

DUBAI RESIDENCY TRAINING PROGRAMME



SPECIALIST TRAINING PROGRAMME IN GENERAL SURGERY (2007-8)

Six Year Residency Training Programme

Continuing Education Department
Dubai Department of Health and Medical Services

Programme Administrators

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I. INTRODUCTION

This document sets out the programme for surgical training in the Residency Programme of Department of Health and Medical Services, (DOHMS), Dubai.

This document describes the entry requirements, knowledge and skills content, rotations, assessment methods accreditation and certification for training in General Surgery. It is expected that trainees will acquire the training and experience necessary for independent practice in surgery. The requirements of this programme meet, and in some cases exceed, those of well established postgraduate training programs in Surgery in Europe and North America.

After satisfactory completion of the six year program, inclusive of two year post-residency experience, the graduates will be certified in General Surgery.

II. Mission and Vision

The mission of the program is to develop and train General Surgeons who are competent to practise Surgery independently.

III. Goals and Objectives

The goals and objectives of the program reflect the mission and vision statements.

General Objectives

The training program will provide a broad educational experience in recognition and treatment of surgical disorders. Upon completion of training, the graduate is expected to be a competent specialist in General Surgery capable of independent practice.

During training, the resident will have acquired a thorough knowledge of the theoretical basis of General Surgery, including its foundations in the basic medical sciences and be exposed to research activities. The graduate will be able to access and apply relevant knowledge and skills to clinical practice and provide effective consultation services with respect to patient care, education and medico-legal issues.

To resident in General Surgery, must acquire:

- Knowledge and expertise in clinical and operative management of diseases of the alimentary tract, breast and endocrine systems, trauma and critical care, general surgical oncology and ambulatory patient care for general surgical disorders
- Mastery of surgical skills of open cavity surgery, endoscopy, minimal access surgery, endocrine surgery, breast surgery, trauma surgery and soft tissue surgery including abdominal wall surgery; and a basic training in orthopedic surgery
- Effective clinical judgment and decision making in dealing with general surgical problems based on sound surgical principles.
- The knowledge, skills and attitudes relating to gender, culture and ethnicity pertinent to General Surgery and incorporate these in research activities.

The Specific Objectives (Summary)

The resident in General Surgery is required to attain sufficient training and knowledge of:

- Basic science related to General Surgery including relevant clinical applied anatomy.
- The pathophysiology, differential diagnoses and management of surgical disease
- Appropriate skills in instrumental diagnostic procedures (endoscopy of alimentary tract, ultrasound of thorax, abdomen and laparoscopy)
- Indications for either surgical or conservative treatment
- Laboratory investigation for surgical disorders
- Pharmacological agents and contrast medium used in surgical practice

- Clinical and operative competence in both emergency and elective settings
 - Intensive care, management of shock and resuscitation
 - Local and regional anesthesia
 - Enteral and parenteral nutrition
 - Particular requirements of day case surgery
 - Quality control of surgical procedures
 - Palliative care and quality of life issues
 - Clinical audit
 - Medical ethics, health economics, medico-legal matters, risk management, medical statistics, information technology and health service management
 - Research methods
 - Teaching and training others in general surgery
 - Making oral presentations at professional meetings effectively.
- (See Syllabus for more details)**

IV Competencies as a Specialist General Surgeon

At the completion of training, the resident will have acquired various competencies and will function effectively as:

Medical Expert/Clinical Decision-Maker

Consultants will possess a defined body of knowledge and procedural skills, which are used to collect and interpret data, make appropriate clinical decisions, and carry out diagnostic and therapeutic procedures within the boundaries of their discipline and expertise. Their care is characterized by up-to-date (and whenever possible evidence-based), ethical, and cost-effective clinical practice and effective communication in partnership with patients, other health care providers, and the community. The role of medical expert/clinical decision maker is central to the function of the specialist clinician.

The Resident in General Surgery is required to attain sufficient knowledge, diagnostic expertise, judgment and skills in general surgical techniques including endoscopy and minimal access surgery to manage adult patients with regard to:

- Diseases of the alimentary tract, including esophagus, spleen, liver, pancreas and biliary tract
- Trauma and critical illness, including emergency and intensive care
- Malignant diseases including the multidisciplinary management of cancer patients
- Endocrine disease — including breast disease
- Surgical infections and inflammatory diseases
- Abdominal wall pathology
- Skin and soft tissue diseases
- Head and neck disease
- Principles of thoracic surgery
- Orthopedic trauma with neurovascular compromise
- Interventional imaging technologies
- Diagnostic laboratory procedures and their interpretation
- Multidisciplinary care
- Continuing professional development
- Life-long learning
- Health information systems

(See syllabus of knowledge and skills for details)

Communicator

In order to provide humane, high-quality care, Consultants establish effective relationships with patients, other physicians, and other health professionals. Communication skills are essential for the functioning of a specialist, and are necessary for obtaining information from, and conveying information to, patients and their families. Furthermore, these abilities are critical in eliciting patients' beliefs, concerns, and expectations about their illnesses, and for assessing key factors impacting on patients' health.

General Requirements include the ability to:

- Establish therapeutic relationships with patients/families
- Obtain relevant history from patients/families/communities Listen effectively
- Discuss appropriate information with patients/families and the health care team

Specific Requirements

- recognize that being a good communicator is an essential function of a surgeon, and understand that effective communication can foster patient satisfaction and compliance as well as influence the manifestations and outcome of a patient's illness.
- establish relationships with the patient that are characterized by understanding, trust, respect, empathy and confidentiality.
- gather information not only about the disease but also about the patient's beliefs, concerns and expectations about the illness, while considering the influence of factors such as the patient's age, gender, ethnic, cultural and socioeconomic background, and spiritual values on that illness.
- deliver information to the patient and family in a humane manner and in such a way that it is understandable, encourages discussion and promotes the patient's participation in decision-making to a degree that is compatible with current surgical practice.
- understand and demonstrate the importance of cooperation and communication among health professionals involved in the care of individual patients such that their roles are delineated and consistent messages are delivered to patients and their families.
- demonstrate skills in working with others who present significant communication challenges as a result of an ethno-cultural background which is different from the clinician's own, or who exhibit anger or confusion.

