junior residents on Labor Floor and Postpartum Service
- Attend M&M conferences to improve patient safety, learn from errors, become informed about complex medical issues

- Attend Morning and core curriculum Conferences
- Adopt and encourage debriefing as critical component of team-based care and practice-based learning

Systems-Based Practice

- Adopt Labor and Delivery protocols and pre-printed orders

AMBULATORY ROTATION

GOALS AND OBJECTIVES :

General exposure to common women's health issues in the outpatient setting.

CORE COMPETENCIES :

Patient Care

- Perform routine well-woman examinations with familiarization of periodic health assessment based on age (second six-months of the year)
- Perform routine and high-risk OBS care in the outpatient setting with attention to periodic screening
- Exposure to non OBS/GYN specialties related to women's health (Dermatology, Gastroenterology, Breast)
- Exposure to specialized OBS/GYN evaluation in urogynecology, OBS Ultrasound

Medical Knowledge

- Periodic health assessment, age-base
- Become familiar with OBS ultrasound—First trimester screening and Level 2

- Know screening options for genetic disorders in pregnancy
- Understand mammogram screening guidelines and interpretation
- Become familiar with benign breast disorders
- Understand diagnosis and treatment of breast cancer

Interpersonal and Communication Skills

- Eliciting accurate, focused, appropriate history and performing thorough physical exam
- Understanding the needs of the well-woman presenting for an outpatient visit and incorporating education, preventive medicine into a meaningful encounter

Professionalism

- Maintaining a professional appearance
- Introducing self to patient and/or family
- Develop and maintain habits of punctuality and efficiency
- Work with attending physicians to shadow, model encounters

Practice-Based Learning and Improvement

- Demonstrate responsiveness to instruction and feedback
- Use knowledge from textbooks, websites, and up-to-date studies to guide patient care

Systems-Based Practice

- Understand the basics of insurance, documentation, and coding principles
- Understand patient referrals and interaction between ambulatory centers/ subspecialty clinics

PG 3rd YEAR

Educational Objectives :

1. Physicians at this level learn to develop a practical and comprehensive approach to prenatal counselling and the management of high risk conditions in obstetrics. They also perfect essential technical skills in operative vaginal and abdominal obstetrical birth as well as laparoscopic surgeries. They acquire surgical skills in operative gynecology. They are responsible to be involved in the care of all the OPD patients (OBS/GYN) and be consultants to the junior students. They are expected to be in the OPD on a daily basis and follow up on their OPD continuity clinics.
2. Residents are requested to present weekly journal clubs, covering specialized and controversial topics in OB/GYN.

OBSTETRICS ROTATION

GOALS AND OBJECTIVES :

Exposure to all aspects of normal and high-risk pregnancies, active management of labor, and supervision of the labor floor.

CORE COMPETENCIES :

Patient Care

- Actively manage laboring patients admitted to Labor Floor
- Participate in operative vaginal deliveries and complicated cesarean deliveries
- Participate in management of antepartum patients admitted to Labor Floor
- Participate in postpartum care for women with complicated deliveries
- Care for OB/GYN patients in the outpatient setting

Medical Knowledge

- Prenatal diagnosis and treatment
- Understand and teach fetal and maternal invasive and noninvasive monitoring
- Repair of 3rd and 4th degree lacerations

Interpersonal and Communication Skills

- Be able to counsel patients regarding vaginal delivery, operative vaginal delivery, vaginal birth after cesarean, cesarean delivery
- Communicate with patients and families in an urgent care setting
- Optimize care provided by healthcare team by communicating with nursing staff, anesthesia, pediatrics, obstetrics

- Provide thorough, concise sign-out to night team
Professionalism
- Provide effective mentoring and role modeling for junior residents and students

Practice-Based Learning and Improvement

- Assist Antepartum Chief with outpatient management of prenatal care for high-risk obstetric patients Attend Perinatal Neonatal Conference Systems-Based Practice
- Present at M&M conferences to improve patient safety, learn from errors, become informed about complex medical issues

GYNAECOLOGY- BENIGN ROTATION

GOALS AND OBJECTIVES :

Exposure to all aspects of benign gyn surgery with further development of operative skills and techniques and expertise in postoperative management

CORE COMPETENCIES :

Patient Care

- Participate in postoperative care for Benign Gynecologic surgery patients as well as inpatient admissions
- Attend to emergency room and become familiar with gynecologic surgical emergencies and admissions
- Care for OBS/GYN patients in the outpatient setting
- Counsel patients regarding medical vs. surgical management of benign gynecologic conditions

Medical Knowledge

- Pelvic anatomy
- Understand surgical procedures including: operative laparoscopy/ hysteroscopy, abdominal/vaginal/ laparoscopic hysterectomy, myomectomy
- Postoperative management and treatment of complications

Interpersonal and Communication Skills

- Assist chief with delegation of responsibilities and with teaching of junior residents
- Work with other services to provide emergency and/or consult care appropriately
- Pre and post-surgical counseling
- Provide informed consent Professionalism
- Provide effective mentoring and role modeling for junior residents and students
- Respond to consult requests in a timely manner

Practice-Based Learning and Improvement

- Provide educational experiences to GYN team with presentations of consults
- Participate in work and teaching rounds
- Attend weekly M&M Conference Systems-Based Practice
- Present at M&M conferences to improve patient safety, learn from errors, become informed about complex medical issues.

GYNAECOLOGIC ONCOLOGY ROTATION

GOALS AND OBJECTIVES :

Exposure to all aspects of Gyn Oncology including operative technique, pre and post-operative management, chemotherapy. This rotation is designed to give the resident experience in managing a surgical service as the primary decision-maker working closely with the attending physician.

CORE COMPETENCIES :

Patient Care

- Assess the need for admission to inpatient service for patients presenting through office or emergency room

Medical Knowledge

- Advanced management of the GYN oncology surgical and post-operative patient
- Surgical approach to the treatment of gynecologic malignancies and staging procedures
- Principles of chemotherapy and radiation

Interpersonal and Communication Skills

- Provide compassionate care to patients who are critically ill, coping with cancer diagnosis and associated treatments
- Coordinate inpatient and outpatient care

Professionalism

- Provide effective mentoring and role modelling for junior residents and students

Practice-Based Learning and Improvement

- Conduct morning rounds
- Participate in afternoon rounds with Oncology faculty
- Participate in GYN oncology conferences and case presentations

Systems-Based Practice

- Present at M&M conferences to improve patient safety, learn from errors, become informed about complex medical issues

REPRODUCTIVE ENDOCRINOLOGY AND INFERTILITY ROTATION

GOALS AND OBJECTIVES :

Exposure to basic office infertility and endocrinology with the evaluation of outpatients.

CORE COMPETENCIES :

Patient Care

- See patients in the REI faculty practice office in order to become familiar with basic office infertility and endocrinology
- Perform ultrasounds
- Cover major and minor cases with REI fellows and faculty

Medical Knowledge

- Assessment of the infertile couple
- Understanding normal physiology and abnormalities of the menstrual cycle
- Assessment of ovulation and management of ovulatory dysfunction
- Principles of ultrasound; scanning for follicular development and early pregnancy
- Principles of oocyte retrieval

Interpersonal and Communication Skills

- Communicate effectively with patients in language appropriate to age, educational, cultural, socioeconomic background
- Convey information to colleagues in a concise, effective manner

Professionalism

- Demonstrate a commitment to excellence and interest in ongoing professional development

Practice-Based Learning and Improvement

- Attend REI conferences
- Attend morning resident conferences

Systems-Based Practice

- Order diagnostic tests with attention to cost effectiveness and clinical relevance

PRENATAL DIAGNOSIS UNIT ROTATION

GOALS AND OBJECTIVES :

1. Demonstrate proper technique and utilization of ultrasound equipment
2. Understand the principles of ultrasound physics and use them to enhance their image acquisition
3. Demonstrate competency in the routine obstetric and gynecologic ultrasound applications
4. Demonstrate ability to correctly interpret normal as well as abnormal ultrasound images

CORE COMPETENCIES :

Patient Care

- Perform ultrasounds on continuity clinic obstetrical patients
- Perform bedside ultrasound in the Delivery Suite

Medical Knowledge

- Acquire the principles of ultrasound physics and use them to enhance their image acquisition
- Know the routine obstetric and gynecologic ultrasound applications
- Learn correctly to interpret normal as well as abnormal ultrasound images

Interpersonal and Communication Skills

- Develop and consistently demonstrate listening skills to address patients' concerns respectfully and effectively
- Ensure that patients (and their families) understand the nature of the findings

Professionalism

- Demonstrate empathy and compassion toward patients and their families
- Respect patient autonomy, comfort and modesty as you perform sonographic studies

Practice-Based Learning and Improvement

- Effectively use the educational resources available in the Department including on-line texts and databases as well as the yearly ultrasound course.
- Identify areas for self-improvement and implement strategies to enhance sonographic knowledge, skills and processes of care.
- Accept and integrate feedback given by other members of the health-care team, including faculty and senior residents.

Systems-Based Practice

Integrate sonographic findings into the care of patients appropriately.



Department of
Ophthalmology

SUBJECT SPECIFIC LEARNING OBJECTIVES

Program Objectives

The post-graduate training programs are intended at developing in a student qualities of a clinical specialist, a teacher and a researcher. These programs are organized such that a post graduate student should possess the following qualities, knowledge and skills :

- a) The student should possess basic knowledge of the structure, function and development of the human body as related to ophthalmology, of the factors which may disturb these mechanisms and the disorders of structure and function which may result thereafter.
- b) The student should be able to handle most day-to-day problems independently in ophthalmology. The student should recognize the limitations of his/her own clinical knowledge and know when to seek further help.
- c) The student should be familiar with the epidemiology of at the more common diseases in the field of ophthalmology.
- d) The student should be able to integrate the preventive methods with the curative and rehabilitative measures in managing diseases.
- e) The student should be familiar with common eye problems occurring in rural areas and be able to deal them.
- f) The student should also be made aware of Mobile Ophthalmic Unit and its working.

- g) The student should be familiar with the current developments in Ophthalmic Sciences.
- h) The student should be able to plan educational programs in Ophthalmology and be familiar with the modern methods of teaching and evaluation.
- i) The student should be able to identify a problem for research, plan a rational approach to its solution, execute it and critically evaluate his/her data in the light of existing knowledge.
- j) The student should reach the conclusions by logical deduction and should be able to assess evidence both as to its reliability.
- k) The student should have basic knowledge of medico-legal aspects of medicine.
- l) The student should be familiar with patient counseling and proper consent taking.

SUBJECT SPECIFIC COMPETENCIES

A post graduate student upon successfully qualifying in the M.S. (Ophthalmology) examination should be able to:

- a) Offer to the community, the current quality of 'standard of care' in ophthalmic diagnosis as well as therapeutics, medical or surgical, in most of the common situations encountered.
- b) Periodically self-assess his or her performance and keep abreast with ongoing advances in the field and apply the same in his/her practice.
- c) Be aware of her/his own limitations to the application

of the specialty in situations, which warrant referral to more qualified centers or individuals.

- d) Apply research and epidemiological methods during his/her practice. The post graduate student should be able to present or publish work done by him/her.
- e) Contribute as an individual/group towards the fulfillment of national objectives with regard to prevention of blindness.
- f) Effectively communicate with patients or relatives so as to educate them sufficiently and give them the full benefit of informed consent to treatment and ensure compliance.

At the end of the course, the student should have acquired knowledge in the following :

A. COGNITIVE DOMAIN

Basic Medical Sciences :

- Attain understanding of the structure and function of the eye and its parts in health and disease.
- Attain understanding and application of knowledge of the structure and function of the parts of Central Nervous System and other parts of the body with influence or control on the structure and function of the eye.
- Attain understanding of and develop competence in executing common general laboratory procedures employed in diagnosis and research.

1. Clinical Ophthalmology :

Given adequate opportunity to work on in stepwise approach responsibilities in outpatients, inpatient and operation theatres on a rational basis in the clinical sections from the day of entry to the completion of the training program, the students should be able to:

- Acquire scientific and rational approach to the diagnosis of ophthalmic cases
- Acquire understanding of and develop inquisitiveness to investigate to establish cause and effect of the disease.
- To manage and treat all types of ophthalmic cases.
- To competently handle safely all routine surgical procedures on lens, glaucoma, lid, sac, adnexa, retina and muscle anomalies.
- To competently handle all ophthalmic medical and surgical emergencies.
- To be familiar with micro-surgery.
- To demonstrate the knowledge of the pharmacological (including toxic) aspects of drugs used in ophthalmic practice.

2. Refraction :

- Acquire competence in assessment of refractive errors(Retinoscopy) and prescription of glasses for all types of refraction problems including children.
- Acquire basic knowledge of manufacture and fitting of glasses and competence of judging the accuracy and defects of the dispensed glasses.

3. **Ophthalmic super-specialties :**

- Given an opportunity to work on a rotational basis in various special clinics of sub-specialties of ophthalmology, if possible, the student should be able to:
- Examine, diagnose and demonstrate understanding of management of the problems of neuro-ophthalmology and refer appropriate cases to neurology and neuro-surgery.
- Examine, diagnose and demonstrate understanding of management of (medical and surgical) complicated problems in the field of (a) lens, (b) glaucoma, (c) cornea, (d) retina, (e) pediatric ophthalmology, (f) oculoplasty, (g) uvea, and (l) genetic problems in ophthalmology.
- To demonstrate competence in prescription and dispensing of contact lenses and ocular prosthesis.

4. **Ophthalmic pathological / microbiological / biochemical sciences**

- Be able to interpret the diagnosis in correlation with the clinical data.

5. **Community Ophthalmology**

Eye camps arranged where the PG students are posted for imparting training to according to a set methodology. The community and school surveys also be conducted by the post graduate students. The post graduate students are given an opportunity to participate in surveys, eye camps. They should be able to guide rehabilitation workers in the organisation and training of the blinds

in art of daily living and in the vocational training of the blind leading to gainful employment.

6. Research :

- Recognise a research problem.
- State the objectives in terms of what is expected to be achieved in the end.
- Plan a rational approach with appropriate controls with full awareness of the statistical validity of the size of the material.
- Spell out the methodology and carry out most of the technical procedures required for the study.
- Accurately and objectively record on systematic lines results and observation made.
- Analyze the data with the aid of an appropriate statistical analysis.
- Interpret the observations in the light of existing knowledge and highlight in what ways the study has advanced existing knowledge on the subject and what further remains to be done.
- Write a thesis in accordance with the prescribed instructions.
- Write at least one scientific publication from the material of this thesis.

B. AFFECTIVE DOMAIN

1. Should be able to function as a part of a team, develop an attitude of cooperation with colleagues, and interact

with the patient and the clinician or other colleagues to provide the best possible diagnosis.

2. Always adopt ethical principles and maintain proper etiquette in dealings with patients, relatives and other health personnel and to respect the rights of the patient including the right to information and second opinion.
3. Develop communication skills to word reports and professional opinion as well as to interact with patients, relatives, peers and paramedical staff, and for effective teaching.