Collaborator

Consultants work in partnership with others who are appropriately involved in the care of individuals or specific groups of patients. It is therefore essential for Consultants to be able to collaborate effectively with patients and a multidisciplinary team of expert health professionals for provision of optimal patient care, education, and research activities.

General Requirements

- Consult effectively with other physicians and health care professionals.
- Contribute effectively to other interdisciplinary team activities.

Specific Requirements

- Develop an ability to work effectively and harmoniously with other health care workers.
- Function competently in the initial management of conditions that, in major centers, fall within the realm of other surgical specialties.

- Develop a care plan for a patient, who has been assessed, including investigation, treatment and continuing care, in collaboration with other members of the interdisciplinary team.
- Identify and describe the role, expertise and limitations of all members of an interdisciplinary team required to optimally achieve a goal related to patient care, a research problem, an educational task, or an administrative responsibility.
- Participate in an interdisciplinary team meeting, demonstrating the ability to accept, consider and respect the opinions of other team members, while contributing personal specialty-specific expertise.
- Understand how health care governance influences patient care, research and educational activities at a local, provincial, regional, and national level.
- Effectively communicate with the members of an interdisciplinary team in the resolution of conflict, provision of feedback, and where appropriate, be able to assume a leadership role.

Manager

Consultants function as managers when they make everyday practice decisions involving resources, co-workers, tasks, policies, and their personal lives. They do this in the settings of individual patient care, practice organizations, and in the broader context of the health care system. Thus, Consultants require abilities to prioritize and effectively execute tasks through teamwork with colleagues, and make systematic and rational decisions when allocating finite health care resources. As managers, Consultants take on positions of leadership within the context of professional organizations and the health care system.

General Requirements

- Utilize resources effectively to balance patient care, learning needs, and outside activities.
- Allocate finite health care resources wisely.
- Work effectively and efficiently in a health care organization.
- Utilize information technology to optimize patient care, life-long learning and other activities.

Specific Requirements

- Understand how to function effectively in health care organizations, ranging from individual clinical practice to local, regional and national surgical associations.
- Understand the structure, resourcing, and operation of the Emirates health care system, and function effectively within it, as well as being capable of playing an active role in its evolution.
- Acquire the ability to access and apply a broad base of information to the care of ambulatory patients, and those in hospitals and other health care settings.
- Make clinical decisions and judgments based on sound evidence for the benefit of individual patients and the population served.
- Understand population-based approaches to health care and their implication for medical practice and prioritization to access for services.

Health Advocate

Consultants recognize the importance of advocacy activities in responding to the challenges represented by those social, environmental, and biological factors that determine the health of patients. They recognize advocacy as an essential and fundamental component of health promotion that occurs at the level of the individual patient, the practice population, and the

broader community. Health advocacy is appropriately expressed both by the individual and collective responses of specialist physicians in influencing public health and policy.

General Requirements

- Identify the important determinants of health affecting patients.
- Contribute effectively to improved health of patients and communities.
- Recognize and respond to those issues where advocacy is appropriate.

Specific Requirements

Demonstrate an understanding of the following:

- Determinants of health by identifying those that are the most important (i.e., poverty, unemployment, early childhood education, social support systems), being familiar with the underlying research evidence, and applying this understanding to common problems and conditions in general surgery;
- Determination of the patient's status with respect to one or more of the determinants of health and adapting management accordingly; and assessing the patient's ability to access various services in the health and social system;
- The need to work collaboratively with specialty societies and other associations in identifying current "at risk" groups and application of available knowledge regarding prevention to "at risk" groups.

Scholar

Consultants engage in a life-long pursuit of mastery of their domain of professional expertise. They recognize the need to be continually learning and model this for others. Through their scholarly activities, they contribute to the appraisal, collection, and understanding of health care knowledge, and facilitate the education of their students, patients, and others.

General Requirements

- Develop, implement and monitor a personal continuing education strategy.
- Critically appraise sources of medical information.
- Facilitate learning of patients, interns, students and other health professionals.
- Contribute to development of new knowledge.

Specific Requirements

The Resident in General Surgery will develop an inquiring mind and a critical attitude to scientific literature, as well as an ability to adapt to innovations and development which will occur during a career in general surgery.

Clinical:

- Identify clinical problems in general surgery
- Recognize and identify gaps in knowledge and expertise
- Formulate a management plan:
- Conduct an appropriate literature search based on the clinical question
- Assimilate and appraise the literature
- Develop a system to store and retrieve relevant literature
- Consult other health professionals in a collegial manner
- Propose treatment for the clinical problem
- Evaluate the outcome
- Identify practice areas for research

Research:

- Pose a research question (clinical, basic or populationhealth);
- Develop a proposal to solve the research question:

- Conduct an appropriate literature search based on the research question
- Identify, consult and collaborate with appropriate content experts to conduct the research
- Propose a methodological approach to solve the question
- Carry out the research outlined in the proposal
- Defend and disseminate the results of the research
- Identify areas for further research that flow from the results

Education:

- Demonstrate an understanding of, and the ability to apply the principles of adult learning, with respect to oneself and others
- Demonstrate an understanding of preferred learning methods in dealing with students, residents, and colleagues.

Professional

Consultants have a unique societal role as professionals with a distinct body of knowledge, skills, and attitudes dedicated to improving the health and well being of others. Consultants are committed to the highest standards of excellence in clinical care and ethical conduct, and to continually aspiring to mastery of their discipline.

General Requirements

- Deliver the highest quality care with integrity, honesty and compassion.
- Exhibit appropriate personal and interpersonal professional behavior.
- Practise medicine ethically consistent with the obligations of a clinician.