C. PSYCHOMOTOR DOMAIN

At the end of the course, the student should acquire following clinical skills :

Essential diagnostic skills :

I. Examination techniques along with interpretation

1. Slit lamp Examination

- Diffuse examination
- Focal examination
- Retroillumination – direct and indirect
- Sclerotic scatter
- Specular reflection
- Staining modalities and interpretation

2. Fundus evaluation

- Direct/Indirect ophthalmoscopy
- Fundus drawing

- 3-mirror examination of the fundus
- 78-D/90-D/60-D examination
- Amsler's charting

II. Basic investigations along with their interpretation

1. Tonometry

Tonometry - Applanation/Indentation/Non-contact

2. Gonioscopy

Gonioscopy grading of the anterior chamber angle

3. Tear/ Lacrimal function tests

- Staining- fluorescein and Rose Bengal
- Schirmer test/tear film break up time
- Syringing
- Dacrocystography

4. Corneal

- Corneal scraping and cauterization
- Smear preparation and interpretation (Gram's stain /KOH)
- Media inoculation
- Keratometry - performance and interpretation
- Pachymetry

5. Colour Vision evaluation

- Ishihara pseudoisochromatic plates

6. Refraction

- Retinoscopy- Streak/ Priestley Smith
- Use of Jackson's cross-cylinder
- Subjective and objective refraction
- Prescription of glasses

7. Diagnosis and assessment of Squint

- Ocular position and motility examination
- Synoptophore usage
- Lees screen usage
- Diplopia charting
- Assessment of strabismus - cover tests/prisms bars
- Amblyopia diagnosis and treatment
- Assessment of convergence, accommodation, stereopsis, suppression

8. Exophthalmometry

- Usage of Hertel's exophthalmometer - proptosis measurement

9. Contact lenses

- Fitting and assessment of RGP and soft lenses
- Subjective verification of over refraction
- Complications arising of contact lens use
- Educating the patient regarding CL usage and imparting relevant
- knowledge of the complications arising thereon

10. Low Vision Aids

- Knowledge of basic optical devices available and relative advantages and disadvantages of each.
- The basics of fitting with knowledge of availability & cost

III. The post graduate must be well versed with the following investigative modalities although the student may or may not perform it individually. But, she/he should be able to interpret results of the following tests:

1. Fundus photography
2. Fluorescein angiography
3. Ophthalmic ultrasound A-scan/B scan
4. Automated perimetry for glaucoma and neurological lesions
5. Radiological tests - X rays - Antero posterior/ Lateral view PNS (Water's view) / Optic canal views
6. Localisation of intra-ocular and intra-orbital FBs
7. Interpretations of -USG/ CT/ MRI Scans
8. OCT and UBM
9. ERG, EOG, and VEP

IV. Minor surgical procedures – Must know and perform independently

- Conjunctival and corneal foreign body removal on the slit lamp
- Chalazion incision and curettage
- Pterygium excision and Grafting

- Biopsy of small lid tumours
- Suture removal - skin / conjunctival / corneal / corneoscleral
- Tarsorrhaphy
- Subconjunctival injection
- Retrobulbar, peribulbar & topical anaesthesia
- Posterior Sub-Tenon's injections
- Artificial eye fitting

V. Surgical procedures

1. Must know and can perform independently
 - a. Ocular anaesthesia :
 - Retrobulbar anaesthesia
 - Peribulbar anaesthesia
 - Facial blocks- O'Brein / Atkinson/Van lint and modifications
 - Frontal blocks
 - Infra orbital blocks
 - Blocks for sac surgery
2. Must be able to independently perform and deal with complications arising from the following surgeries :
 - Lid Surgery –
 - Tarsorrhaphy
 - Ectropion and entropion
 - Lid repair following trauma
 - Epilation

- Destructive procedures
 - Evisceration with or without implant
 - Enucleation with or without implant
 - Exenteration with or without implant
 - Sac surgery
 - Dacryocystectomy
 - Dacryocystorhinostomy
 - Probing for congenital obstruction of nasolacrimal duct
 - Strabismus surgery
 - Recession and resection procedures on the horizontal recti.
 - Orbit surgery
 - Incision and drainage via anterior orbitotomy for abscess
 - Cyclocryotherapy/Cyclophotocoagulation
3. PG Students should be well conversant with use of operating microscope and must be able to perform the surgeries listed below competently under the same:
- Cataract surgery
 - i. Standard ECCE (extracapsular cataract extraction; first year) with or without IOL implantation
 - ii. Small incision ECCE with or without IOL implantation and/or Phacoemulsification with PC IOL implantation
 - iii. Intracapsular cataract extraction (second year)

- iv. Cataract with Phacoemulsification (third year)
 - v. Secondary AC or PC IOL implantation
 - Vitrectomy/Scleral buckling
 - i. Intra-vitreous and intra-cameral (anterior chamber) injection techniques and doses of drugs for the same
 - ii. Needs to know the basis of open sky vitrectomy (anterior segment) as well as management of cataract surgery complications.
 - iii. Assisting vitrectomy and scleral buckling procedures
 - Ocular surface procedures
 - i. Pterygium excision with modifications
 - ii. Conjunctival cyst excision/foreign body removal
 - iii. Corneal foreign body removal
 - iv. Conjunctival flap/ peritomy
 - Glaucoma
 - i. Trabeculectomy
 - ii. Non Penetrating Glaucoma surgeries.
 - Corneal
 - i. Repair of corneo - scleral perforations
 - ii. Corneal suture removal
 - iii. Application of glue and bandage contact lens
4. Should have performed/assisted the following microscopic surgeries

- i. Keratoplasty
Therapeutic and optical
 - ii. Glaucoma surgery
 - Pharmacological modulation of trabeculectomy
 - Trabeculotomy
 - Goniotomy
5. Desirable to be able to perform following laser procedures
- Yag Capsulotomy
 - Laser iridotomy
 - Focal and panretinal photocoagulation
6. Should have assisted/knowledge of Keratorefractive procedures

Operations :

The PG is provided with an opportunity to perform operations both extra-ocular and intra-ocular with the assistance of the senior post graduate students and/or under the direct supervision of a faculty member. The student is provided with an opportunity to learn special and complex operations by assisting the senior postgraduate student or the faculty in operations of cases of the specialty and be responsible for the post operative care of these cases.

In **first phase**, the post graduate student is given training in preparations of cases for operation, pre-medication and regional anaesthetic blocks. In the **next phase**, the postgraduate student assists the operating surgeon during

the operations. In the **third phase**, the post graduate student operates independently assisted by senior postgraduate student or a faculty member. She/he is required to be proficient in some operations and show familiarity with others.

COURSE CONTENTS :

These are only broad guidelines and are illustrative, there may be overlap between sections.

I. Basic Sciences :

1. Orbital and ocular anatomy
 - i. Gross anatomy
 - ii. Histology
 - iii. Embryology
2. Ocular Physiology
3. Ocular Pathology
4. Ocular Biochemistry
General biochemistry, biochemistry applicable to ocular function
5. Ocular Microbiology
6. General Microbiology, specific microbiology applicable to the eye
7. Immunology with particular reference to ocular immunology
8. Genetics in ophthalmology
9. Community Eye Health

II. Optics

1. Basic physics of optics

2. Applied ophthalmic optics
3. Applied optics including optical devices
4. Disorders of Refraction

III. Clinical Ophthalmology

1. Disorders of the lids
2. Disorders of the lacrimal system
3. Disorders of the Conjunctiva
4. Disorders of the Sclera
5. Disorders of the Cornea
6. Disorders of the Uveal Tract
7. Disorders of the Lens
8. Disorders of the Retina
9. Disorders of the Optic Nerve and Visual Pathway
10. Disorders of the Orbit
11. Glaucoma
12. Neuro-ophthalmology
13. Paediatric ophthalmology
14. Ocular involvement in systemic disease
15. Immune ocular disorders
16. Strabismus and Amblyopia
17. Ocular oncology

TEACHING AND LEARNING METHODS

Teaching Methodology :

The theoretical knowledge is imparted to the post graduate student through distinct courses of lecture demonstrations,

seminars, symposia and inter- and intradepartmental meetings. The students are exposed to recent advances through discussions in journal clubs and participation in CMEs, and symposia & conferences.

The post graduate students are imparted clinical training in several ways :

1. *Group Discussion*

The junior post graduate students may present the symposium to their senior postgraduates where it is fully discussed before finally being discussed in front of the faculty or senior eye specialists. A free and fair discussion is encouraged. These discussions enable the post graduate students to prepare for a general discussion in the class.

2. *Clinical Case discussion*

- a. Bedside discussion on the rounds and outpatient teaching take their toll with patient management. Therefore in addition to these, clinical case discussions should form part of a department's schedule at a fixed time every week. This could range from 1-2 hours and could be held at least once a week. The choice and manner of presentation and discussion varies widely and is left to the discretion of the department. Every effort should be made to include as wide a variety of cases as possible over three years with multiple repetitions. Problem oriented approach is better as it aids in decision making skills.

- b. In addition to bedside teaching rounds, at least 5-hr of formal teaching per week.
- c. Consultant case presentation is another approach which is encouraged as it aids in solving complex problems and also is forum for discussion of interesting cases.
- d. Case discussions on the patient's records written by the student is encouraged as it helps exercise the student's diagnostic and decision-making skills. It also helps the consultant in critical evaluation of the student's progress academically.
- e. Case presentation at other in-hospital multidisciplinary forums.
- f. The postgraduate students shall be required to participate in the teaching and training program of undergraduate students and interns.
- g. Department encourage e-learning activities.

3. *Seminars*

Seminars conducted at least once weekly. The duration is at least one hour. The topics selected to be repeated once in 3 years so as to cover as wide a range of topics as possible. Seminars could be individual presentations or a continuum (large topic) with many post graduate students participating.

4. *Journal clubs*

Journals are reviewed in particular covering all articles in

that subject over a 6 months period and are discussed by the post graduate student under the following headings.

- 1) Aim
- 2) Methods
- 3) Observations
- 4) Discussions and
- 5) Conclusions

The post graduate student to whom the journal is allotted presents the journal summaries to the senior postgraduates. They are expected to show their understanding of the aspects covered in the article and clarify any of the points raised in the article, offer criticisms and evaluate the article in the light of known literature.

5. A postgraduate student of a postgraduate degree course in broad specialities/super specialities would be required to present one poster presentation, to read one paper at a national/state conference and to present one research paper which should be published/accepted for publication/sent for publication during the period of his postgraduate studies so as to make him eligible to appear at the postgraduate degree examination.
6. **Out-Patients :** For the first six months of the training program, post graduate students are attached to a faculty member to be able to pick up methods of history taking and ocular examination in ophthalmic practice. During this period the post graduate student also is oriented to the common ophthalmic problems. After 6 months, the clinical post graduate student may work

independently, where he receives new and old cases including refractions and prescribes for them. The post graduate students are attached to a senior postgraduate student and faculty member whom they can consult in case of difficulty.

7. **Wards :** Each post graduate student is allotted beds in the in-patient section depending upon the total bed capacity and the number of the postgraduates. The whole concept is to provide the post graduate student increasing opportunity to work with increasing responsibility according to seniority. A detailed history and case record is to be maintained by the post graduate student.

Relevance of beds and admissions in Ophthalmology has really gone down at present, as most of the surgical and special investigative procedures are being performed on out-patient basis. Most of the teaching has to be imparted in out-patients department and special Clinics.

8. Rotations : Specialty clinics

The student rotates in the following subspecialty clinics:

- Anterior segment and cataract
- Glaucoma
- Oculoplastics
- Paediatric ophthalmology and strabismus
- Retina
- Cornea, Contact lens and low vision
- Neuroophthalmology
- Refractive Clinic

9. Practicals in Ocular Histopathology

The post graduate students are provided with fully stained slides of the ocular tissues along with relevant clinical data and discuss the diagnosis and differential diagnosis on the basis of the information provided with experts.

10. Attend accredited scientific meetings (CME, Symposia, and Conferences).
11. Additional sessions on basic sciences, biostatistics, research methodology, teaching methodology, hospital waste management, health economics, medical ethics and legal issues related to ophthalmology practice are suggested.
12. Maintenance of log book: Log books to be checked and assessed periodically by the faculty members imparting the training.

During the training program, patient safety is of paramount importance; therefore, skills are to be learnt initially on the models, later to be performed under supervision followed by performing independently; for this purpose, there is provision of surgical skills laboratory.

ASSESSMENT

FORMATIVE ASSESSMENT :

Formative assessment is to assess medical knowledge, patient care, procedural & academic skills, interpersonal skills, professionalism, self directed learning and ability to practice in the system, during the training

General Principles

Assessment done every year, covers all domains of learning and is used to provide feedback to improve learning. It also covers professionalism and communication skills. Formative assessment includes theory as well as practical clinical examinations.

Quarterly assessment during the MS training is based on following educational activities :

1. Journal based / recent advances learning
2. Patient based /Laboratory or Skill based learning
3. Self directed learning and teaching
4. Departmental and interdepartmental learning activity
5. External and Outreach Activities / CMEs

SUMMATIVE ASSESSMENT

The summative examination conducted as per the Rules given in POSTGRADUATE MEDICAL EDUCATION REGULATIONS, 2000 of the Medical Council of India.

The Post Graduate evaluation shall be in three parts :

1. Thesis :

Every post graduate student works on an assigned research project under the guidance of a recognised Post Graduate Teacher, the result of which is written up and submitted in the form of a Thesis. Work for writing the Thesis is aimed at contributing to the development of a spirit of enquiry, besides exposing the post graduate student to the techniques of research, critical analysis,

acquaintance with the latest advances in medical science and the manner of identifying and consulting available literature.

Thesis to be submitted at least six months before the Theory and Clinical /Practical examination. The thesis shall be examined by internal and external examiners, who are not the examiners for Theory and Clinical examination. A post graduate student is allowed to appear for the Theory and Practical/Clinical examination only after the acceptance of the Thesis by two examiners.

2. Theory Examination :

The examinations is organised to evaluate and to certify post graduate student's level of knowledge, skill and competence at the end of the training. Minimum marks for passing shall be as prescribed by the Medical Council of India for PG Examinations from time to time. The examination for MS shall be held at the end of 3rd academic year.

There shall be four theory papers.

Paper I : Basic Sciences related to Ophthalmology,
Refraction & Optics

Paper II : Clinical Ophthalmology

Paper III : Systemic Diseases in Relation to
Ophthalmology

Paper IV : Recent Advances in Ophthalmology and
Community Ophthalmology

3. **Clinical/Practical and oral/viva voce examination**

Clinical : this will include 1 long case, 2 short cases with different problems, 2 fundus Cases and 1 refraction case.

Oral/Viva Voce Examination shall be comprehensive enough to test the student's overall knowledge of the subject and shall include :

- i. Instruments
- ii. Pathology specimens
- iii. Drugs, X-rays, USG/OCT/CT/MRI Scans, etc.
- iv. Visual fields and other ophthalmic diagnostic charts
- v. Thesis & Pedagogy

Recommended Reading :

Books (latest edition)

1. Principles and Practice of Ophthalmology. Albert DM, Jakobiec. W B Saunders
2. Principles & Practice of Ophthalmology. Gholam A Paymen
3. The Current American Academy of Ophthalmology Basic and Clinical Science Course (13 volumes)
4. Duke Elder's Practice of Refraction. Abrams D. Churchill Livingstone.
5. Text book of Ophthalmology. Yanoff and Duker
6. Retina. Stephen J Ryan:
7. Ophthalmic Ultrasound: Sandra Byrne and Ronald Green.

8. Cornea: Fundamentals, Diagnosis, and Management. Krachmer JH, Mannis MJ,
9. Holland EJ. Mosby Elsevier.
10. Ophthalmology. Yanoff N, Duker JS. Mosby Elsevier.
11. Review of Ophthalmology. Friedman NJ, Kaiser PK, Trattler WB. Elsevier Saunders, Philadelphia.
12. Corneal Transplantation. Vajpayee RB. Jaypee Brothers Medical Publishers (P)
13. Ltd, New Delhi.
14. Shields Text book of glaucoma
15. Intraocular tumors. An atlas and textbook. Shields JA, Shields CL.
16. Pediatric Ophthalmology. Taylor and Hoyt: Saunders Ltd.
17. Binocular Vision and Ocular Motility. Theory and Management of Strabismus. Von Noorden GK. Mosby.
18. Strabismus: A Decision Making Approach. Von Noorden and Helveston:
19. A Manual of Systematic Eyelid Surgery. Collin JRO (ed). Churchill Living stone, Edinburgh.
20. Refractive Surgery. Agarwal A, Agarwal A, Jacob Soosan. Jaypee.
21. Ocular Pharmacology: Havener
22. Anatomy: Wolff 's Anatomy of the Eye and Orbit
23. Physiology: Adler's Physiology of the Eye

24. Clinical Ophthalmology. Kanski JJ. Butterworth/Heinemann.
25. Walsh and Hoyt's Clinical Neuroophthalmology (5 volumes). Miller NR, Newman NJ, Williams and Wilkins.
26. Decision Making in Ophthalmology. Van Heuven WAJ, Zwann J. Mosby.
27. Parsons' Diseases of the eye. Sihota and Tandon.
28. Wills Eye Manual
29. International Council of Ophthalmology Residency Curriculum available at <http://www.icoph.org/>

Journals

03-05 international Journals and 02 national (all indexed) journals

Acknowledgement :

Structuring this MS Ophthalmology residency program was thankfully possible due to reference designs of : Medical Council of India, SRM University MS Ophthalmology Curriculum 2011, Maharashtra University of health Sciences, American Academy of Ophthalmology.



Department of
Orthopaedics

The Departmental strategies are planned to cover the vital aspects of medical curriculum which includes research, education, patient care & community services.

While targeting the goals, we propose to strengthen both of our assets namely the knowledge & the resources.

The details are as follows –

- **Research -**

- Focus on safety as the number one priority in human subjects' research
- Maintain a competitive edge in technology.
- Engage industry to improve technology transfer.
- Provide increased opportunities for medical students to participate in research.
- Promote the bench-to-bedside principles DOO was founded upon.
- Arrange ample funding for cutting edge research.
- Ensure adequate space for research is reserved in future expansions.
- Increase funding from sources other than Govt and Autonomous bodies.

- **Education -**

- Integrate a focus on safety into all academic activities.
- Reform the medical curriculum to incorporate the challenges posed by a rapidly developing medical world.
- Allow for more patient care in the years of speciality graduation.

- Foster the bench to bedside ideals upon which DDO was founded
- Better incorporate new technologies & medical science into the curriculum.
- Increase multidisciplinary learning.
- Foster professionalism & communication skills among all levels of learners – Medical students to clinicians
- Expand the use of new technologies as teaching tools
- Simulation centres cadaveric Dissection
- Online learning tools
- Ensure adequate space for teaching is reserved in new buildings & ample funds are secured.
- Focus on faculty development.
- Clarify promotional tracts, placing equal emphasis on the importance of scholarly achievement in teaching as well as research and patient care.
- Attain resources to recruit & retain the very best faculty.
- Foster multidisciplinary interactions across DDO was founded.
- Better incorporate new technologies and medical science into the curriculum.
- Increase multidisciplinary learning.
- Foster professionalism and communication skills among all levels of learners: medical students to clinicians.
- Expand the use of new technologies as teaching tools;

- Simulation center Cadaveric Dissection.
 - Online learning tools.
 - Ensure adequate space for teaching is reserved in new buildings and ample funds are secured/
 - Focus on faculty development.
 - Clarify promotion tracts, placing equal emphasis on the importance of scholarly achievement in teaching, as well as research and patient care.
 - Attain resources to recruit and retain the very best faculty.
 - Foster multidisciplinary interactions across DOO.
 - Improve diversity across the faculty
 - Ensure faculty are motivated to meet teaching requirements
- **Patient care –**
 - Emphasize patient safety & risk management
 - Expand the use of technology to improve efficiency & effectiveness
 - Support patient access initiatives
 - Allow postgraduate students more patient contact in their tenure.
 - Provide longitudinal contact for students, spanning across the three year curriculum.
- **Service for the community –**
 - Enhance the community outreach programs
 - Better integrate & organize community service initiatives into the curriculum.

- Collaborate across all educational entities of DOO to improve community health.

- **Orthopedic Surgery residency educational goals -**

The educational goal of the Orthopaedic Surgical residency training program of DOO Program is to prepare the resident to become a highly competent and authentically certified Orthopaedic surgeon. On completion of their training, our graduates will be equally qualified to attain placement in Orthopaedic super speciality degree subspecialty fellowship, pursue a career in academic Orthopaedic surgery, or enter private practice, rural or metropolitan

This goal is attained by means of a progressively graded curriculum of study & clinical experience under the guidance & supervision of the faculty progression continues through succeeding stages of responsibility for patient care to culminate in complete management of patient care at the senior level.

1. Use sound judgment to guide surgical decision making based upon firm ethical base.
2. Manage disorders based on a thorough knowledge of basic & clinical science.
3. Attain perfect surgical skills necessary to be a competent Orthopedic surgeon
4. Communicate effectively with patients & their families regarding life altering decisions
5. Respect the cultural & religious needs of the patient.
6. Collaborate effectively with colleagues & other

health professionals

7. Teach & discuss surgical issues with colleagues, residents, medical students & other health care providers.
8. Educate patients & their families about the patients health needs
9. Provide cost effective care to surgical patients.
10. Value lifelong learning as a necessary prerequisite to maintaining surgical knowledge & skill.

- **Evaluation -**

The evaluation is a continued process & is reaffirmed at the end of each term.

Residents are evaluated by the faculty.

The senior residents participate in the evaluation of junior residents. At the end of rotation, the faculty meeting assesses the strengths & weakness of the residents.

Evaluation forms are completed & the residents are encouraged to meet with the faculty at the conclusion of the rotation. Feedback is distributed during the rotation such that the resident can address deficiencies. The faculty is taken care into account patient care, operative techniques, attitude & communication with others. The opinions of paramedical personnel, patients, families, and others are considered during the evaluation process.

The residents are encouraged to provide feedback to the faculty regarding the strength & weakness of the surgical experience of the unit.

- **Learning objectives -**

The learning objectives are standard & are basically 6 core competencies.

The resident is expected to complete these objectives independently as well as conjointly during his tenure in a term wise framework.

The 6 core elements are

1. Patient care
2. Medical Knowledge
3. Practice based learning & improvement
4. Interpersonal & communication skills
5. Professionalism
6. Systems based practice

GOALS & OBJECTIVES

This is the proposed framework of the competencies based goals & objectives for the Orthopaedic Surgery services. Many aspects of these competencies are general & apply equally to all the related services.

Competency - I : PATIENT CARE

GOALS & OBJECTIVES 1/17

PGY1 - TERM 1

- Develop & perfect the art of history taking, physical examination
- Understand the initial approach to the Orthopaedic patients, & develop a differential diagnosis for the new patient, or one for a new problem on a patient already

on the Orthopaedic service.

- Develop a treatment plan
- Present the patient to the senior resident & the attending faculty
- Write daily notes on the assigned patients, & all patients on whom the individual resident was the operating surgeon or the first assistant
- Entries into medical record should be legible, & the signature should be followed with a stamp or name.
- Notes should reflect all sections of the SBAR & SOAP acronyms or other hospital accepted routes of communication (SBAR: Situation, Background, Assessment, & recommendation). (SOAP: Subjective, Objective, Assessment, plan)
- All notes should explain the need for continued hospitalization
- Patients should have pain assessment: the resident should assess the degree of pain on an appropriate scale & document it on the progress note.
- **The notes will be read by the faculty member & countersigned. The residents will be given feedback by the faculty on the progress notes.**

GOALS & OBJECTIVES 2/17

- Understand the chain of command on Orthopaedic services
- Inform senior resident & faculty of new admissions, or changes in status of the patients already on the service

- When in doubt, call senior resident, chief resident or faculty on the service
- In an emergency call for help from any available internees, residents, nurse, medical social worker & inform the responsible faculty
- Develop basic surgical clinical skills:
 - IV-line placement
 - Nasogastric tube placement
 - Suturing & knot tying
 - Art of dressing, bandaging & Splintage
 - Beside Procedure under supervision
 - External fixator

GOALS & OBJECTIVES 3/18

- Recognition & correct application of various surgical devices, ie. Common instruments, retractors, energy sources, suction devices
- Assistance in the operating unit
- Complete credentialing in minor surgical procedures

PGY1 - Term 2

- Improving the clinical & didactic skills developed as a PGY1 - Term 1
- Consultation: become familiar with evaluation process of the patient referred for the consultation from casualty or other services
- Develop a differential diagnosis, treatment plan for consulted patients

- Present the patient to the senior or the chief resident, & the faculty. Immediately upon seeing the patient, place a consult on the chart, & inform the primary service that the patient has been seen. It is acceptable not to have a finalized plan of care in the initial note, as long as the patient is assessed promptly by the senior/ chief resident, & the faculty, & the plan of care is not only defined & finalized but also communicated to the primary services.
- Become credentialed in minor & moderate surgical procedures
- Improve on the basic surgical skills ie. Suturing, knot tying, use of mechanical instruments and staplers, plastering and splinting closed reduction of various dislocation.
- Develop understanding of commonly performed surgical operations & their related anatomy
- Become familiar with the new technologies, ie. Arthoroscopic equipment Total Joint Replacements, Spine Surgeries.
- Develop leadership skills to become role model to your interns
- Teach the medical students
- Check X-rays, blood work, understand how to interpret basic films & lab reports
- In addition to the routine ward rounds & follow-ups legibly documents visits to the patients you operated on everyday & consultations for your service unit

PGY2 – Term 1

- Continue to improve skills developed as a junior resident
- Assume more visible supervisory & leadership role in the team
- Become the resident responsible for the consultations on your service
- Coordinate and supervise PGY 1s evaluative and consultative services and skills
- Become an active liaison between the primary service, chief residents, and the surgical Faculties.
- Become credentialed in the moderate and some of the major surgical procedures.
- Become familiar with the surgical procedure, Open reduction and internal fixation of DER, Radius Ulna external fixators, spine surgery, Joint replacements etc.

GOALS AND OBJECTIVES 4/17

- Show graded and progressive levels of complexity and responsibility by more participation in the basic and clinical sciences curriculum and clinical assignments of the junior residents.

PGY2 - Term 2

- Improvement of skills developed in earlier years.
- Become credentialed in all tiers of invasive procedures including supra major surgeries

- Establish complete responsibility of running the service under the direction of the supervising faculty.
- Coordinate all conferences and clinical activities in collaboration with the Organizing Residents. or Faculty responsible.
- Coordinate care for all patients on the service unit and referral consultations.
- Scrub in operations on cases of complexity and variety suitable for the most senior resident in the service unit.
- Coordinate the in-house and outpatient experience that will assure optimal continuity of care.
- Present morbidities and mortalities on the service at the monthly meetings.
- Participate in the selection process for the case presentation.

PGY3

- Supervise all aspects of management of the Surgical patients in the respective unit
- Provide leadership to the entire team of the Surgical residents, and medical students
- Assist faculty in daily clinical and educational activities of the department.
- Act as a teaching assistant to the junior residents, when appropriate under the supervision of the Faculty.
- Coordinate the multidisciplinary conferences with other services and assignment of the presentations to the senior and junior residents.

- Establish total continuity of care, and accept responsibility for the patients in the unit, and even those on whom 'he chief resident was the operating surgeon in other units (e.g. when on call or covering other unit).
- Assure that the outpatient experience for every rotation that optimizes that continuity of care.
- Assure that all clinical assignments in the chief year will be at the integrated sites.
- The operative cases will be of complexity appropriate for the chief resident.

Competency - II : MEDICAL KNOWLEDGE

All scheduled Seminars, Case presentations, Journal readings, Grand rounds, CME's, Workshops, Skill Courses, Conferences are "protected time" from routine clinical duties. Only in an event of a medical emergency the resident will be excused from attending these sessions.

GOALS AND OBJECTIVES 5/17

PGYI - Term 1

- The academic sessions is are preplanned programs
- All residents are expected to attend at least 80 % sessions
- All residents, except those on call, are expected to attend the out of campus academic activities.
- All residents are encouraged to read up on the topic in advance.
- Power Point presentations from each session are available on the Departments computer for review and

preparation for the Department's assessments and quiz.

- All residents are expected to participate in the Core Curriculum meetings.
- The senior residents will assign aspects of the presentation that will be appropriate for the level of the resident.
- The resident is expected to become an associate member of the Indian Orthopaedic Association (IOA) to be eligible to participate in the academic activities of IOA
- The resident is expected to read the assigned topic and be prepared for the session for each topic-specific meeting.
- Residents will receive orientation from the senior residents on the service and the Faculty in charge as to where and when the sessions are held.
- The residents at all levels are expected to read standard surgical texts and journals.
- All categorical residents will participate in the term theory examination
- Residents are expected to achieve a score of no less than 50 % marks
- After receiving scores, residents should review their results, and direct self-learning based on the results
- Residents are expected to teach medical students
- Residents are expected to come to the operating room prepared to discuss the particular case, regional anatomy, pathophysiology, steps of the operation.

PGYI – Term 2

- The requirements above for the first term serve as the foundation from which the residents will acquire the habits for life-long learning and critical self-evaluation. The resident will be assigned presentations commensurate with increased knowledge, ability and maturity.
- Residents should begin reading of surgical journals and focus on both : Problem based and Broad based surgical knowledge.
- Reading focused on particular surgeries or clinical problems they encounter
- Focus reading for potential research opportunities.
- Concentration on the basic science in preparation for the examinations.
- Preparation for the assigned cases.
- Expand teaching responsibilities to medical students and interns.

GOALS AND OBJECTIVES 6/17**PGYI**

- Continue to build on the medical knowledge foundation of the previous two terms
- Prepare more in-depth, researched preparation for the assigned cases.
- Preparation of the Power Point presentation for the seminar or other session.

- Reading of the standard surgical texts Orthopaedic curriculum, and supplemented by the journals.
- Preparation for the exam.
- Preparation for presentations at the departments and multi-specialty conferences.
- Utilization of web-based resources, such as pub Med, WebMD and online journals.
- Teaching of the medical students and junior residents.
- Preparation for and participation in the terminal theory and mock oral examination, which is patterned by DOO.
- Review of Research work allotted & permitted by ethical committee.

PGY3

- Building on the medical knowledge foundation of the previous two years.
- Preparation of the Power Point presentation for the seminar or other session.
- Assist junior residents in preparation and execution of the talks, anticipate questions
- Preparation for the Morbidities and Mortalities Conferences at each rotation site.
- Presentation of the cases at the case presentation and grand rounds.
- Help choose the cases to present, who will present, and schedule the presentation
- Begin preparation for the PG examination after

completion of the residency.

- Participation in the “Residents as Teachers” workshop.
- Didactic sessions with the Guide (faculty advisor).
- Practical sessions with the Guide (faculty advisor).
- Finalization and submission of dissertation and other research project undertaken during residency.
- Bring the program to the junior residents and medical students.

Competency - III : PRACTICE BASED LEARNING AND IMPROVEMENT

GOALS AND OBJECTIVES 7/17

PGYI

- The residents are expected to utilize their own experience and assimilation of the scientific data for learning, reflection, and patient care improvement.
- Use internet resources, as well as the standard surgical texts to optimize learning.
- Develop on-going personal learning projects, which includes dissertation data compilation and completion.
- Maintenance of accurate, timely, and updated operative and performance log book.
- Maintenance of accurate, up-to-date credentialing for invasive procedures
- Timely submission of the dissertation review for documentation of credentialing (Topic Selection & Ethical clearance)

- Incorporation of all formal presentations into Logbooks
- Review of term examination results and learn about topics which were not answered correctly, to direct self-study
- Prepare for assigned elective operative cases by review of the regional anatomy, pertinent pathophysiology and steps of the surgical procedure.
- Come prepared to the OR- technically and in fund of knowledge
- Participation in morbidity and mortality conferences and the associated Quality Assurance process at each session.
- Participation in evidence-based, campus wide, DOO Core Curriculum.
- Use the Department's patient care portfolios to reflect on :
 - The care rendered to the patient in the context of the global health care environment
 - The resident's appreciation of own contribution to the care of the patient.
- Review of the faculty and senior residents filled assessment form/ monthly valuation to understand the residents own weaknesses and strengths.
- Assure participation in meeting and discussing with the faculty guide/mentor/advisor, and the HOD during regularly scheduled meeting for the evaluations, and plan of correction if needed.