Specific Requirements

- Acquire the training and experience to maintain competence as a specialist or sub specialist
- Assume responsibility for the overall care of the surgical patient
- Have a comprehensive knowledge of the principles of biomedical ethics and medical jurisprudence
- Maintain ethical relationships with colleagues, patients and relatives
- Recognize one's own limitations of professional competence
- Have the ability to explore and resolve interpersonal difficulties in professional relationships
- Demonstrate ways of attempting to resolve conflicts and role strain
- Have a knowledge and understanding of the professional, legal and ethical codes to which clinicians are bound
- Have the ability to recognize, analyze and know how to deal with unprofessional behavior in clinical practice, taking into account local and national regulations

IV Administrative Structure.

a. Programme Director

The programme director is responsible for the overall conduct of the Residency Programme. The Residency Programme Director is responsible to the Chair of the Department of Surgery and to the Postgraduate Dean, and is a member of the Postgraduate Education Committee of the Continuing Education Department of DOHMS.

b. Programme Site Co-Director

The Programme Site Co-directors are responsible for the day to day functioning of the Residency Program at each institution participating in the Programme. The Programme Site

Co-directors are responsible to the Programme Director. There must be active liaison between the Programme Director and the Programme Co-directors.

c. *Residency Programme Committee*

The Residency Programme Committee assists the Program Director in the planning, organization, and supervision of the Programme. The Residency Programme Committee must meet regularly, at least quarterly, and keep minutes. It is chaired by the Programme Director who is its executive officer.

This committee includes

- a representative from each participating institution,
- the Programme Site Co-Directors
- representatives of Residents in the Programme, nominated and elected by their peers in the programme. Where numbers permit this representation should consist of at least one each from Dubai and RH.

d. *Responsibilities of the Programme Director*

The responsibilities of the Program Director, assisted by the Residency Programme Committee include:

- development and operation of the Programme such that it meets the standards of accreditation for a specialty program in Surgery.
- selection of candidates for admission to the program
- evaluation and promotion of residents in the program in accordance with policies approved by the Postgraduate Medical Education Committee.
- maintenance of an appeal mechanism. (see description of Appeal Mechanism)
- establishment of mechanisms to provide career planning and counseling for residents and to deal with problems such as those related to stress in collaboration with the Residents Affairs
- an ongoing review of the Programme to assess the quality of the educational experience and to review the resources available in order to ensure that maximal benefit is being derived from the integration of the components of the program. This review must include:
 - an assessment of each component of the Programme to ensure that the educational objectives are being met
 - an assessment of resource allocation to ensure that resources and facilities are being utilized with optimal effectiveness
 - an assessment of the teachers in the Programme

Further to those responsibilities listed above, the Programme Director must function as a resident advocate and aid in the organization of other educational opportunities. The Program Director is responsible for assigning residents their rotation and service schedules. The Programme Director is responsible to the residents to train them well in a humane atmosphere. The Programme Director reports to the Postgraduate Dean.

IV. Programme Sites.

The two sites for training are currently the Dubai Hospital and the Rashid hospital. Other services or units that are approved by the Accreditation Committee of the Postgraduate Medical Education Committee may be included in the future.

V Entry Requirements

Prospective candidates:

- should have successfully completed basic medical training leading to MBBS, MD, or MB Ch from a recognized institution.
- must have completed a one year internship programme that included at least two months of Surgery.
- must be fully registered by the competent Authority, to practice medicine in the United Arab Emirates.
- must be successful at an Evaluation Examination which may include an oral and/or written examination and oral interview. The Office of Postgraduate Education in collaboration with the Admission Committee will supervise the Evaluation. Applications will be submitted on line in response to advertisement.

VI. Number of Posts and Duration of Training

The number of posts per academic year is **5**. This will be reviewed after accreditation visit. The duration of training will be **6** years made up of 4 years of formal training and two years of post-residency experience which may be in one of the sub-specialties.

VII. Programme Structure and Rotations

R1	Basics of General Surgery (24 wks each RH and DH)
Part 1, Arab Board, MRCS, MCCEE, ECFMG (USMLEs)	
R2	Rotations through ICU (12wks) and A/E (12wks) plus 2 (12 wks each) of the following (Paediatric Surgery, Urology, Plastic, ENT, Vascular, CardioThoracic, Orthopaedics),
R3	General Surgery (Elective @ DH; Acute @RH) 24 wks each
R4	General Surgery (DH and RH), 20 wks, each 8wks elective
Part 2 Arab Board, MRCS, Overseas Fellowship	
Board Eligibility	
SSpReg	Organ Surgery
SSpReg	(Colorectal, Upper GI, Breast, Endocrine, Trauma (Soft Tissue))
Board Certification	

VIII. Assessments

The continuous appraisal and regular assessments of trainees with feed-backs are essential elements of the program.

There will be a formal assessment (Written, Vival and Skills) at the end of the Basic Surgical Year 1

In Year 2, there will three monthly DOPS and a formal evaluation at the end of the year.

Assessment if Year 3 will be based on the logbook and three monthly feedbacks. Progress from one year to the next will be dependent on satisfactory performance.

Residents are required to document their activities during the program in a logbook of procedures and interventions (endoscopic, radiological and surgical) and retain the documentation. The entry is to be signed by the Resident as well as by the responsible Trainer. At the completion of the Rotation all documents, the Logbook and assessment records will be forwarded to the Surgery Residency Committee.

A. The trainee's log book, and copies of reports which record the trainee's operative and diagnostic experience (including endoscopy and interventional radiological procedures), which should indicate the degree of supervision -

- (A) Assisting senior surgeon
- (S1) Performing a procedure under direct supervision-Consultant" scrubbed" for the major part of the operation (includes performing a significant part of the operation under supervision)
- (S2) Performing a procedure under supervision-Consultant present in the theatre but not "scrubbed"
- (P) Performing a procedure without direct supervision
- (T) Supervising a more junior trainee.

Analysis of the content of the logbook will be used to assess both the experience of the trainee and the training post. This can be more easily facilitated by the use of a computerized record and, if data from successive trainees is aggregated, provides the means to assess training posts. The SRC (Surgical Residency Committee) therefore requires that trainees submit a minimum data set, derived from their logbooks, to their Program Director at 6 monthly intervals, preferably on disc using approved software. Courses and meetings attended should also be recorded in the logbook.