PGY2

- Continue to develop Practice-based Learning and improvement from junior years.
- Evaluations: As more opportunities present to evaluate the performance of the senior residents our feedback and evaluations carry more importance, and will allow for an objective evaluation.
- Through feedback, deficiencies are better understood and the strengths will become more apparent. Residents should therefore take the opportunity and thoroughly review their evaluations, and use them as an objective guide for improvement.
- For identified deficiencies, residents should track the changes in evaluations for that topic. Also, consultation with their mentor to help institute change is encouraged
- If a technical deficiency is noted on the evaluation, residents should use the department's resources (animal, inanimate and clinical labs), and faculty to work on the particular deficiency.
- Leadership skills
- Resident at this level should become a leader to the junior residents, and students. Active teaching, using techniques from our 'Resident as Teachers' program, of topics or skills will reinforce knowledge on particular topics.
- Teaching Skills
- Participate in the Department's 'Resident as Teachers' program faculty based. resident based and even video-based sessions are valuable tools to understand

individual style when presenting and the associated strengths and weaknesses.

- using the techniques assimilated in these workshops to become more effective teacher and a leader
- Preparation for the formal discussions and presentations using library, information technology, Other resources available at the department and the on-line resources by the Residents to participate in seminars and conferences
- Since Power Point presentations are presented at a formal meeting, and is a resource to anyone looking for the information on the topic, residents are encouraged to make them coherent, concise and accurate.

GOALS AND OBJECTIVES 8/17

PGY3

- Assimilate into daily practice the lessons of the prior years, and build on this foundation the life-long practice of learning, reflection, and humility.
- Residents are responsible for junior residents and students on their service
- Residents establish themselves as leaders and diplomats of the Department and its residency program, and should realize that they will leave a legacy of their chief year. They are encouraged to make their legacy one that the students and junior residents will aspire to emulate.

Competency - IV : INTERPERSONAL AND COMMUNICATION SKILLS

PGY1

- Participate in the outpatient clinics and ward rounds.
- Take appropriate history and performing a physical exam
- Document accurate and appropriate information in the patient's medical record.
- Create the plan of care and presentation of the patient to the faculty member in charge of the patient.
- Initiate the plan of care discussion with the patient
- The resident should be present when the Faculty assesses the patient and discusses the disease process and plan of care with the patient.
- Residents should participate in the discussion with the patient's family members.
- When asking for consultation or any investigation, residents should: provide accurate information to the consulting service, such as when a radiological test is requested or a specialist is requested.
- Hand writing must be legible, and signature should be followed by a stamp or name.
- Effectively and professionally communicate with all members of the health care team, including discharge planning for admitted patients.
- Provide the necessary information to the Public relation officers and social workers.

- Take necessary assistance with the required forms in preparation for the discharge.
- Residents should appreciate and respect ethnic and religious beliefs of patients.
- When needed, should use the translation services,
- The residents are expected to be teachers and role models to the-medical students, and extensive series of workshops entitled “Residents as teachers” would be undertaken by the department.

GOALS AND OBJECTIVES 9/17

PGY2 - Term 1

- As the level of clinical responsibility increases the importance the ability to communicate effectively will become more important
- Resident at this level will be seeing patients in the Emergency department, and as consultants for in-house patents.
- When a consultation is requested, the response to the consultation must be prompt and courteous to the referring service. Remember than you are building habits and frequently relationships that will become important to you in the future.
- Assess the patient, and in a non-emergent situation allow yourself time to think.
- Don't feel pressured to come up with the immediate diagnosis of care. Do not be influenced by the opinion of others, and evaluate the patient and the data

independently, without any preconceptions. These concepts hold true for evaluating the patients anywhere

- Seek opinions from your seniors and other physicians. Reflection and thought are very useful to the surgeon
- Share your impression with patient, referring team, senior resident and Faculty.
- If the situation is urgent, immediately summon help. You always have an option of calling for help from senior physicians around you, calling a code or activating the Rapid Response Team and even calling Consultant outside your Unit/Dept/Institute. Make sure your supervising residents and Faculty know the situation.

PGY2 - Term 2

- Based on the foundation of information and experience acquired the junior years incidents at this level need to communicate professionally and effectively at a more advanced level.
- The outline above should be reviewed
- Accurate communication with residents at all levels, students, different services, and faculty is more important than ever.
- Remember that frequently the information you will have to convey will be to those with less experience than you. Be patient! Remember that you had less experience in the recent past. Always be a teacher to those less experienced, in a professional and not condescending manner.
- Write timely and legible consultations.

- Resident as role models is important- you should assist junior residents with acquiring good communication skills.
- Communicate with the patients and when appropriate the patient's families courteously and professionally.
- Remember that most times these will be lay people, who are in a stressful environment and sick. Effectively communicate with the vocabulary that will be understandable to the patient. Request translator if needed.
- Communicate with consulting services courteously, professionally and accurately. Conflicts may arise, and management of these conflicts reflects on the resident, the service, the Faculty, the Departments and our entire profession.

GOALS AND OBJECTIVES 10/17

PGY3

- Become leader amongst residents using graduated experiences of the prior years.
- Being a leader requires delicacy, skills of diplomacy, and profound respect for the patients and all members of the health care team.
- Appreciate the strengths and weaknesses of your team. It is easy to work with the "good" residents. Working with the average resident will challenge your skills as a leader and a communicator. Be patient! ‘
- Most residents will perform the tasks well, with supervision, guidance and appropriately timed and

tempered feedback and critics.

- If you have to counsel or reprimand a junior resident do it privately.
- Do not insult anyone! We work in an environment of diverse social and cultural sensitivities which should be taken into account when we talk to the patients and other health care team members.
- If you have a disagreement with any member of the health care team, attempt to resolve it amicably and not in the presence of a patient.
- Escalate to the supervising Faculty any unresolved matters.
- Always act professionally, and withdraw from a potentially more difficult situation.
- Report the matter to the supervising faculty, day or night.

Competency - V : PROFESSIONALISM

GOALS AND OBJECTIVES 11/17

PGY1

- Residents are expected to be ethical and professional.
- Professionalism is expected in all clinical arenas- bedside, operating room, outpatient department, and hallways/elevators, corridors and canteens.
- Respect patient privacy and confidentiality. Do not discuss anything related to patient care issues in public places. Understand patient privacy issues and legal aspects of patient of confidentiality.
- Lectures are arranged annually by department.

- These will define and address the prevalence of the problem, effects on a person and how it may potentially affect the physician and impact the patient care.
- The residents are expected to act professionally towards all members of the health care team and other co-workers.
- If at any time any resident feels that they felt persecuted, harassed, or threatened in any form they should immediately report their concerns to the faculty member, unit in charge, or his designee, or the HOD, and the appropriate action and referrals will be made.
- The Department's Annual lecture on stress, will help the resident to identify signs of stress in themselves and their colleagues.
- Timely record completion is expected, including -Medical records, operative dictations. and discharge summaries, residency operative logs, submission of the credentialing notes and reviews for procedures, evaluations of rotations, annual evaluations of Faculties and the program.
- Remember that the hospital is the workplace for us, but for the patients it is temporary home.
- Be respectful to the patients.
- Patient's areas are therefore their private space, which we enter out of necessity. Knock on the door, if the door to the room is closed.
- Most of the time there are many patients in the hall, and to get to the patient away from the door you will have to traverse the space of a person. A quick apology, a greeting and a smile will make the intrusion much less offensive.

- Surgeons frequently make rounds in the very early hours. and with large teams. Try to awaken the patient gently, and ask permission to examine them.
- Close the curtain, respecting the patient's privacy. Although frequently difficult to maintain privacy in a small room make every effort to do so.
- Show compassionate patient care which is ethical and respectful.
- Demonstrate professionalism by preparation for the elective cases, pre-operative assessment of the patient, and conduct in surgery that is deferential to the patient and to the experience of the Supervising Faculty. Follow the patient after the surgery with daily progress notes.
- Communicate with the Faculty surgeon daily to coordinate the post-operative care of the patient.
- When appropriate provide the patient with the pertinent information, deferring to the Faculty surgeon discussions dealing with difficult matters, such as complications, differential diagnosis, prognosis and treatment plan in cancer patients.
- Be present when these discussions do take place, as this will provide you with the important lessons for the future.
- Dress appropriately with attention to personal and hospital hygiene.

PGY3

- Lead by example
- At this stage of your training you are expected to be a leader in a professional organization.

- The position of a final year resident is perceived to be one of great power, responsibility and brevity.
- But, there must be a sense of humility and appreciation that physicians are lifelong students at various stages of personal and professional development.
- Treat your juniors as you wanted to be treated by your chief when you were an intern.
- Treat your patients as you would want to be treated if you were in their place.

Competency - VI : SYSTEMS - BASED PRACTICE

GOALS AND OBJECTIVES 12/17

PGYI

- Residents are expected to demonstrate awareness about - Differences between hospitals, Differences between health care systems. insurance companies, National QA initiatives such as the Joint Commission, care measures, pollution control program, waste disposal systems, communicable disease measures, medico legal formalities, infection control programs, effectively in their context.
- Resident's logbooks and notes address the issues of resident's involvement in the care of a particular patient. It gives residents an opportunity to reflect on how they contributed to patient care in the contexts above and how they felt as a participant.
- Participation in the multiple multi-disciplinary conferences is valuable in demonstrating and teaching

the residents the practice of medicine in the context of a global health care delivery.

- Case management conferences are important for demonstrating the close and necessary ties between clinical and other services especially in the discharge planning arena.
- Familiarization with the MCI standards, National Patient Safe Goals, Department of Health Regulations are mandated and the instruction given.
- Professional Secrecy regulations, patient privacy issues are to be understood and respected, instructions are given to the residents.
- Participation in the Department' Quality Assurance process is assured.
- The Residents are required to comply with the department's administrative policies:
- Operative Procedure log books, Submission of notes and reviews for credentialing for incisive procedure, Program and Faculties evaluations.
- Monitoring of the news and developments on the department's front, and periodic checking of the notices, as important communications are sent to the residents through these.

GOALS AND OBJECTIVES 13/17

PGY2

- Participation in Department Quality Assurance projects, such medicine reconciliation, infection control, per

operative use of antibiotics, pre, intra & postoperative management will be provide the residents with valuable experience and appreciations of health care delivery in a more global context.

- Participation in discharge rounds will provide the residents with understanding of the discharge process, steps necessary to at range for social services, arranging for the visiting medical team at home health aids.
- Participation in multi-specialty conferences will offer the residents the unique opportunity to benefit from the knowledge and experience of the faculty members from different departments.
- The residents will be able to incorporate this acquired appreciation of the multi-specialty approach to patient care in their own practice.

PGY3

- Senior and chief residents are expected to not only understand the above issues of System- Based Practice, but also appreciate the differences at each site where they rotate, as every institution is unique. They should help the junior residents to navigate through the difficulties that working in an unfamiliar institution may pose.
- Participation in the institutional and department's quality assurance committees, such as Root Cause Analysis, where complex case with an unexpected outcome are discussed in a multi special group involving hospital and nursing administration in addition the clinical services.

Goals and Objectives Orthopaedic Surgical Critical Care (OSICU)

Critical Care is an integral aspect of Orthopaedic training that brings together all of the skills of Orthopaedic surgery, including diagnostic techniques, operative techniques, and patientcare. The goal of the OSICU rotation is to provide PGY2 and PGY3 resident with understanding of the critically ill patient that allows them to provide safe, competent care. The rotation will give the residents the necessary background knowledge to care for the critical Orthopaedic patient as well as an understanding of the multi- discipline nature of critical care in the pre and postoperative care of surgical patients.

GOALS AND OBJECTIVES 14/17

Competency - I : PATIENT CARE

Residents will be expected to have patient care that; compassionate, appropriate up to date for the treatment of the critical care surgical patient. The resident will learn the importance of a systematic approach to the patient as well as the technical skills necessary to perform the common procedures encountered in the OSICU.

PGY 2

- Become familiar with the various monitoring equipment and modes of mechanical ventilation. Understand the appropriate use of the various modes of ventilation.
- Interpret flow, pressure and volume waveforms displayed on the ventilator
- Display the necessary skills to manage Intubation in the ICU

- Understand and use various weaning techniques from the ventilator including criteria and techniques for extubation.
- Display the necessary skills for safe placement of Central lines.
- Initiate appropriate treatment and diagnostic evaluations of an acutely decompensating Patient. Understand and execute the priority protocol for the critically ill.

PGY3

- Become a chief in the patients care team in the OSICU
- Prepare the team for Faculty bedside teaching rounds
- Supervise junior residents who are not credentialed in some invasive procedures and help them get credentialed.
- Log the non-operative trauma cases and complex cases into the log book.

Competency - II : MEDICAL KNOWLEDGE

Residents will be expected to acquire knowledge regarding the anatomy, physiology and pathophysiology involved in critical care medicine.

GOALS AND OBJECTIVES 15/17

PGY2 and PGY3

Residents at the PGY2 and at the PGY3 levels will be expose to same clinical curriculum at the beside rounds and didactic conferences. The senior PGY3resident on the service is expected to be the leader of the team and teacher to the junior residents, the senior residents have significant experience

and Knowledge acquired in the past years. Exposure and experience with Arthroscopy, Joint Replacements, Hand surgeries, Paediatric surgery, Ilizarov's and other External Fixators and Spine surgery under the direction of the surgical faculty provided.

- Hemodynamic patterns and diagnostic workup of shock and cardiac failure.
- Understand the concepts of oxygen delivery and consumption and be able to work with the formulas.
- Respiratory system: Understand basic respiratory physiology, including work of breathing, neural control of breathing, compliance and resistance.
- Blood Gas interpretation, differential diagnosis & management (see renal section below)
- Understand physiologic effects of mechanical ventilation on cardiovascular function.
- Diagnosis and Management of Ventilator and Hospital acquired pneumonia as well as protective strategies to prevent them.
- Prevention, Diagnosis and management of Pulmonary Embolism.
- Neurology & Neurosurgery :
 - Understand pharmacology and use of sedatives, pain medication & paralytics
 - Understand the diagnostic workup, pathophysiology and management of ICU delirium and decreased mental status

- Understand the differential diagnosis and workup of neurological deficits, Seizure management and diagnostic issues.
- Learn how to manage closed Head Injuries in association with neurosurgery department.
- Understand the response to stress in the surgical patient.
- Nutrition
 - Understand and be able to perform a nutritional assessment, calculating caloric, protein and other nutritional needs
 - Understand the variety as well as placement techniques of a variety of enteral feeding tubes.
 - Understand the indications and usage of blood products
 - Understand the workup and management of anemia
- Infectious disease
 - Understand the diagnosis, workup and management of septic shock
 - Understand the importance of early goal directed therapy in sepsis
 - Understand the microbiology, pathology and treatment of infections in the surgical patients including, pneumonia, catheter related sepsis.
 - Understand the pharmacology, indications and appropriate use of antibiotics in the ICU including prophylactic use.

Competency - III : PRACTICE BASED LEARNING AND IMPROVEMENT

PGY2

The SICU resident will re-evaluate their care of the patient and review relevant literature. Residents in the SICU will identify areas for improvement and implement strategies and continually improve their patient care.

GOALS AND OBJECTIVES 16/17

PGY3

The final year resident will assist the junior residents and assess the junior resident's patient care. Portfolios entries are mandated for all residents.

Competency - IV : INTERPERSONAL AND COMMUNICATION SKILLS

PGY2

The care of the critical care patient is a complex multidisciplinary procedure that requires the coordination of many different disciplines. The resident should develop leadership skills that will enable him/her to maximize the effectiveness of the diverse critical care team. The resident should be able to develop interpersonal skills and communication skills that facilitate and result in effective communication across disciplines as well as an effective exchange of information between health care providers, families and administrations. The resident will learn to interact professionally and respectfully with the consulting physician and the primary care team. The resident will learn

to maintain timely, complete and appropriate notes in the medical record.