B. Regular appraisal and feedback as well as trainee's reports of their personal evaluation at the end of every rotation.

C. Minimum requirements for numbers of procedures: a minimum number of cases to be operated upon or examined by the trainee (Appendices A, B). In addition methods of assessment of competencies, both clinical and operative, should be developed.

D.SPECIALTY EXAMINATION IN GENERAL SURGERY

A. Candidates who have successfully completed the programme will be eligible for a Board Examination at the end of the six years, and if successful at this examination will be certified. The graduates are expected to have successfully challenged other Board examinations (Arab Board, British Royal Colleges of Surgeons) at the end of the four years of formal training.

The Board Examination should comprise clinical examination (two sessions of short cases, each session lasting for half an hour) oral examination.

IX Vacation

Each year will include four weeks of vacation that may be taken at any time in the program with the approval of the Program Director and the Supervisor of the affected rotation.

Every effort will be made to avoid significantly impacting the educational experience in any single rotation that might occur should a prolonged period of leave be taken within a single rotation.

X. Evaluation of the Programme

i. Residency Programme Committee

The Residency Programme Committee under the leadership of the Programme Director will be responsible for the ongoing evaluation of the programme. This will include an assessment of the strengths and weaknesses of the programme and recommendation of improvements. As well, all residency training sites, including elective experiences will be assessed and evaluated. Formal evaluation of all of the teaching staff affiliated with the programme. Discussion regarding the programme will occur at all residency programme committee

meetings and a formal evaluation of the programme accompanied by a report should occur on a yearly basis.

ii. Internal Review

The internal review is intended as a mechanism to assist the sponsor maintaining the quality of Residency Programme and providing the Programme Administrators with information about the strengths and weaknesses of the Programme. So that necessary corrective measures may be taken.

The internal review should be initiated by the Postgraduate Dean and the team should include: a Programme Director from another Programme, a staff member from another discipline who is experienced in postgraduate medical education, and a resident from another discipline. The review team should have available all documentation regarding the Programme. A series of interviews should take place with the Programme Director, teaching staff, members of the resident group, and with the Residency Programme Committee.

Visits to individual sites should occur when indicated. The internal review team should review all residency education sites and elective experiences. There should be a careful assessment of the quality of the program and the degree to which it fulfills its Goals and Objectives.

The written report of the internal review should include the strengths and weaknesses of the Programme and specific recommendations for continued development and improvements. This report should be submitted to the Postgraduate Dean Chair of the department, the Programme Director, and members of the Residency Programme Committee.

Internal Review should take place every two years

iii. External Review

The Programme should undergo an external review every 5 to 6 years. The process of the external review is similar to that of the internal review with the exception of the make up of the review committee. The external review is initiated by the Postgraduate Dean for Medical Education and the team should include: a representative of an accrediting body in Surgery, a Programme Director from another Surgery Programme accredited by the aforementioned body, a faculty member from another discipline who is experienced in postgraduate medical education, and a resident from an accredited external program.

The external review committee would generate a report that should include the strengths and weaknesses of the program and specific recommendations for continued development and improvements. This report should be submitted to the Postgraduate Dean and made available to the Chair of the Department, the Programme Director, and members of the Residency Programme Committee.

XI. THE CERTIFICATION

On satisfactory completion of the entire programme of specialist training, the Programme Director will notify the Postgraduate Dean.

The authorized signatories on the certificate will be the Programme Director, Director General/Assistant Director General (MA) and Postgraduate Dean

XII References

1. The Arab Board of Medical Specialization. Jokhadar, M.D., F.A.C.C., Secretary General e Arab Board for Medical Specializations

2. MRCS Regulations and Guidelines for Basic Surgical Training Royal College of Physicians and Surgeons of Glasgow Specialty Boards
3. The Surgical Royal Colleges of Great Britain and Ireland, Royal College of Surgeons of Edinburgh
4. The Royal College of Surgeons of England, 2006
5. Canadian Board for Surgery,
http://rcps.medical.org/English/residency/certification/training/gensur_e.html
6. Postgraduate Training Programme in Surgery by Professor Dr Farouk Safi 2006

Appendix 1

SYLLABUS

The following pages comprise schedules of knowledge and operative skills, which provide a syllabus for training in General Surgery. The knowledge required includes basic science. The syllabus should be taken in conjunction with the relevant general objective. It represents the minimum to be achieved in training.

1. EMERGENCY AND CRITICAL CARE.

By the end of these rotations, residents should have knowledge and management of the following conditions, and of the relevant basic science:-

Assessment of the acute abdomen

Appendicitis and right iliac fossa pain, peritonitis, acute intestinal obstruction, intestinal pseudo-obstruction, biliary tract emergencies, acute pancreatitis, strangulated hernia, swallowed foreign bodies, gastrointestinal bleeding, toxic megacolon, superficial sepsis and abscesses, acute anorectal sepsis, ruptured aortic aneurysm, acute urological disease, acute presentations of gynaecological disease drainage of superficial abscesses; drainage of anorectal sepsis; urethral catheterization; suprapubic cystostomy; exploration of scrotum for torsion; reduction of paraphimosis.

Trauma and treatment of fractures

Assessment of the multiply injured patient; blunt abdominal intestinal ischaemia, injuries including splenic, hepatic pancreatico-duodenal, injuries simple and complicated fractures (conservative/operativetherapy); blunt chest injuries; stab and gunshot wounds; arterial injuries; injuries of the urinary tract; initial management of head injuries and interpretation of CT scans; initial management of severe burns, diagnostic peritoneal lavage Trainees must acquire an understanding of the disturbances of normal physiology and of the bacteriological, pathological and immunological changes that affect the seriously ill patient.