PGY3

The PGY3 is the team leader, under the supervising Faculty's leadership, for the care of the patient. The senior resident will coordinate the care, prepare the team for rounds, and communicate with the ancillary clinical services. The communication skills, leadership and professionalism are of paramount importance in the highly charged environment of the SICU. The senior resident will be guided by the seasoned full-time faculty.

Competency - V : PROFESSIONALISM

PGY2

- The ICU is a high intensity area and high stress area that requires the Critical Care Resident to behave professionally at all times. Residents are expected to
- Demonstrate respects, compassion and integrity in relationship with family, patients and staff.
- Demonstrate sensitivity and responsiveness to cultural issues, age, gender, and religious differences
- Understand and be able to participate in the process of informed consent.
- Understand the ethical and legal issues that ICU patients including DNR, withdrawal of support, and end of life issues.

PGY3

- The senior resident on the service will provide the professional leadership and demeanor expected of surgical resident responsible for a high-volume and high-intensity service. The senior resident will act professionally towards the ancillary, and nursing staff. The senior resident will coordinate the care of the patient in the context of a multi-disciplinary team.
- Conflict resolution methods emphasized.
- The senior resident is expected to acquire and implement into the daily practice the methods of the “Resident as Teachers” workshop.

GOALS AND OBJECTIVES 17/17

Competency - VI : SYSTEMS-BASED PRACTICE

PGY2

The care of the critical care patient is a complex multi-disciplinary process that stretches the resources of the health care system. It is important the critical care resident to learn how to effectively call upon the wide range of system resources available while not wasting resources that are not needed or effective. The critical care resident must coordinate the care of the patient within this complex health care system.

PGY3

The senior resident on the OSICU service will coordinate the discharge and transfer planning for the patients in the OSICU,

under the direct supervision of the supervising orthopaedic surgical Faculty.

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Department of
**Oto-Rhino-
Laryngology**

The Department of Oto-Rhino-Laryngology was previously called the Ear, Nose & Throat Department. The abbreviation of 'ENT' is used for ease of reading.

The Departmental strategies are planned to cover the vital aspects of medical curriculum which includes research, education, patient care & community services. While targeting the goals, we propose to strengthen both of our assets namely the knowledge & the resources.

The details are as follows –

Research –

- Focus on safety as the number one priority in human subject research
- Maintain a competitive edge in technology.
- Engage industry to improve technology transfer.
- Provide increased opportunities for medical students to participate in research.
- Promote the bench to bedside principles of the department was founded upon.
- Arrange ample funding for cutting edge research.
- Ensure adequate space for research is reserved in future expansions.
- Increase funding from sources other than Govt and Autonomous bodies.

Education –

- Integrate a focus on safety into all academic activities.

- Reform the medical curriculum to incorporate the challenges posed by a rapidly developing medical world.
- Allow for more patient care in the first two years of speciality graduation.
- Foster the bench to bedside ideals upon which DOS was founded
- Better incorporate new technologies & medical science into the curriculum.
- Increase multidisciplinary learning.
- Foster professionalism & communication skills among all levels of learners – Medical students to clinicians
- Expand the use of new technologies as teaching tools
- Simulation centres
- Online learning tools
- Ensure adequate space for teaching is reserved in any new buildings & ample funds are secured.
- Focus on faculty development.
- Clarify promotional tracts, placing equal emphasis on the importance of scholarly achievement in teaching as well as research and patient care.
- Attain resources to recruit & retain the very best faculty.
- Foster multidisciplinary interactions across DOS.
- Improve diversity across the faculty.
- Ensure faculty are motivated to meet teaching requirements.

Patient care –

- Emphasis patient safety & risk management
- Expand the use of technology to improve efficiency & effectiveness
- Support patient access initiatives
- Allow postgraduate students more patient contact in their first two years
- Provide longitudinal contact for students, spanning across the three-year curriculum.
- Service for the community –
- Enhance the community outreach programs
- Better integrate & organize community service initiatives into the curriculum.
- Collaborate across all educational entities of Department to improve community health.

EDUCATIONAL GOALS –

The educational goal of ENT residency training program is to prepare the resident to become a highly competent and authentically certified ENT surgeon.

On completion of their training, our graduates will be equally qualified to attain placement in a super speciality degree subspeciality fellowship, pursue a career in academic surgery, or enter private practice, rural or metropolitan

This goal is attained by means of a progressively graded curriculum of study & clinical experience under the guidance

& supervision of the faculty progression continues through succeeding stages of responsibility for patient care to culminate in complete management of patient care at the senior level.

1. Use sound judgement to guide surgical decision making based upon firm ethical base.
2. Manage ENT disorders based on a thorough knowledge of basic & clinical science.
3. Attain perfect surgical skills necessary to be a competent ENT surgeon
4. Communicate effectively with patients & their families regarding life altering decisions
5. Respect the cultural & religious needs of the patient.
6. Collaborate effectively with colleagues & other health professionals
7. Teach & discuss surgical issues with colleagues, residents, medical students & other health care providers.
8. Educate patients & their families about the patients health needs
9. Provide cost effective care to patients.
10. Value lifelong learning as a necessary prerequisite to maintaining surgical knowledge & skill.

Evaluation -

The evaluation is a continued process & is reaffirmed at the end of each term wherein residents are evaluated by the faculty. The senior residents participate in the evaluation of

junior residents. At the end of rotation, the faculty meeting assesses the strengths & weakness of the residents.

Evaluation forms are completed & the residents are encouraged to meet with the faculty at the conclusion of the rotation. Feedback is shared so that the resident can address deficiencies.

The faculty takes into account patient care, operative techniques, attitude & communication with others.

The opinions of paramedical personnel, patients, families, and others are considered during the evaluation process.

The residents are encouraged to provide feedback to the faculty regarding the strength & weakness of the surgical experience of the unit.

Learning objectives –

The learning objectives are standard & are basically 6 core competencies.

The resident is expected to complete these objectives independently as well as conjointly during his tenure in a term wise framework.

The 6 core elements are

1. Patient care
2. Medical Knowledge
3. Practice based learning & improvement
4. Interpersonal & communication skills
5. Professionalism
6. Systems based practice

GOALS & OBJECTIVES

This is the framework of the competencies based goals & objectives for the ENT department.

Many aspects of these competencies are general & apply equally to all the related services.

Competency - I : PATIENT CARE

GOALS & OBJECTIVES 1/18

PGY1 – TERM 1

- Develop & perfect the art of history taking, physical examination
- Understand the initial approach to the ENT patients, & develop a differential diagnosis for the new patient, or one for a new problem on a patient already on the ENT service.
- Develop a treatment plan
- Present the patient to the senior resident & the attending faculty
- Write daily notes on the assigned patients, & all patients on whom the individual resident was the operating surgeon or the first assistant
- Entries into medical record should be legible, & the signature should be followed with a stamp or name.
- Notes should reflect all sections of the SBAR & SOAP acronyms or other hospital accepted routes of communication (SBAR: Situation, Background, Assessment, & recommendation). (SOAP: Subjective,

Objective, Assessment, plan)

- All notes should explain the need for continued hospitalization
- Patients should have pain assessment: the resident should assess the degree of pain on an appropriate scale & document it on the progress note.
- **The notes will be read by the faculty member & countersigned. The residents will be given feedback by the faculty on the progress notes.**

GOALS & OBJECTIVES 2/18

- Understand the chain of command on ENT services
- Inform senior resident & faculty of new admissions, or changes in status of the patients already on the service
- When in doubt, call senior resident, chief resident or faculty on the service
- In an emergency call for help from any available internees, residents, nurse, medical social worker & inform the responsible faculty
- Develop basic surgical clinical skills :
 - IV line placement
 - Nasogastric tube placement
 - Suturing & knot tying
 - Diagnostic nasal endoscopy
 - Art of dressing & bandaging
 - Nasal packing
 - Aural toileting

GOALS & OBJECTIVES 3/18

- Recognition & correct application of various surgical devices, ie. Common instruments, retractors, energy sources, suction devices
- Assistance in the operating unit
- Complete credentialing in minor surgical procedures

PGY1 - Term 2

- Improving the clinical & didactic skills developed as a PGY1 - Term 1
- Consultation: become familiar with evaluation process of the patient referred for the consultation from casualty or other services
- Develop a differential diagnosis, treatment plan for consulted patients
- Present the patient to the senior or the chief resident, & the faculty. Immediately upon seeing the patient, place a consult on the chart, & inform the primary service that the patient has been seen. It is acceptable not to have a finalized plan of care in the initial note, as long as the patient is assessed promptly by the senior/ chief resident, & the faculty, & the plan of care is not only defined & finalized but also communicated to the primary services.
- Become credentialed in minor & moderate surgical procedures
- Improve on the basic surgical skills ie. Suturing, knot tying, use of mechanical instruments, nasal packing &

aural toileting.

- Develop understanding of commonly performed ENT operations & their related anatomy (Adenotonsillectomy & Septoplasty)
- Become familiar with new technologies ie. Endoscopies (nasal endoscopy, video laryngoscopy, otoendoscopy)
- Develop leadership skills to become role model to your interns
- Teach the medical students
- Check X-rays, blood work, understand how to interpret basic films & lab reports
- In addition to the routine ward rounds & follow-ups legibly documents visit to the patients you operated on everyday & consultations for your service unit

PGY2 – Term 1

- Continue to improve skills developed as a junior resident
- Assume more visible supervisory & leadership role in the team
- Become the resident responsible for the consultations on your service
- Coordinate and supervise PGY 1s evaluative and consultative services and skills
- Become an active liaison between the primary service, chief residents, and the surgical Faculties.
- Become credentialed in the moderate and some of the

major surgical procedures.

- Become familiar with the surgical procedure, i.e. various types of tympanoplasty & cortical mastoidectomy & FESS.

GOALS AND OBJECTIVES 4/17

Show graded and progressive levels of complexity and responsibility by more participation in the basic and clinical sciences curriculum and clinical assignments of the junior residents.

PGY2 - Term 2

- Improvement of skills developed in earlier years.
- Take complete responsibility of running the service under direction of supervising Faculty.
- Coordinate all conferences and clinical activities in collaboration with the Organizing Residents or Faculty responsible.
- Coordinate care for all patients on the service unit and referral consultations.
- Scrub in operations on cases of complexity and variety suitable for the most senior resident in the service unit.
- Coordinate the in-house and outpatient experience that will assure optimal continuity of care.
- Present morbidities and mortalities on the service at the monthly meetings.
- Participate in the selection process for the case presentation.

PGY3

- Supervise all aspects of management of the ENT patients in the respective unit
- Provide leadership to the entire team of the ENT residents, and medical students
- Assist faculty in daily clinical and educational activities of the department.
- Act as a teaching assistant to the junior residents, when appropriate under the supervision of the Faculty.
- Coordinate the multidisciplinary conferences with other services and assignment of the presentations to the senior and junior residents.
- Establish total continuity of care, and accept responsibility for the patients in the unit, and even those on whom the chief resident was the operating surgeon in other units.
- Assure that the outpatient experience for every rotation that optimizes the continuity of care.
- Assure that all clinical assignments in the chief year will be at the integrated sites.
- The operative cases will be of complexity appropriate for the chief resident.

Competency II - MEDICAL KNOWLEDGE

All scheduled Seminars, Case presentations, Journal readings, Grand rounds, CME's, Workshops, Skill Courses, Conferences are "protected time" from routine clinical duties. Only in an event of a medical emergency the resident will be excused from attending these sessions

GOALS AND OBJECTIVES 5/17

PGYI - Term 1

- The academic sessions is are preplanned programs
- All residents are expected to attend at least 80 % sessions
- All residents, except those on call, are expected to attend the out of campus academic activities.
- All residents are encouraged to read up on the topic in advance.
- Power Point presentations from each session are available on the Departments computer for review and preparation for the Department's assessments and quizzes.
- All residents are expected to participate in the Core Curriculum meetings.
- The senior residents will assign aspects of the presentation that will be appropriate for the level of the resident.
- The resident is expected to become a associate member of the Association of Otorhinolaryngologists of India (AOI) to be eligible to participate in their academic activities
- The resident is expected to read the assigned topic and be prepared for the session for each topic-specific meeting.
- Residents will receive orientation from the senior residents on the service and the Faculty in charge as to where and when the sessions are held.

- The residents at all levels are expected to read standard surgical texts and journals.
- All categorical residents will participate in the term theory examination. Residents are expected to achieve a score of no less than 50 % marks. After receiving scores, residents should review their results, and direct self-learning based on the results
- Residents are expected to teach medical students
- Residents are expected to come to the operating room prepared to discuss the particular case, regional anatomy, pathophysiology, steps of the operation.

PGYI – Term 2

The requirements above for the first term serve as the foundation from which the residents will acquire the habits for life-long learning and critical self-evaluation. The resident will be assigned presentations commensurate with increased knowledge, ability and maturity.

- Residents should begin reading of surgical journals and focus on both: Problem based and Broad based surgical knowledge
- Reading focused on particular surgeries or clinical problems they encounter
- Focus reading for potential research opportunities
- Concentration on the basic science in preparation for the examinations
- Preparation for the assigned cases
- Expand teaching responsibilities to medical students and interns

GOALS AND OBJECTIVES 6/17**PGYI**

- Continue to build on the medical knowledge foundation of the previous two terms
- Prepare more in-depth, researched preparation for the assigned cases.
- Preparation of the Power Point presentation for the seminar or other session.
- Reading of the standard surgical texts ENT curriculum, and supplemented by the journals.
- Preparation for the exam.
- Preparation for presentations at the departments and multi-specialty conferences.
- Utilization of web-based resources, such as pub Med, WebMD and online journals.
- Teaching of the medical students and junior residents.
- Preparation for and participation in the terminal theory and mock oral examination, which is patterned by department.
- Review of Research work allotted & permitted by ethical committee.

PGY3

- Building on the medical knowledge foundation of the previous two years.
- Preparation of the Power Point presentation for the seminar or other session.

- Assist junior residents in preparation and execution of the talks, anticipate questions
- Preparation for the Morbidities and Mortalities Conferences at each rotation site.
- Presentation of the cases at the case presentation and grand rounds.
- Help choose the cases to present, who will present, and schedule the presentation
- Begin preparation for the PG examination after completion of the residency.
- Participation in the “Residents as Teachers” workshop.
- Didactic sessions with the Guide (faculty advisor).
- Practical sessions with the Guide (faculty advisor).
- Finalization and submission of dissertation and other research project undertaken during residency.
- Bring the program to the junior residents and medical students.

Competency III : PRACTICE BASED LEARNING AND IMPROVEMENT

GOALS AND OBJECTIVES 7/17

PGYI

- Residents are expected to utilize their own experience and assimilation of the scientific data for learning, reflection, and patient care improvement.
- Use internet resources, as well as the standard surgical texts to optimize learning.

- Develop on-going personal learning projects, which includes dissertation data compilation and completion.
- Maintenance of accurate, timely, and updated operative and performance log book.
- Maintenance of accurate, up-to-date credentialing for invasive procedures
- Timely submission of the dissertation review for documentation of credentialing (Topic Selection & Ethical clearance)
- Incorporation of all formal presentations into Teaching Portfolios/ Logbooks
- Review of term examination results and learn about topics which were not answered correctly, to direct self-study
- Prepare for assigned elective operative cases by review of the regional anatomy, pertinent pathophysiology and steps of the surgical procedure.
- Come prepared to the OR- technically and in fund of knowledge
- Participation in morbidity and mortality conferences and the associated Quality Assurance process at each session.
- Participation in evidence-based, campus wide, Core Curriculum.
- Use the Department's patient care portfolios to reflect on :
 - The care rendered to the patient in the context of the global health care environment
 - The resident's appreciation of own contribution to the care of the patient.