Intensive; Critical Care:

A thorough knowledge, including the relevant basic science, to enable recognition and management as well as to make appropriate referrals for intensive care admission: hypotension; haemorrhage/ shock; haemorrhagic and thrombotic disorders; blood transfusion and blood component therapy; septicaemia and the sepsis syndrome; antibiotic therapy and the management of opportunistic infection; gastro-intestinal fluid losses and fluid balance; nutritional failure and nutritional support; respiratory failure; renal failure; fluid overload and cardiac failure; myocardial ischaemia; cardiac arrhythmia; multiple organ dysfunction; pain control; cardiac arrest, respiratory arrest and brain death; organ donation A detailed knowledge of the methods and results of intensive monitoring will not be required.

The following practical skills MUST be mastered:-

- Cardiopulmonary resuscitation techniques
- Chest drain insertion
- Central venous pressure line insertion

2. ENDOSCOPY AND ULTRASOUND

Endoscopy and Ultrasound training will be for all General surgical trainees and the minimum experience required for the program is shown in Appendix A.

3. CARDIOTHORACIC / VASCULAR SURGERY

Trainees, by the end of training, shall be expected to have a knowledge of the diagnosis and surgical management of the following groups of conditions, and of the relevant basic science:- - Arterial trauma; Ischaemic limb; Venous thromboembolism; Hyper/hypo coagulable states; Chronic venous insufficiency; Continuous wave Doppler; Duplex ultrasound

The skills to be mastered include:

- Vascular suture/anastomosis; Approach to /control of infra-renal aortic, iliac and femoral arteries; Control of venous bleeding; Balloon thrombo-embolism; Above knee amputation; Fasciotomy; Treatment of long saphenous varicosities

4. GENERAL/ ABDOMINAL SURGERY

Residents, by the end of training are expected to have knowledge of the diagnosis and surgical management of the following conditions, and of the relevant basic science:

Carcinoma of the breast; benign breast disease; Large bowel diseases (neoplasms; inflammatory; diverticular disease; injuries; colonic obstruction/ perforation); Anal disorders (Haemorrhoids, fissure, prolapse and sepsis); Acute appendicitis; Small bowel diseases (intestinal obstruction; pseudo-obstruction; ischaemia); Peritonitis; Pediatric disorders (testicular pain; trauma; pyloric stenosis; tracheoesophageal fistula; Hirschsprung's disease; ano-rectal anomalies); Hydrocoele; epididymal cyst; Burns; Thyroid, parathyroid and adrenal diseases; Pancreatic disease (neoplasms; acute and chronic pancreatitis and their complications; jaundice; Gastro-oesophageal reflux and its complications; Peptic ulceration and its complications; Radiation enteritis; Abdominal and thoracic trauma; Head injuries; Neoplasms of the upper GI tract; Management of perforations of the upper GI tract; Gallstone disease; Carcinoid syndrome

The skills to be mastered include

-Surgical therapy and hormone therapy for benign and malignant breast disease; Thyroid; Parathyroid surgery/conservative therapy; Upper GI surgery; closure of perforated ulcer; control of upper GI bleeding; stomach resection; Bile duct and gall bladder surgery; Operative cholangiography/endoscopy; Small bowel surgery; Principles of liver and pancreatic surgery; Colon resection; Hartmann's procedure; Colostomy; Ileostomy; Appendicectomy; Hernia Surgery; Soft tissue surgery; Surgical therapy of anal disorders (sepsis, haemorrhoids, fissure); Circumcision/ Reduction of paraphimosis; Exploration for testicular torsion; Basic course in laparoscopy; physiology of pneumo-peritoneum; dangers of pneumoperitoneum; principles of diathermy; informed consent for laparoscopic procedures; cholecystectomy; Diagnostic laparoscopy; laparoscopic appendicectomy; laparoscopic hernia repair; Informed consent; Breaking bad news.

Appendix 2:

Procedures	(n)
A. Ultrasound of the abdomen	30
B. Ultrasound of urogenital organs (exclude female organs)	100
C. Documentation of medical history	300/Year
D. Blood transfusion	50
E. Anti thrombosis therapy	50
F. Multi-modal-therapy in patients with cancer	40
G. Follow –up of cancer patients after surgical therapy of the disease	60
H. Perform local and regional Anesthesia.	50
I. Proctoscopy	50
J. Sigmoidoscopies / partial endoscopy	50
K. Gastroscopy	50
L. Central venous line insertion	30
M. Arterial catheterization	50
N. Abdominal, Pleuroparacentesis	50
O. Enteral / parenteral therapy and nutrition	50
P. Ventilation techniques and intubation	50
Q. Insertion of chest tube	30
R. Appraisal of five complicated cases	50
S. Interpretation of blood gas analysis	500
T. Interpretation of laboratory tests (all patients with documented medical history, See C)	100
U. Interpretation of blood in stool	60

Appendix 3

Required operative procedures performed by the resident under the direct supervision of Consultant

Operation		(n)
1. Head /neck operation (Thyroid, Parathyroid)		30
2. Chest and Chest wall including Breast surgery		40
3. Abdominal wall and cavity operation		330
Stomach	10	
Gallbladder	50	
Small intestine	30	
Colon and Rectum	25	
Liver	5	
Appendix	50	
Hernia	50	
Abdominal wall	40	
Proctology	40	
Other	30	
4. Vascular and nervous System		25
Thromboembolectomy	5	
Varicosities	10	
Peripheral nervous system	10	
5. First assistant in complicated difficult operation		100

SYLLABUS FOR FIRST YEAR 1st Six Months

1. KNOWLEDGE

Principles of wound healing
Principles of wound dressing
Local and regional anaesthesia
Instruments and sutures
Surgical infection
Specific infectious diseases
Shock
Surgical Emergency (Trauma, Disaster)
Burns
General features of surgical procedures (indication, preparation, consent, prognosis)
Surgical intervention (Definition, Operative theatre, Recovery from Anaesthesia & Surgery)
Postoperative monitoring
Pain management (Protocol)
Postoperative complications
Surgical oncology
Transplantation