- Review of the faculty and senior residents assessment form/ monthly valuation to understand the residents own weaknesses and strengths.
- Assure participation in meeting and discussing with the faculty guide/mentor/advisor, and the HOD during regularly scheduled meeting for the evaluations, and plan of correction if needed.

PGY2

- Continue to develop Practice-based Learning and improvement from the junior years.
- Evaluations : As more opportunities present to evaluate the performance of the senior residents our feedback and evaluations carry more importance, and will allow for an objective evaluation.
- Through feedback, deficiencies are better understood and the strengths will become more apparent. Residents should therefore take the opportunity and thoroughly review their evaluations, and use them as an objective guide for improvement.
- For identified deficiencies, residents should track the changes in evaluations for that topic. Also, consultation with their mentor to help institute change is encouraged
- If a technical deficiency is noted on the evaluation, residents should use the department's resources (animal, inanimate and clinical labs), and faculty to work on the particular deficiency.
- Leadership skills : Resident at this level should become a leader to the junior residents, and students. Active

teaching, using techniques from our ‘Resident as Teachers’ program, of topics or skills will reinforce knowledge on particular topics.

- Teaching Skills
 - Participate in the Department’s ‘Resident as Teachers’ program faculty based. resident based and even video-based sessions are valuable tools to understand individual style when presenting and the associated strengths and weaknesses.
 - using the techniques assimilated in these workshops to become more effective teacher and a leader
 - Preparation for the formal discussions and presentations using library, information technology, Other resources available at the department and the on-line resources by the Residents to participate in seminars and conferences
 - Since Power Point presentations are presented at a formal meeting, and is a resource to anyone looking for the information on the topic, residents are encouraged to make them coherent, concise and accurate.

GOALS AND OBJECTIVES 8/17

PGY3

- Assimilate into daily practice the lessons of the prior years, and build on this foundation the life-long practice of learning, reflection, and humility.
- Residents are responsible for junior residents and students on their service

- Residents establish themselves as leaders and diplomats of the Department and its residency program, and should realize that they will leave a legacy of their chief year. They are encouraged to make their legacy one that the students and junior residents will aspire to emulate.

Competency IV : INTERPERSONAL AND COMMUNICATION SKILLS

PGY1

- Participate in the outpatient clinics and ward rounds.
- Take appropriate history and perform rig a physical exam
- Document accurate and appropriate information in the patient's medical record.
- Create the plan of care and presentation of the patient to The faculty member in charge of the patient.
- Initiate the plan of care discussion with the patient
- The resident should be present when the Faculty assesses the patient and discusses the disease process and plan of care with the patient.
- Residents should participate in the discussion with the patient's family members.
- When asking for consultation or any investigation, residents should: provide accurate information to the consulting service, such as when a radiological test is requested or a specialist is requested.
- Hand writing must be legible, and the signature should be followed with a stamp or name.

- Effectively and professionally communicate with all members of the health care team, including
- Discharge planning for admitted patients.
- Provide the necessary information to the social service. Public relation officers, and when necessary assistance with the required forms in preparation for the discharge.
- Residents should appreciate and respect different ethnic and religious beliefs of the patients. When needed, should use the translation services,
- The residents are expected to be teachers and role models to the-medical students, and extensive series of workshops entitled “ Residents as teachers “ would be undertaken by the department.

GOALS AND OBJECTIVES 9/17

PGY2 - Term 1

- As the level of clinical responsibility increases the importance the ability to communicate effectively will become more important
- Resident at this level will be seeing patients in the Emergency department, and as consultants for in-house patents.
- When a consultation is requested, the response to the consultation must be prompt and courteous to the referring service. Remember than you are building habits and frequently relationships that will become important to you in the future.
- Assess the patient, and in a non-emergent situation allow yourself time to think.

- Don't feel pressured to come up with the immediate diagnosis of care. Seek opinions from your seniors and other physicians it needed.
- Reflection and thought are very useful to the surgeon and tie
- Do not be influenced by the opinion of others, and evaluate the patient and the data independently, without any preconceptions.
- Share your impressions with the patient, the referring team, and the senior chief resident or a Faculty.
- These concepts hold true for evaluating the patients anywhere in trio hospital, or in the outpatient facility.
- If the situation is urgent, immediately summon help. You always have an option of calling for help from senior physicians around you, calling a code or activating the Rapid Response Team and oven calling Consultant outside your Unit/Dept/Institute. Make sure your supervising residents and Faculty know the situation.

PGY2 - Term 2

- Based on the foundation of information end experience acquired in the junior years incidents at this level need to communicate professionally and effectively at a more advanced level. The outline above should be reviewed
- Accurate communication with residents at all levels, students, different services, and Faculties is more important than ever.
- Remember that frequently the information you will have to convey be to those with lees experience than

you. Be patient! Remember that you had less experience in the recent past. Always be a teacher to those less experienced, in a professional and not condescending manner.

- Write timely and legible consultations.
- Resident as role models is important- you should assist junior residents with acquiring good communication skills.
- Communicate with the patients and when appropriate the patient's families courteously and professionally.
- Remember that most times these will be lay people, who are in a stressful environment and sick. Effectively communicate with the vocabulary that will be understandable to the patient. Request translator if needed.
- Communicate with consulting services courteously, professionally and accurately. Conflicts may arise, and management of these conflicts reflects on the resident, the service, the Faculty, the Departments and our entire profession.

GOALS AND OBJECTIVES 10/17

PGY3

- Become leader among residents using graduated experiences of the prior years.
- Being a leader requires delicacy, skills of diplomacy, and profound respect for the patients and all members of the health care team.

- Appreciate the strengths and weaknesses of your team. It is easy to work with the “good” residents. Working with the average resident will challenge your skills as a leader and a communicator. Be patient!
- Most residents will perform the tasks well, with supervision, guidance and appropriately timed and tempered feedback and critics.
- If you have to counsel or reprimand a junior resident do it privately.
- Do not insult anyone! We work in an environment with diverse social and cultural sensitivities which should be taken into account when we talk to the patients and other health care team members.
- If you have a disagreement with any member of the health care team, attempt to resolve it amicably and not in the presence of a patient.
- Escalate to the supervising Faculty any unresolved matters. Always act professionally, and withdraw from a potentially more difficult situation. Report the matter to the supervising faculty, day or night.

Competency - V : PROFESSIONALISM

GOALS AND OBJECTIVES 11/17

PGY1

- Residents are expected to be ethical and professional .
- Professionalism is expected in all clinical arenas- bedside. operating room, outpatient department, and hallways/elevators, corridors and catteries.

- Respect patient privacy.
- Do not discuss anything related to patient care issues in public places
- Understand patient privacy issues and legal aspects of patient of confidentiality.
- Lectures on arranged annually by department.
- These will define and address the prevalence of the problem, effects on a as a person and how it may potentially attest physician's life and impact the patient care.
- The residents are expected to act professionally towards all members of the health care team and other co-workers.
- If at any time any resident feels that they felt persecuted, harassed, or threatened in any form they should immediately report their concerns to the faculty member, unit in charge, or his designee, or the HOD, and the appropriate action and referrals will be made.
- The Department's Annual lecture on stress, will help the resident to identify signs of stress in themselves and their colleagues.
- Timely record completion is expected, including -Medical records, operative dictations. and discharge summaries, residency operative logs, submission of the credentialing notes and reviews for procedures, evaluations of rotations, annual evaluations of Faculties and the program.
- Remember that the hospital is the workplace for us, but for the patients it is temporary home.
- Be respectful to the patients .

- Patient's areas are therefore their private space, which we enter out of necessity. Knock on the door, if the door to the room is closed. Most of the time there are many patients in the hall, and to get to the patient away from the door you will have to traverse the space of a person. A quick apology, a greeting and a smile will make the intrusion much less offensive.
- Surgeons frequently make rounds in the very early hours. and with large teams. Try to awaken the patient gently, and ask permission to examine ,close the curtain, respecting the patient's privacy. Although frequently difficult to maintain privacy in a small room make every effort to do so.
- Show compassionate patient care which is ethical and respectful.
- Demonstrate professionalism by preparation for the elective cases, pre-operative assessment of the patient, and conduct in surgery that is deferential to the patient and to the experience of the Supervising Faculty. Follow the patient after the surgery with daily progress notes.
- Communicate with the Faculty surgeon daily to coordinate the post-operative care of the patient.
- When appropriate provide the patient with the pertinent information, deferring to the Faculty surgeon discussions dealing with difficult matters, such as complications, differential diagnosis, prognosis and treatment plan in cancer patients.
- Be present when these discussions do take place, as this will provide you with the important lessons for the future.

- Dress appropriately with attention to personal and hospital hygiene.

PGY3

- At this stage you are expected to be a leader in a professional organization.
- The position of a 3rd year is perceived to be one of power, responsibility and brevity. But, there must be a sense of humanity and appreciation that physicians are lifelong students at various stages of personal and professional development.
- Treat your juniors as you wanted to be treated by your chief when you were an intern.
- Treat your patients as you would want to be treated if you were in their place.

Competency VI : SYSTEMS-BASED PRACTICE

GOALS AND OBJECTIVES 12/17

PGYI

- Residents are expected to demonstrate awareness about differences between hospitals,
- Differences between health care systems. insurance companies, National QA initiatives such as the Joint Commission, care measures, pollution control program, waste disposal systems, communicable disease measures, medico legal formalities, infection control programs, Hearing assessment & rehabilitation effectively in their context.

- Resident's reflections address the issues of resident's involvement in the care of a particular patient. It gives the resident an opportunity to reflect on how they contributed to the care of the patient in the contexts above and how they felt as a participant.
- Participation in the multiple multi-disciplinary conferences is valuable in demonstrating and teaching the residents the practice of medicine in the context of a global health care delivery.
- Case management conferences are important for demonstrating the close and necessary ties between clinical and other services especially in the discharge planning arena.
- Familiarization with the MCI standards, National Patient Safe Goals, Department of Health Regulations are mandated and the instruction given.
- Professional Secrecy regulations, patient privacy issues are to be understood and respected, instructions are given to the residents.
- Participation in the Department' Assurance process is assured.
- The Residents are required to comply with the department's administrative policies: Operative Procedure log books, Submission of notes and reviews for credentialing for incisive procedure, program department and Faculty evaluations.

GOALS AND OBJECTIVES 13/17

PGY2

- Participation in Department Quality Assurance projects, such as medicine reconciliation, infection control, perioperative use of antibiotics, pre, intra & postoperative management will be providing the residents with valuable experience and appreciation of health care delivery in a more global context.
- Participation in discharge rounds will provide the residents with understanding of the discharge process, steps necessary to arrange for social services, arranging for the visiting medical team at home health aids.
- Participation in multi-specialty conferences will offer the residents the unique opportunity to benefit from the knowledge and experience of the faculty members from different departments.

PGY3

- Senior and chief residents are expected to not only understand the above issues of System- Based Practice, but also appreciate the differences at each site where they rotate, as every institution is unique. They should help the junior residents to navigate through the difficulties that working in an unfamiliar institution may pose.
- Participation in the institutional and department's quality assurance committees, such as Root Cause Analysis, where complex cases with an unexpected outcome are discussed in a multi-special group involving

hospital and nursing administration in addition the clinical services.

Goals and Objectives Surgical Critical Care (SICU)

Goals - Critical Care is an integral aspect of ENT training that brings together all of the skills of ENT surgery, including diagnostic techniques, operative techniques, and patientcare. The goal of the ICU rotation is to provide PGY2 and PGY3 resident with understanding of the critically ill patient that allows them to provide safe, competent care. The rotation will give the residents the necessary background knowledge to care for the critical ENT patient as well as an understanding of the multi- discipline nature of critical care in their pre and postoperative care.

GOALS AND OBJECTIVES 14/17

Competency I : PATIENT CARE

Residents will be expected to have patient care that ; compassionate, appropriate up to date for the treatment of the critical care ENT patient. The resident will learn the importance.

PGY 2

- Become familiar with the various monitoring equipment and modes of mechanical ventilation
- Display the necessary skills to manage airways in the ICU.
- Initiate appropriate treatment and diagnostic evaluations of an acutely decompensating Patient Understand and execute the priority protocol for the critically ill.

- Become a chief in the patients care team in the SICU
- Prepare the team for Faculty bedside teaching rounds
- Supervise junior residents who are not credentialed in some invasive procedures and help them get credentialed.

Competency II - MEDICAL KNOWLEDGE

Residents will be expected to acquire knowledge regarding the anatomy, physiology and patho-physiology involved in critical care medicine.

GOALS AND OBJECTIVES 15/17

PGY2 and PGY3

Residents at the PGY2 and at the PGY3 levels will be exposed to same clinical curriculum at the bedside rounds and didactic conferences. The senior PGY3 resident on the service is expected to be the leader of the team and teacher to the junior residents, the senior residents have significant experience and Knowledge acquired in the past exposure and experience with an Various endoscopic techniques such as videolaryngoscopy, bronchoscopy, oesophagoscopy under the direction of the Faculty.

- Understand the differential diagnosis and workup of neurological deficits, Endocrine
- Understand The Responses To Stress In The Surgical Patient ,Nutrition
- Understand the pathology, diagnosis and management of facio-maxillary trauma including nasal bone fracture.
- Understand the workup and management of Infectious Disease.

- Understand the importance of various techniques of tracheostomy & care.
- Understand the diagnosis, workup and management of shock.

Competency III : PROFESSIONALISM

PGY 2

The ICU is a high intensity area and high stress area that requires the Critical care resident to behave professionally at all times residents are expected to:

- Demonstrate respect, compassion and integrity in relationships with family, patients and staff
- Demonstrate sensitivity and responsiveness to cultural, age, gender and religious differences.
- Understand and be able to participate in the process of information consent.
- Understand and ethical and legal issues that ICU patients including withdrawal of support and end of life issues.

PGY 3

- The senior resident of the service will provide the professional leadership and demeanor expected of a ENT resident responsible for a high-volume and high-intensity service. The senior resident will act professionally towards the care of the patient in the context of multi-disciplinary team.
- Conflict resolution methods emphasized.

- The senior resident is expected to acquire and implement into the daily proactive the methods of the “Residents as Teachers “ Workshop.

GOALS AND OBJECTIVES 17/17

Competency VI : SYSTEMS-BASED PRACTICE

PGY 2

The care of the critical care patient is a complex multi-disciplinary process that stretches the resources of the health care system. It is important the critical care resident to learn how to effectively call upon the wide range of system resources available while not wasting resources that are not needed or effective. The critical care resident must coordinate the care of the patient within this complex health care system.

PGY 3

The senior resident will coordinate the discharge and transfer planning for the patients in the SICU, under the direct supervision of the supervising ENT Faculty.



Department of
Psychiatry

The postgraduate psychiatry residency program is designed to empower the new entrants with skills and abilities that will help them navigate through the challenges as well as to aim for and achieve various goals in the rapidly expanding landscape of mental healthcare.

The department has well-qualified faculty profile who are well-trained and experienced in patient care, community service and clinical research, which will help our students chose their path once they finish their post-graduation.

Highlights of the Psychiatry Residency Program

- The educational goals of the Psychiatry residency training program is to prepare the resident to become a highly competent and authentically certified psychiatrist.
- On completion of their training, the post-graduates will be qualified to attain a placement in a psychiatry super speciality degree, subspecialty fellowship, pursue a career in academic psychiatry or enter private practice, in either rural or metropolitan.
- This goal is attained by means of progressively graded curriculum of study and clinical experience under the guidance and supervision of the faculty.
- Progression continues through succeeding stages of responsibility for patient care, culminating in complete patient care at the senior/chief resident level.
- The program empowers them to
 - Use sound judgement to guide decision making based on scientific evidence and a firm ethical base

- Manage psychiatric disorders based on a comprehensive knowledge of basic and clinical sciences.
- Attain and perfect psychiatry skills necessary to be a competent psychiatrist Communicate effectively with colleagues and other health professionals
- Teach and discuss psychiatry issues with colleagues, residents, medical students and other health care providers
- Educate patients and their families about the patients' health needs
- Provide cost effective care to psychiatry patients
- Value life-long learning skills as a necessary prerequisite to maintaining psychiatry skill and knowledge

Evaluation

- The evaluation is a continued process and is reaffirmed at the end of each term.
- Residents are evaluated by the faculty. The senior residents participate in the evaluation of the junior residents.
- Evaluation forms are completed and residents are encouraged to meet the faculty at the completion of the term
- Feedback is distributed during the rotation so that the resident can address the deficiencies.