2. SKILLS

- Surgical Clinical Documentation and filing
- Surgical Clinical examination
- Suturing and knots
- Wound dressing and suture removal
- Basic endoscopy
- Basic laparoscopy
- Surgical ultrasound
- Surgical handscrub
- Punctures and drainages
- Biopsy
- Minor surgeries (on the list)
- Intermediate surgeries (according to ability)

3. PRESENTATIONS

Presentation of two surgical topics (copy for file)
Attendance at Departmental CME lectures (signature at attendance)

4. EVALUATION

Departmental orientation
Monthly feedback (1 hour interview)
6 MINI-CEX (copy of assessment for file)
6 DOPS (copy for file)
Privilege to operate

Objectives for the Second 6 months during First Year of Residency in General Surgery

1. Knowledge

Missed objectives of the first 6 months rotation

Drains and catheters

Soft tissue (cellulitis, abscess, sebaceous cyst, pilonidal sinus, hydradenitis, Tumors of skin and soft tissue, tendons and ganglion)

Lymph vessels and lymph nodes (lymphangitis, lymphoma, lymphedema)

Surgical endocrinology (thyroid, parathyroid, adrenals, pancreas)

Salivary glands

Breast

Hernias

Proctology

Appendix

2. Skills

Cosmetic skin suture

Secondary wound closure

I&D

Excision of lipoma, fibroma, pilonidal sinus, skin tumors

Debridement and fasciotomy

Lymphnode excision and biopsy

Breast biopsy and lumpectomy

Inguinal hernia - umbilical hernia- epigastric hernia repair

Haemorrhoids, fissurectomy, I&D, proctoscopy, rectoscopy

Appendicectomy

Explorative laparoscopy

FAST ultrasound

BLS training

ATLS training

3. Presentations and Academic Activities

2 presentations about surgical techniques

Attendance of all departmental CME lectures

Participation in teaching of students and intern house officers

Attendance of at least one surgical conference

MRCS part 1

4. Evaluation

Monthly feed back (1 hour interview)

6 Mini-CEX (copy for the file)

6 DOPS

Review of privileging

Exam of first year

Objectives for the 2nd Year of Residency in General Surgery

During the second year of residency the resident will have mandatory rotation to accident/emergency department and intensive care unit of three months duration each. During the remaining six months a free rotation to two of the following departments can be chosen with a three months rotation each: trauma surgery of Rashid Hospital, vascular surgery in Rashid Hospital, cardiothoracic surgery in Dubai Hospital, Paediatric Surgery in Al Wasl Hospital, orthopedic surgery in Dubai Hospital, plastic surgery in Rashid Hospital, urology in Dubai Hospital, and maxillo-cranio-facial surgery in Rashid Hospital.

1. Knowledge

1.1. During accident/emergency rotation:

Assessment of acute diseases and injuries

Pain assessment

Logistics of polytrauma

Triage systems

Investigation plan

Criteria for admission

1.2. During intensive care unit rotation:

- Live threatening conditions
- Post-aggression syndrome
- Respiratory insufficiency
- Cardiac failure
- Renal failure
- Post-operative bleeding
- Fever
- Thrombo-embolism
- Antibiotics

1.3. During free rotation:

According to the basic knowledge of specialty chosen

2. Skills

2.1. During rotation in accident/emergency:

Management of acute pain

Surgical treatment of injuries

Management of polytrauma-patient

Disaster management

Triage

Elementary therapy

2.2. During rotation in intensive care unit:

- Monitoring
- Oxygenation and ventilation
- Cardiac evaluation
- Post-operative balancing of metabolism
- Treatment of acute renal failure

- Central venous line
- Resuscitation
- Prophylaxis of thrombo-embolism
- Choice of antibiotic

2.3. During free rotation:

According to the basic skills of specialty chosen

3. Presentations and Academic Activities

1 presentation in each rotation (copy for the file)

Attendance of respective meetings and lectures

MRCS part 2

4. Evaluation

Monthly feed back

Consultant evaluation after each rotation

Objectives for the 3rd Year in Residency of General Surgery

1. Knowledge

- Gallbladder and bile ducts
- Obstructive jaundice
- Diaphragmatic hernias and rupture
- Surgical diseases of esophagus and mediastinum
- Stomach surgery
- Surgical disorders of small bowel
- Abdominal trauma
- Gastrointestinal bleeding
- Intestinal obstruction
- Indication for limb amputation

2. Skills

- Cholecystectomy
- Gastrostomy
- Gastrojejunostomy
- Surgery for bleeding or perforated ulcer of stomach and duodenum
- Resection of stomach
- Adhesiolysis and Enteroanastomosis
- Small bowel resection
- Ileostomy
- Colostomy
- Amputation of limb

3. Presentations and Academic Activities

- Two presentations about complex abdominal disorders or syndromes (copy for the file)
- Attendance of departmental meetings and CME activities (list of attendance)
- Attendance of at least one international surgical conference
- Training course in laparoscopic surgery
- Collaboration in clinical audit and/or scientific publication
- Participation in teaching of medical students and intern house officers
- MRCS Part 3

4. Evaluation

- Monthly feed back (one hour interview)
- 12 DOPS
- Cumulated evaluation of the third year
- Review of privileging

Objectives for the 4th Year of Residency in General Surgery

1. Knowledge

- Surgical diseases of liver and spleen
- Disorders of pancreas
- Surgical diseases of colon
- Surgery and specific aspects of the rectum
- Re-intervention

2. Skills

- Splenectomy and spleen preserving procedures
- Surgery for liver diseases (trauma, abscess, hydatid cyst, tumor, drainage of abscess, liver resection)
- Pancreatic surgery (biopsy, necrosectomy, drainage of pseudocyst, resection)
- Operations on the colon (colon resection, hemicolectomy, Hartmann procedure)
- Rectal surgery (anterior resection, rectopexy, surgery for rectal injuries)

3. Presentations and Academic Activities

- 2 presentations about complex surgical disorders
- Attendance of departmental meetings and lectures
- Attendance of mortality and morbidity lectures
- Attendance of at least one international conference
- Participation in clinical audit and quality improvement plans
- Participation in teaching for students and intern house officers
- MRCP part 3

4. Evaluation

- Monthly feed back (one hour interview)
- 12 DOPS (copy for the file)
- 1 Multisource feedback (copy for the file)
- Career counseling
- Final examination

Objectives for the 2 Years Residency Program in Surgical Specialty after Residency in General Surgery

After successful completion of the 4 years residency program in general surgery the resident can add two more years of residency to obtain a subspecialty in surgery such as vascular surgery, plastic surgery, thoracic surgery, endocrine surgery, colorectal surgery, hepatobiliary surgery, laparoscopic surgery and oncology surgery. During the two years residency program a three months rotation to a related specialty is advisable but not mandatory.