- The Faculty takes into account, patient care, communicative techniques, decision making and communication with others. The opinions of paramedical personnel, patients and family members are considered during the evaluation process.
- The residents are encouraged to provide feedback to the faculty

Learning Objectives

- The learning objectives are set to train a postgraduate resident in 6 core competency skills (CCS), which will enable him/her to cope with challenges in the changing scenario of mental healthcare in India and the world.
- The resident is expected to complete these objectives independently as well as conjointly with his/her colleagues during his/her tenure.
- The 5 core elements are :
 1. Patient care including emergency psychiatry
 2. Medical education/academic skills
 3. Practice based learning and improvement
 4. Interpersonal and communication skill
 5. Professionalism

**YEAR -WISE STRUCTURED PROGRAM FOR
ACHIEVEMENT OF CORE COMPETENCY SKILLS (CCS)**

**CCS FOR 1st YEAR OF
POSTGRADUATION PROGRAM : PGY1**

Competency – PATIENT CARE

In their first year, residents will achieve the following objectives in the competency “**patient care**”.

- Understand the initial approach to a patient with behavioural disturbances.
- Develop and perfect the art of establishing rapport with the patient and caregivers, history taking, physical examination, including a comprehensive neurological examination.
- Maintain appropriate body language while communicating with the patient.
- Take ward rounds, monitoring patients for symptoms, adverse effects and complications if any.
- Present rounds to senior resident and attending faculty.
- Write daily notes on assigned patients in the ward
- Make legible entries in the medical record which fulfil SBAR and SOAP protocols adopted by the hospital.
- Present daily rounds to the senior residents and attend the faculty rounds.
- Effective communication between departmental colleagues about patients, in OPD as well as IPD settings.
- Emergency Psychiatry

- Approach to a violent patient.
 - Approach to a patient with acute suicidal ideations.
 - Approach to a patient with delirium.
 - Approach to a patient presenting to the casualty.
 - Skills in rapid history taking, 4-point and 5-point restraining techniques.
 - Summoning help in cases of emergency psychiatry presentations
- Prepare a patient for electroconvulsive therapy (ECT). Learn to administer ECT and pre-post treatment care of the patients.

Competency – MEDICAL EDUCATION

In their first year, residents will achieve the following objectives in the competency “medical education”.

- Understand normalcy in psychiatry and neurosciences, such as normal neuroanatomy, neurophysiology, neurochemistry and neuropsychology.
- Read standard textbooks and journals as their main source of scientific information.
- Adhere by the departmental postgraduate teaching schedule, which is a structured, pre-set program. All residents are expected to attend a minimum of 80% of these sessions.
- Read up in advance, the topic set for discussion on a particular day.
- Make effective, concise and precisely worded powerpoint presentations.

- Join various academic societies and institutions, such as the Indian Psychiatric Society, which will facilitate their participation in various scientific conferences.
- The resident will be assigned presentations commensurate with increased knowledge, ability and maturity.
- Reading focused on particular problems they encounter and focus reading on potential research opportunities.
- Concentration on the basic science for the preparation for exams.
- Preparation for assigned cases.
- Expand teaching responsibilities to medical students and interns.
- Learn basics of clinical research, research methodologies and principles of bioethics involved in clinical research.
- Discuss with their guide about their proposed postgraduate thesis topic.

Competency – COMMUNICATION SKILLS

In their first year, residents will achieve the following objectives in the competency “Communication skills”.

- From the beginning of training, residents are expected to develop communication skills that result in assertive, effective and professional communication with patients, patients’ families and members of the health care team.
- Learn the basics of establishing a rapport with patients and their caregivers.

- Learn to be patient and compassionate listeners.
- Learn basic skills of appropriate body language during a clinical interview.
- Learn to effectively communicate patient's clinical status to colleagues and seniors.
- Learn to communicate with precision with colleagues and seniors while communicating clinical information.

Competency – PROFESSIONALISM

In their first year, residents will achieve the following objectives in the competency “professionalism”.

- Behave professionally and embed key work ethics, such as punctuality, perseverance and meticulousness.
- Dress appropriately to their work environment.
- Maintain the dignity of their work environment and their profession while carrying themselves around patients and their caregivers.

Competency – PRACTICE BASED LEARNING AND IMPROVEMENT

In their first year, residents will achieve the following objectives in the competency “**Practice based learning and improvement**”.

- The residents are expected to utilize their own experience and assimilation of the scientific data for learning, reflection and patient care improvement.

- Use internet resources as well as the standard psychiatry textbooks to optimize learning.
- Develop on going personal learning projects which includes thesis data compilation and completion.
- Maintenance of accurate, timely, and updated log book.
- Timely submission of thesis review for documentation of credentialing (topic selection and ethical clearance).
- Incorporation of all formal presentations into teaching portfolios and CV's.
- Review of term examination results and learn about topics which were not answered correctly to direct self-study.
- Come prepared to the ECT room with knowledge of the patient, and to keep note of vitals, pre ECT check-up list and post ECT recovery.
- Assure participation in meeting and discussing with faculty guide and HOD during regularly scheduled meetings for the evaluations and plan for correction if needed.

**CCS FOR 2nd YEAR OF
POSTGRADUATION PROGRAM : PGY2**

Competency – PATIENT CARE

In their second year, residents will achieve the following objectives in the competency “**patient care**”.

- Continue to improve skills developed as junior resident.
- Assume a more visible supervisory and leadership role in the OPD.

- Master the art of mental state examination.
- Become the resident responsible for the consultations on your service
- Coordinate and supervise PGY1's evaluative, consultative services and skills
- Become the active liaison between the primary service, chief residents and the other faculties.
- Become more familiar with ECT, EEG and psychometry.
- Show graded and progressive levels of responsibility and complexity by participating in basic and clinical sciences curriculum and clinical assignments of junior residents.

Competency – MEDICAL EDUCATION / ACADEMIC ACTIVITIES

In their second year, residents will achieve the following objectives in the competency “**Medical education/academic activities**”.

- Participate in the departmental research programs and attend conferences for paper and poster presentations.
- Help organise departmental daily activities and various scientific programs, such as guest lectures and conferences.
- Continue to build the medical knowledge on the foundation of the two previous terms.
- Prepare more in depth researched preparation for the assigned cases.

- Preparation of power point presentation for seminar or other reading sessions.
- Reading of standard texts, DOP curriculum and supplemented by journals
- Preparation for presentations at departments and multi-speciality conferences
- Utilization of web based resources such as PubMed, WebMD and online journals
- Teaching of the medical students and junior residents preparation for and participation in the terminal theory and mock oral examination committee examination which is patterned by the DOP
- Review of research work allotted and permitted by the ethical committee

Competency - PRACTICE BASED LEARNING AND IMPROVEMENT

In their second year, residents will achieve the following objectives in the competency **“Practice based learning and improvement”**.

- Continue to develop practice based learning and improvement from the junior years.
- Through feedback deficiencies are better understood and strength become more apparent.
- Therefore, residents should take the opportunity to thoroughly review their evaluations and use them as an objective guide for improvement.

- For identified deficiencies, residents should track the changes in evaluations for that topic.
- Also consultation with their mentor is encouraged. If a technical deficiency is noted on the evaluation, residents should use the department's resources (animal, inanimate and clinical labs), and faculty to work on the particular deficiency.

Competency - COMMUNICATION

In their second year, residents will achieve the following objectives in the competency “**communication**”.

- Become a liaison between newly joined first year residents and senior faculty.
- Communicate assertively and effectively with both their juniors and seniors in the department.
- Accept a mentor's role for their juniors.
- Learn and master to communicate complex issues with patients and relatives about their diagnosis, prognosis, pros and cons of various treatment modalities.

Competency - PROFESSIONALISM

In their second year, residents will achieve the following objectives in the competency “**professionalism**”.

- Adhere to the departmental work ethic and help the seniors implement it.
- Maintain the dignity of medical profession while carrying around themselves in the work environment.

**CSS For 3rd YEAR OF
POST-GRADUATION PROGRAM : PGY3**

Competency – PATIENT CARE

In their third year, residents will achieve the following objectives in the competency “**patient care**”.

- Continue to improve skills developed as junior resident.
- Assume a more visible supervisory and leadership role in the Opd.
- Supervise all aspects of management of psychiatry patients in wards and other liaisons.
- Assure that all clinical assignments in the chief year will be at the integrated sites.
- Help choose the cases to present, who will present and schedule the presentation.
- Gain more autonomy in making clinical decisions related to diagnosis, treatment and other supportive measures.

**Competency – MEDICAL EDUCATION/
ACADEMIC ACTIVITIES**

In their third year, residents will achieve the following objectives in the competency “**Medical education/academic activities**”.

- Building on the medical knowledge of the previous two years
- Preparation of PowerPoint seminar for the seminars of other sessions
- Assign junior residents in preparation and execution of the talks, anticipate questions

- Presentation of cases at case presentation and grand rounds
- Provide leadership to the entire team of the residents and medical students
- Assist faculty in daily clinical and educational activities of the department
- Act as a teaching assistant to the junior residents when appropriate under the supervision of the psychiatry faculty
- Coordinate the multidisciplinary conferences with other services and assignments of the presentations to the senior and junior residents.
- Begin preparation for the PG examination after completion of the residency.
- Didactic sessions with guide.
- Practical sessions with guide.
- Finalization and submission of thesis and other research projects undertaken during residency.

Competency - PRACTICE BASED LEARNING AND IMPROVEMENT

In their third year, residents will achieve the following objectives in the competency “**Practice based learning and improvement**”.

- Assimilate into daily practice the lessons of the prior years, and build on this foundation the life-long practice of learning, reflection, and humility.

- Residents are responsible for running entire psychiatry services, resident schedules, cross covering of services, assignment of cases, and co-ordination of care for patients.
- Residents are responsible for junior residents and students on their service
- Residents establish themselves as leaders and diplomats of the department and its residency program, and should realize that they will leave a legacy of their chief year. They are encouraged to make their legacy one that the students and junior residents will aspire to emulate.

Competency - COMMUNICATION

In their third year, residents will achieve the following objectives in the competency “**communication**”.

- Resident should become a leader to the junior residents, and students. Active teaching, using techniques from our ‘Resident as Teachers’ program, of topics or skills will reinforce knowledge on particular topics.
- Participate in the Department’s ‘Residents as Teachers’ program. Faculty based, resident based and even video-based sessions are valuable tools to understand individual style when presenting, and the associated strengths and weaknesses.
- Using the techniques assimilated in these workshops to become a more effective teacher and a leader.
- Preparation for the formal discussions and presentations using the library, information technology, other resources available at the department and the on-line resources by the Residents to participate in seminars

and conferences.

- Since Power Point presentations are presented at a formal meeting, and is a resource to anyone looking for the information on the topic, residents are encouraged to make them coherent, concise and accurate.
- Learn and master the art of pedagogue and discussing clinical issues with general public.
- Learn to discuss and convey complex, sensitive issues to patients and caregivers and help them make rational treatment decisions.

Competency - PROFESSIONALISM

In their third year, residents will achieve the following objectives in the competency “**professionalism**”.

- Adhere to the departmental work ethic and help the seniors implement it.
- Maintain the dignity of medical profession while carrying around themselves in the work environment.

Bioethics

During their tenure, residents are expected to learn, understand and master some important ethical principles that govern medical science, clinical care and research.

- First do no harm. Any decision or intervention we make, should not cause any harm to the patient physically or psychologically.
- Maintain patient’s dignity and self esteem while communicating with the patient.

- Respect the patient's right to privacy and confidentiality.
- Respect patient's basic human rights while communicating with/about him/her.
- Follow the principles in the Geneva convention and the Helsinki declaration while conducting clinical research involving human volunteers.

Systems-based Practice

- Residents are expected to demonstrate awareness about differences between hospitals, differences between health care systems, insurance companies.
- Initiatives such as the control measures, pollution control program, waste disposal systems, communicable disease measures, medico-legal formalities.
- Infection Control programs, D prophylaxis and must work effectively in their context.
- Resident's portfolios address the issues of resident's involvement in the care of a particular patient. It gives the resident an opportunity to reflect on how they contributed to the care of the patient in the contexts above and how they felt as a participant.
- Participation in the multiple multi-disciplinary conferences if valuable in demonstrating and teaching the residents the practice of medicine in the context of a global health care delivery.
- Case management conferences are important for demonstrating-the close and necessary ties between clinical and other services, especially in the discharge planning arena.

- Familiarization with the MCI standards, National Patient Safe Goals, Department of Health Regulations are mandated and the instruction given.
- Professional Secrecy regulations, patient privacy issues are to be understood and respected. Instructions are given to the residents.
- Participation in the Department's Quality Assurance process is assured.
- The residents are required to comply with the department's administrative policies:
- Log books and submission of notes and reviews for credentialing
- Monitoring of the news and developments on the department's front, and periodic checking of the notices, as important communications are sent to the residents through these.
- Participation in discharge rounds will provide the residents with understanding of the discharge process, steps necessary to arrange for social services.
- Participation in multi-specialty conferences will offer the residents the unique opportunity to benefit from the knowledge and experience of the faculty members from different departments.
- The residents will be able to incorporate this acquired appreciation of the multi-specialty approach to patient care in their own practice.
- Senior and chief residents are expected to not only understand the above issues of System- Based Practice,

but also appreciate the differences at each site where they rotate, as every institution is unique. They should help the junior residents to navigate through the difficulties that working in an unfamiliar institution may pose.

- Participation in the institutional and department's quality assurance committees, such as Root Cause Analysis, where complex case with an unexpected outcome are discussed in a multispecialty group involving hospital and nursing administration in addition to the clinical services.

Participation in the Resident Subcommittee of the Grievance Redressal Committee (GRC), Curricular Committee (CC) and Research and Ethical committee (REC) provides our resident with hands-on involvement in charting the academic course of the institution. Residents' concerns are discussed, and then presented by the representative at the Executive Committee (EC).



Department of
Radio-Diagnosis

The infrastructure and faculty of the department of Radio-diagnosis is as per MCI guidelines.

1. PREAMBLE

The program is structured so that the resident's clinical responsibilities increase progressively during training. At the completion of the training program, residents will be proficient in all areas of Diagnostic Radiology and will be able to function independently as a consultant in radiology, plan and perform appropriate radiologic procedures, interpret the results, and formulate a diagnosis and an appropriate differential diagnosis. They will be qualified to diagnose accurately or advice further investigations in case the need arises. It is expected that residents will develop a satisfactory level of clinical maturity, judgment, and technical skill that will, on completion of the program, render them capable of the independent practice of diagnostic radiology. The departmental strategies are planned to cover the vital aspects of medical curriculum which includes research, education, patient care and community services.

2. GOALS

The three years course in Radiodiagnosis is aimed at imparting training in both conventional radiology and modern imaging techniques so that the candidate is fully competent to practice, teach and do research in the broad discipline of radiodiagnosis including ultrasound, Computed Tomography, Magnetic Resonance Imaging, Mammography, Nuclear Medicine including PET-CT, Interventional Radiology etc.

Candidate should be well versed with medical ethics and consumer protection act and the Pre-Conception and Pre-Natal Diagnostic Techniques (Prohibition of Sex Selection) Act (PCPNDT Act) E-LORA, CAD etc.