1. Knowledge

- Detailed knowledge about anatomy, physiology, patho-physiology, pathology and conservative treatment of all diseases according to specialty chosen
- Knowledge of specific technical investigations usually used in this specialty
- Interventional and other alternative techniques
- Detailed knowledge about indication, variety of procedures and their complications according to specialty chosen

2. Skills

- Ultrasound, Doppler and endoscopic investigations as far as necessary for the respective specialty
- Use of specific technical equipment in theatre such as laser, cusa, ultracision, liga-sure, nerve stimulator, intraoperative ultrasound, intra-operative endoscopy, detector probes
- Extensive experience in performing procedures of the specialty chosen
- Acquired skills in minimally invasive techniques
- Management of postoperative complications
- Performance of re-intervention

3. Presentations and Academic Activities

- Two academic presentations of specialty chosen per year
- Regular attendance of meetings and lectures of the specialty
- Attendance of at least one international conference per year
- Contact to professional societies of specialty
- Review of actual literature
- Participation in teaching of residents, interne house officers and students
- Audit and/or quality improvement plan activities

4. Evaluation

- Feed Back monthly (one hour duration)
- Evaluation every 6 months
- 6 DOPS per year
- Final exam after successful completion of training and logbook of specialty

SUPERVISION OF THE RESIDENTS

Policy:

1. Clinical Teaching staff are essential and important to the successful implementation of the Dubai residency training Programme.
2. Clinical Teaching staff are expected to be familiar with the goals and objectives of the programme as well as of the rotation for which they have responsibility.
3. Clinical Teaching staff are expected provide a direct and appropriate level of clinical supervision to all residents during clinical rotations.
4. Clinical Teaching staff are expected to foster an effective learning environment by ensuring that the (a) residents share responsibility for decision-making in patient care under supervision, (b) residents have constructive feedback from the concerning clinical skills at diagnosis and management (c) participation of residents in patient care adds to the effectiveness, appropriateness and quality of care.

Procedures:

1. Clinical responsibilities must be assigned to the residents in a carefully supervised and graduated manner, so that the resident assumes progressively increasing responsibility in accordance with their level of education, ability, and experience.
2. Teaching staff supervision must include timely and appropriate feedback to the residents.
3. The resident's clinical involvement must be in fulfillment of the programme's written educational curriculum.
4. Teaching staff must demonstrate concern for each resident's well-being and professional development.
5. Teaching staff who supervise the residents have overall responsibility for patient care and are the ultimate authority for final decision.
6. Teaching staff schedules must be structured to ensure continuous supervision of residents and availability of consultation.
7. All decisions regarding diagnostic tests and therapeutics, initiated by the residents will be reviewed with the responsible Consultants during patient care rounds.
8. Patients will be seen by the team of residents, interns and medical student and their care will be reviewed with the Consultant at appropriate intervals.
9. The residents are required to promptly notify the patient's Consultant physician in the event of any controversy regarding patient care or any serious change in the patient's condition.
10. In clinics and consultation services, the Consultant or supervising physician must review overall patient care rendered by residents.
11. In the operating theatres, the Consultant or supervising physicians are responsible for the supervision of all operative cases. Consultants supervising physicians must be present in the operating room with residents during critical parts of the procedure. For less critical parts of the procedure, the Consultant or supervising physician must be immediately available for direct participation.

**APPENDIX4
ASSESSMENT FORMS**

Examples of In-Training Evaluation Forms for the end of rotation evaluations are shown on pages following the Case Log Book.

An example of a resident evaluation Encounter Card that would be used in day to day clinical settings is shown below:

Encounter Cards

Resident _____ Staff _____ Date _____

Clinical Situation _____

	Unsatisfactory		Adequate		Excellent		N/A
Knowledge							

	Unsatisfactory		Adequate		Excellent		N/A
Professional Skills							

	Unsatisfactory		Adequate		Excellent		N/A
Manual Skills							

	Unsatisfactory		Adequate		Excellent		N/A
Overall							

Comments: _____



DOHMS Surgery Residency Program Clinical ROTATION Evaluation

Resident Name: (optional) _____ Rotation _____

This Form is designed to provide resident feedback to Programme Administrators concerning strengths and areas to improve in the variety and organisation of clinical exposures provided in the different clinical rotations of the Surgery Programme. The forms will be given to the rotation supervisor of each rotation at the end of the rotation. Please feel free to be candid and objective. All comments will not be traceable to the resident completing the form by the immediate supervisor.