3. OBJECTIVES

A resident on completing his/her MD (Radio-diagnosis) should have acquired good basic knowledge in the various sub-specialties of radiology such as Neuro-radiology, GI-radiology, Uro-radiology, Vascular-radiology, Musculoskeletal, Interventional radiology, Emergency radiology, Paediatric radiology and Mammography, and be able to-

- Independently conduct and interpret all routine and special radiological and imaging investigations.
- Provide radiological services in acute emergency and trauma including its medico legal aspects.
- Elicit indications, diagnostic features and limitation of application of ultrasonography, CT and MRI and should be able to describe proper cost-effective algorithm of various imaging techniques in a given problem setting. Perform (under supervision) basic image guided interventional procedures for diagnosis and therapeutic management.
- Formulate basic research protocols and carry out research in the field of radiology related clinical problems.
- Undertake further specialization in any of the above-mentioned branches in Radio-diagnosis such

as Gastrointestinal radiology, Uro-radiology, Neuro-radiology, Vascular radiology, Musculoskeletal radiology, Interventional radiology etc.

- To interact with other specialists and super-specialists so that maximum benefit to the patient accrues.
- Work as a Senior Resident/consultant in Radiodiagnosis and conduct the teaching programme for undergraduates, postgraduates as well as paramedical and technical personnel.
- Organize CME in the speciality utilizing modern methods of teaching and evaluation.

4. SYLLABUS

4.1 Theory

Basic science related to the speciality of Radio-diagnosis

Radiation Physics and Radiation Biology

Introduction to general properties of radiation, production of X-Ray, Characteristic properties of X-Ray, Interaction of X-Rays with matter and their effects, units of radiation, radiation measurement, Image receptors. X-Ray film, intensifying screen, Formation of radiographic image, X-Ray equipment, Conventional X-Ray Units, Fluoroscopy units (conventional, image intensifier), Advanced imaging equipment. US, CT, MRI, Angiography, cine fluoroscopy and cineangiography.

Radiation hazards and radiation protection

- Contrast media- types, chemical composition, mechanism of action, dose schedule, route of administration, adverse reaction and their management.
- Nuclear Medicine. Diagnostic use of important isotopes in different organ systems. Instruments/equipment in Nuclear Medicine and their recent advances.
- Picture archiving and communication system (PACS) and Radiology information system (RIS) to make a film less department.

Respiratory System

- Disease of the chest wall, diaphragm, pleura and airway; pulmonary vasculature; pulmonary infections; pulmonary neoplasm; diffuse lung disease; mediastinal disease; chest trauma; post-operative and intensive care imaging.

Gastrointestinal (GIT) and Hepato-Biliary-Pancreatic System

- Diseases and disorders of mouth, pharynx, salivary glands, esophagus, stomach, small intestine, large intestine, diseases of omentum, peritoneum and mesentery, acute abdomen, abdominal trauma. Diseases and disorders of hepato-biliary-pancreatic system. Conventional and other imaging methods like US, CT, MRI, DSA and isotope studies pertaining to these systems.

Genito-Urinary System

- Various diseases and disorders of genito-urinary system. These include: congenital inflammatory, traumatic, neoplastic, calculus disease and miscellaneous conditions. He/she should also be able to perform and interpret conventional and other diagnostic imaging procedures used to evaluate urinary tract pathology i.e., ultrasound, CT, MRI, angiography. He/She should be able to perform vascular/non-vascular interventions of genito-urinary system.

Musculoskeletal System

- Imaging (Conventional, Ultrasound, CT, MRI, angiography, Radio-isotope studies) and interpretation of disease of muscles, soft tissue, bones and joints including congenital inflammatory, traumatic, metabolic and endocrine, neoplastic and miscellaneous conditions.

Cardiovascular Radiology

- Diseases and disorder of cardiovascular system (congenital and acquired conditions) and the role of imaging by conventional radiology, ultrasound, Color-Doppler, CT, MRI, angiography radio nuclide studies.

Neuro-Radiology

- Includes imaging (using conventional and newer methods) and interpretation of various diseases and

disorders of the brain and spine covering congenital, infective, vascular, traumatic and neoplastic conditions. This will also include disease Radiology of the eye and ENT.

Emergency Radiology

- The student should be able to evaluate emergency radiographic examinations with reasonable accuracy and have clear understanding of the protocol of imaging in emergency situations of different organ systems.

Mammography and Breast Intervention

- Role of film screen mammography (conventional and digital) in screening of breast cancer, benign and malignant lesions of the breast, in addition breast tomosynthesis and CAD.

General Radiology

Conventional Radiology

- The student should be able to evaluate conventional radiographs including radiographs on chest abdomen, pelvis, skull (including PNS + Orbit), spine, musculoskeletal and soft tissues. Student should be able to perform radiography of different body parts.

Ultrasound

- The student should be able to perform and interpret all ultrasound studies. These studies include: abdomen, pelvis, small parts, neonatal head, breast,

color-duplex imaging (arterial and venous studies), obstetrics/gynecology and intervention procedures using ultrasound guidance.

CT

- Select CT protocol according to the clinical diagnosis.
- Demonstrate knowledge of the CT finding of the common pathological conditions. Interpret conventional and modified body CT examinations.
- Know limitations of CT in the diagnosis of certain diseases. Perform CT guided simple interventions (under supervision).

Angiography

- The student should be able to interpret and preferably perform (under supervision) routine angiographic procedures and vascular interventions.

MRI

- Select MRI protocol according to the clinical diagnosis
- Knowledge of conventional and modified MRI examinations, including MRA, MRV, MRCP, MRS.
- Demonstrate knowledge of the MRI of the common pathological conditions.

Interventional Radiology

- The student should be able to perform (under

supervision) simple interventional procedures of all the organ systems.

4.2 Practical

Practical Schedule –Radiophysics

- Film characteristics, Effectiveness of Lead Apron and other protective Devices,
- Beam parameters check, Optical Radiation field alignment, Assessment of Scatter radiation, Quality control of X-rays and Imaging equipment, Evaluation of performance of a film processing unit

Radiography

- Radiography of the extremities, radiography of the spine, abdomen, pelvic girdle and thorax , Radiography of the skull, Contrast techniques and interpretation of GI tract, biliary tract, etc. Contrast techniques and interpretation of the Genito-urinary system, Contrast techniques and interpretation of the central nervous and Cardiovascular system, Miniature radiography, Macro-radiography and magnification techniques Dental and portable radiography

Radioanatomy

- Gross and cross-sectional Anatomy of all the body systems.

Pathology

- Gross morphology of pathological condition of various systems

Contrast Media

- Their types, formulations, mechanism of action, dose schedule, routes of administration, adverse reactions and their management.

5. TEACHING PROGRAMME

5.1 General Principles

Acquisition of practical competencies being the keystone of postgraduate medical education, postgraduate training is skill oriented.

Learning in postgraduate program is essentially self-directed and primarily emanating from clinical and academic work. The formal sessions are merely meant to supplement this core effort.

5.2 Teaching Sessions

In addition to conducting and reporting of routine and special investigation in the area of posting under direct supervision, formal teaching session to be held on working days. These include seminars in physics and general radiology, journal clubs, case presentations; Interdepartmental meets and Film reading session.

5.3 Teaching Schedule

The suggested departmental teaching schedule would include activities such as Seminar, film reading, case presentation and group discussion and journal club.

Note : All sessions will be coordinated by the faculty members. All the teaching sessions to be assessed

by the consultants at the end of session and graded attendance of the Residents at various sessions should be at least 75%.

6. POSTING

The postgraduate student should be posted in all sections (Conventional radiology, U/S, CT, MRI etc.) so that there is adequate exposure to all modalities.

The proposed duration of postings is as under.

- Conventional including
Radiological procedures 8 to 9 months
- Ultrasonography 8 to 9 months
- CT 8 to 9 months
- MRI 8 to 9 months
- Interventional Radiology 3 to 4 months

1 st Year	(1/6)	Chest	Chest	Musculo-Skeletal	G.U.	G.U.	US
	(2/6)	US	CT (H)	CT(B)	G.I.T.	G.I.T.	US
2 nd Year	(3/6)	Chest + Mammography	Musculo-Skeletal	Musculo-Skeletal	G.I.T.	Elective	CT(H)
	(4/6)	CT(B)	US + Doppler	Intervention	US + Doppler	G.U.	G.I.T.
3 rd Year	(5/6)	CT (H)	MRI	MRI	Intervention	Intervention	CT (B)
	(6/6)	MRI	Elective	Intervention	US + Doppler	MRI	Elective

1st Year (1/6) : Radiation Protection, Positioning in Radiography, Radio-Anatomy, Radio-Physics, Conventional chest and abdomen radiograph, Conventional skull, spine, musculoskeletal etc, Contrast studies – GIT and other fluoroscopic investigations, x-ray procedures, respiratory system and C.V.S

1st Year (2/6) : Basic orientation and Physics of Ultrasonography, Ultrasonography and interventions, Sonographic procedures, Orientation of CT, respiratory and C.V.S

2nd Year (3/6) : CT Physics , emergency imaging, US guided interventions, Obstetrics and Gynecology, G.I.T and genitourinary system, Interventional Radiology

2nd Year (4/6) : MR physics, US and Doppler, Pediatric imaging, Obstetrics and Gynecology, G.I.T and Genitourinary system, Interventional Radiology

3rd Year (5/6) : Head and Neck including ENT and Ophthalmology, CNS & spine, Musculoskeletal system, Mammography, CT & MR interventions, Nuclear medicine.

3rd Year (6/6) : Head and Neck including ENT and Ophthalmology, Musculoskeletal and mammography, CT and MR interventions, MRI, Neuroradiology, Nuclear Medicine.

7. JOB RESPONSIBILITIES

- Work up of all cases coming for special investigations (Barium studies, Urological investigation, U/S, CT and MR).
- To confirm that proper preparation of the patient has been done.
- To perform various radiological procedures keeping in view the following:
- Low radiation dose to the patient and doctor.

- Patient comfort.
- Diagnostic yield.
- To observe the findings and discuss the interpretations with the consultants and document them.
- To assist the consultants in various guided procedures carried out in the department like:-
 - Aspirations
 - PCN
 - Catheter Insertion
 - PTBD
- To take clinical classes of undergraduate students.

8. THESIS

The student should be able to demonstrate capability in research by planning and conducting systematic scientific research and data analysis and deriving conclusion.

Every candidate shall carry out work on an assigned research project under the guidance of a recognized Postgraduate teacher, the project shall be written and submitted in the form of a thesis.

Every candidate shall submit thesis plan to the university within the time frame mentioned by the university.

Thesis shall be submitted to the University six months before the commencement of theory examination i.e. for examination May/June session, 30th November of the preceding year of examination and for

November / December session 31st May of the year of examination.

The student will identify (i) a relevant research question; (ii) conduct a critical review of literature; (iii) formulate a hypothesis; (iv) determine the most suitable study design; (v) state the objectives of the study; (vi) prepare a study protocol; (vii) undertake a study according to the protocol; (viii) analyze and interpret research data and draw conclusion; (ix) write a research paper.

The thesis must be approved by at least two examiners for the candidate to be eligible to appear in the University examinations.

9. ASSESSMENT

All the PG resident are assessed daily for their academic activities and also periodically.

9.1 General Principles

The assessment is valid, objective and reliable

Formative, continuing and summative (final) assessment is conducted in theory as well as practical / clinical exams. In addition, thesis is assessed separately.

9.2 Formative Assessment

The formative assessment is continuous as well as end-of-term. The former is based on the feedback from the senior residents and the consultants concerned. End-of-term assessment is held at the end of each year. Formative assessment will not count towards pass/fail

at the end of the program but will provide feedback to the candidate.

The performance of the Postgraduate student during the training period should be monitored throughout the course and duly recorded in the log books as evidence of the ability and daily work of the student. Internal assessment would be done as follows :

- i) Personal Attributes
- ii) Clinical Work
- iii) Academic activities
- iv) End of term theory examination
- v) End of term practical examination

i) Personal attributes :

- **Behavior and Emotional Stability** : Dependable, disciplined, dedicated, stable in emergency situations, shows positive approach.
- **Motivation and Initiative** : Takes on responsibility, innovative, enterprising, does not shirk duties or leave any work pending.
- **Honesty and Integrity** : Truthful, admits mistakes, does not cook up information, has ethical conduct, exhibits good moral values, loyal to the institution.
- **Interpersonal Skills and Leadership Quality** : Has compassionate attitude towards patients and attendants, gets on well with colleagues and paramedical staff, is respectful to seniors, has good communication skills.

ii) Clinical Work :

- **Availability** : Punctual, available continuously on duty, responds promptly on calls and takes proper permission for leave.
- **Diligence** : Dedicated, hardworking, does not shirk duties, leaves no work pending, does not sit idle, competent in clinical case work up and management.
- **Academic ability** : Intelligent, shows sound knowledge and skills, participates adequately in academic activities, and performs well in oral presentation and departmental tests.
- **Clinical Performance** : Proficient in clinical presentations and case discussion during rounds and OPD work up. Preparing Documents of the case history/ examination and progress notes in the file (daily notes, round discussion, investigations and management) Skill of performing bed side procedures and handling emergencies.

iii) Academic Activity :

Performance during presentation at Journal club/ Seminar/ Case discussion/Stat meeting and other academic sessions. Proficiency in skills as mentioned in job responsibilities.

iv) End of year theory examination conducted at end of 1st, 2nd year and after 2 years 9 months.**v) End of year practical/oral examinations at end of 1st, 2nd year and after 2 years 9 months.**

9.4 Summative Assessment

Ratio of marks in theory and practical will be equal. The pass percentage will be 50%.

Candidate will have to pass theory and practical examination separately. Minimum marks required to be considered as 'Pass' will be as per the regulations of the Medical council of India as amended from time to time.

A. Theory Examination (Total=400)

Paper	Title	Marks
Paper I	Basic Sciences as applied to Radiodiagnosis - Radiological Anatomy, Physiology, Pathology, Radiography, Radiation Physics and Biology. Basics and Physics of Ultrasound, CT, Nuclear medicine and MRI	100
Paper II	Cardiovascular System, Respiratory System, Chest, Mammography, Recent Advances	100
Paper III	Gastrointestinal system and Abdomen (including Pancreas, Adrenal Gland, Biliary tree, Spleen, Liver and Acute abdomen). Genitourinary, Retroperitoneum, Obstetrics and Gynaecology and Recent advances	100
Paper IV	CNS including head and Neck, Musculoskeletal System, ENT and Ophthalmology, Recent Advances,	100

B. Practical Examination and Viva voce (Total=400)

		Marks
i)	One long case	100
ii)	Two short cases	100
iii)	Imaging spots (25 spots)	50
iv)	Grand Viva (includes Physics, rapid reporting, contrast media & procedures)	125
v)	Thesis	25

All examiners will conduct viva voce conjointly on candidate's comprehension, analytical approach, expression and interpretation of data. It includes all components of course contents, spotters of conventional, newer imaging techniques and instruments. In addition, candidates may also be give case reports, charts, gross specimens, etc. for interpretation. It includes discussion on but not restricted to the following heads: -

- i) Spot Film diagnosis
- ii) Rapid reporting session.
- iii) Radiation Physics session
- iv) Radiography techniques
- v) Contrast media
- vi) Instruments.
- vii) Procedures.

10. SUGGESTED BOOKS

10.1 Core Books :

- Sutton : Text book of Radiology and Imaging volume-I-II.
- Grainger and Allison's Diagnostic Radiology: Text book of Medical Imaging
- Radiology Review Manual by Dahnert.
- Aids to Radiological Differential diagnosis by Chapman & Nakielny.
- Felson's Principles of Chest Roentology Clark's positioning in Radiography
- Christensen's Physics of Diagnostic Radiology

10.2 Reference Books :

List of reference books shall be given to each resident. These books are also available in the Central Library and Departmental Library