Rank the following statements on a scale of 1 to 7 on whether you agree or disagree with them as they pertain to this rotation (1= strongly disagree; 7 = strongly agree)

Evaluation Scale:	Could not Judge	Strongly Disagree	→		→		→	Strongly Agree
Organization of the Rotation								
The overall workload of the rotation was appropriate (please make a comment in comments section as to if workload was too light or too heavy)	0	1	2	3	4	5	6	7
Patient Rounds were run in an efficient manner balancing teaching with patient care needs	0	1	2	3	4	5	6	7
The amount of scut in the Rotation was appropriate	0	1	2	3	4	5	6	7
The clinical material I saw provided a good exposure to the field of practice of the rotation	0	1	2	3	4	5	6	7
I was given clinical responsibilities appropriate for my level of training (please make a comment in comments section as to whether too much or too little was expected of you)	0	1	2	3	4	5	6	7
Teaching								
The academic activities of the division provided good learning opportunities	0	1	2	3	4	5	6	7
There was adequate access to internet resources and books if I needed to look something up	0	1	2	3	4	5	6	7
The bedside teaching was very good	0	1	2	3	4	5	6	7
I received my evaluation before the rotation ended	0	1	2	3	4	5	6	7
I received feedback about my performance throughout the rotation	0	1	2	3	4	5	6	7
Organisation								
There was adequate space for me to complete my work	0	1	2	3	4	5	6	7
The supervising staff were available for back up and consultation if needed	0	1	2	3	4	5	6	7
The rotation was arranged in such a way that I was able to attend other Teaching Activities	0	1	2	3	4	5	6	7
Resident – Faculty Interactions								
I felt that my contributions to the department's clinical activities were valued	0	1	2	3	4	5	6	7
My opinions were respected and I felt like a member of the team.	0	1	2	3	4	5	6	7
Overall								
Overall this rotation allowed me to meet most of the rotation specific educational objectives	0	1	2	3	4	5	6	7



DOHMS Surgery Residency Program Clinical Rotation **FACULTY Teaching Evaluation**

Resident Name: (optional) _____ Rotation _____

This Form is designed to provide resident feedback to Programme Administrators concerning strengths and areas to improve in the quality of training by providing an assessment of teaching staff in the Surgery Programme. The forms will be given to the resident at the end of each rotation. Please feel free to be candid and objective. All comments will not be traceable by the faculty in question to the resident completing the form.

Rank the following statements on a scale of 1 to 7 on whether you agree or disagree with them as they pertain to this rotation (1= strongly disagree; 7 = strongly agree) Please Rate the Faculty Member's teaching style and capacity to function as a role model.

Clinical Teaching Faculty: _____ Rotation: _____

(Note: Use a separate sheet for each supervising Faculty Member)

	Could not Judge	Strongly Disagree	→	.	→	→	→	Strongly Agree
Medical Expert								
Up-to-date in area of practice, scientific and clinical knowledge	0	1	2	3	4	5	6	7
Promotes development of trainee's judgement and decision making	0	1	2	3	4	5	6	7
Supervised the teaching of procedural skills	0	1	2	3	4	5	6	7
Communicator								
Role model for effective & compassionate communication with patients & families	0	1	2	3	4	5	6	7
Clear written communications documentation	0	1	2	3	4	5	6	7
Collaborator								
Role model for care in interdisciplinary setting	0	1	2	3	4	5	6	7
Respectful interaction with trainees/ other colleagues in clinical situations	0	1	2	3	4	5	6	7
Provided appropriate graded responsibility to the resident during the rotation	0	1	2	3	4	5	6	7
Manager								
Role modeled the use of health care resources cost effectively	0	1	2	3	4	5	6	7
Organization of work and time management	0	1	2	3	4	5	6	7
Health Advocate								
Role-modeled just advocacy for his/her individual patients	0	1	2	3	4	5	6	7
Scholar								
Promoted critical appraisal skills in teaching and clinical work	0	1	2	3	4	5	6	7
Enthusiasm for and effectiveness at teaching	0	1	2	3	4	5	6	7
Professional Role modelled and promoted the values of:								
The highest levels of integrity and honesty	0	1	2	3	4	5	6	7
Sensitivity to and respect for diversity	0	1	2	3	4	5	6	7
Compassion and Empathy	0	1	2	3	4	5	6	7
Recognition of own limitations	0	1	2	3	4	5	6	7
Application of the principles of medical ethics to clinical situations	0	1	2	3	4	5	6	7



DOHMS SURGERY RESIDENCY PROGRAM ROTATION IN-TRAINING ASSESSMENT (RESIDENT)

Name:

Period of Training FROM:

TO:

Resident: I II III IV V VI

Site:

Rotation:

	Could not Judge	Strongly Disagree	→	→	→	→	Strongly Agree	
MEDICAL EXPERT								
Basic scientific knowledge	0	1	2	3	4	5	6	7
Basic clinical knowledge	0	1	2	3	4	5	6	7
History & physical examination	0	1	2	3	4	5	6	7
Interpretation & use of information	0	1	2	3	4	5	6	7
Clinical judgment & decision making	0	1	2	3	4	5	6	7
Technical skills	0	1	2	3	4	5	6	7
COMMUNICATOR								
Communication with other allied health professionals	0	1	2	3	4	5	6	7
Communication with patients & families	0	1	2	3	4	5	6	7
Written communication & documentation	0	1	2	3	4	5	6	7
COLLABORATOR								
Consults effectively with all health professionals	0	1	2	3	4	5	6	7
Delegates effectively	0	1	2	3	4	5	6	7
MANAGER								
Understands & uses IT	0	1	2	3	4	5	6	7
Uses resources cost-effectively	0	1	2	3	4	5	6	7
Organises work & manages time well	0	1	2	3	4	5	6	7
HEALTH ADVOCATE								
Advocates for the patient	0	1	2	3	4	5	6	7
Advocates for the community	0	1	2	3	4	5	6	7
SCHOLAR								
Motivated to acquire knowledge	0	1	2	3	4	5	6	7
Critically appraises medical literature	0	1	2	3	4	5	6	7
Teaching skills	0	1	2	3	4	5	6	7
Completion of research/project	0	1	2	3	4	5	6	7
PROFESSIONAL								
Integrity & honesty	0	1	2	3	4	5	6	7
Sensitivity & respect for diversity	0	1	2	3	4	5	6	7
Responsibility and self-discipline	0	1	2	3	4	5	6	7
Professional relationships with physicians	0	1	2	3	4	5	6	7
Recognition of own limitations, seeking advice when needed	0	1	2	3	4	5	6	7
Understands and applies principles of ethics clinical situations	0	1	2	3	4	5	6	7
GLOBAL EVALUATION OF COMPETENCE AND PROGRESS	0	1	2	3	4	5	6	7

