

**FCPS-II &
INTERMEDIATE
MODULE**

(IMM)

CURRICULUM: AIMS, OBJECTIVES & COMPETENCIES

The aim of the fellowship in Oral and Maxillofacial Surgery is to produce specialists and academicians who have attained the required competencies.

OBJECTIVES

Upon completion of specified training the resident must have acquired the competencies comprising of knowledge, skills and attitudes forming the foundation of the standard practice for an Oral & Maxillofacial specialist who is able to:

- Provide an appropriate, cost effective and standard care to patients seeking consultation.
- Promote health and prevent disease in patients, families and communities.
- Apply Knowledge and expertise in clinical & procedural management of diseases.
- Perform prescribed Maxillofacial surgical skills.
- Attain decision making skills for dealing with oral & maxillofacial problems
- Participate in continuing professional development programs.

TRAINING FOR INTERMEDIATE MODULE

The curriculum of first two years in Oral & Maxillofacial surgery involves balanced and objective integration of basic dental sciences including dental and essential core clinical knowledge. The trainee should be able to diagnose and manage common conditions prevalent in the community. Further, that he/she should be able to recognize, stabilize and refer the complicated cases to appropriate place/person.

The coverage that each discipline receives below is not indicative of the relative importance placed on each discipline in the training program, or in the examination. These are

guidelines and not comprehensive definitive lists. Only minimum levels of expected competence have been identified but sufficient scope, volume and variety of experience are desirable.

COMPETENCIES

The competencies prescribed for the Intermediate Module are:

- Take proper history of the case
- Advise appropriate investigations & interpret them
- Perform standardized clinical examination of the OMF region
- Establish final diagnosis of the case & manage it
- Accordingly refer patient to appropriate facilities, when needed
- Practice safe and ethical OMFS
- Communicate effectively with patients, attendants & others
- Follow up and maintain patient records
- Develop scientific paper writing and presentation skills
- Work as OMFS professional, academician & researcher
- Work as a leader or member of health care team

SYLLABUS

PRINCIPLES OF OMFS REGARDING

- Evaluation of the preoperative health status of the surgical patient
- Making a surgical diagnosis and prerequisites of surgery
- Principles & types of incisions, flap design & methods of tissue handling
- Haemostasis, edema control, sterilization, surgical wound toilet
- Patho-physiology and principles of wound repair/ significance of wound healing
- Mechanisms of scar and contracture formation & its prevention
- Surgical infections their prevention and control
- Body response to infection and appropriate methods for carrying out surgery in hepatitis, HIV carriers and all other medically compromised conditions.
- Use of common surgical instruments and operation theatre appliances (suction, diathermy, retractors, general instruments etc)
- Appropriate uses of suture/ ligature materials and basic principles of anastomosis.
- Management of postoperative patients by taking appropriate measures to prevent complications

EXODONTIA

General Principles:

- Armamentarium used for basic oral surgical practice
- Assesses medical condition of patient preoperatively and knows basic principles of managing pain and anxiety control
- Indications and contraindications of performing tooth extraction & related procedures
- Clinical and radiological assessment for tooth extraction

Uncomplicated Exodontia:

- Patient and surgeon preparation, chair positioning and mechanical principles involved in tooth extraction.
- Principles of Forceps, Elevator use and procedures for closed extractions including specific techniques for removal of each tooth
- Post-extraction care of alveolar socket

Complicated Exodontia:

- Flap design, types & development technique and management
- Basic principles of suturing for complex cases
- Indications and contraindications of surgical extractions
- Techniques for performing surgical removal of single, multi-rooted teeth, & root fragments
- Extraction sequence & technique when planning multiple extractions for special scenarios.
- Management of post extraction complication.

MANAGEMENT OF IMPACTED TEETH

- Indications and contraindications for removal of impacted teeth
- Classification of impacted teeth of Upper & Lower Jaws
- Difficulty Index of removal of impacted teeth
- Pre, Per and Post-operative Complications & management when removing impacted teeth

ASEPSIS, STERILIZATION AND CROSS INFECTION CONTROL

- Surgically important and communicable microbes related to OMFS
- Differentiation between sterilization, disinfection, asepsis etc
- Different techniques of instrument sterilization by heat, gas and by chemicals
- Methods of maintenance of sterility in dental surgery unit, room and OT
- Methods of scrubbing, gowning, gloving and assisting the surgical staff
- Managing postsurgical asepsis

ANTIMICROBIAL THERAPY / ANALGESICS USE IN OMFS/ DENTISTRY

- Commonly used antimicrobials and analgesics
- Basic principles of prophylactic and therapeutic antibiotic use
- Basic principles of analgesic use
- Indications, precautions & contraindications of antibiotic therapy
- Drug interactions, advantages & disadvantages of combination therapy
- Significance of culture and sensitivity testing with basic knowledge of dosage and routes of administration & their issues
- Consequences of under or over dosage, allergic reactions to antibiotics and analgesics & their management

DIAGNOSTIC TECHNIQUES AND INVESTIGATIONS REQUIRED FOR PATHOLOGIES OF HEAD AND NECK REGION

- Appropriate radiological investigations
- Appropriate surgical diagnostic investigations including biopsies

RADIOLOGY AND IMAGING TECHNIQUES USED IN OMFS/ DENTISTRY

- Ordering various techniques of radiology and imaging used, including intra- and extraoral radiological investigations
- Evaluates and interprets them for providing OMF surgical care

MEDICAL EMERGENCIES IN OMFS / DENTISTRY

- Common medical conditions which are likely to develop into emergencies in the dental office
- Drugs that should be included in a dental emergency kit
- When, how & whom to refer patients, having serious medical emergencies

MANAGEMENT, PREVENTION AND SPREAD OF ODONTOGENIC INFECTIONS

- Basic microbiology of odontogenic infections
- Routes of odontogenic infections, spread and its natural progression
- Principles of managing and preventing odontogenic infections
- Prophylaxis against spread of infection
- Management of all complex odontogenic facial space infections
- Diseases of the maxillary sinus and their management

MANAGEMENT OF PATHOLOGIC LESIONS AFFECTING OMFS REGION

- Basic principles of biopsy procedure
- Differential diagnosis
- Goals and principles of surgical management of oral pathologic lesions
- Cysts and tumors of the OMFS region

TREATMENT OF PRE-CANCEROUS LESIONS AND ORAL MALIGNANCES

- Diagnosis of various precancerous lesions and conditions and their management
- Identification of etiology and risk factors and the preventions of oral cancer
- Clinical evaluation and differential diagnosis of suspected lesions of the head and neck
- Principles and mode of action of chemotherapy and associated medicines.
- Manage dental problems in patients undergoing brachytherapy, radiotherapy & chemotherapy

DIAGNOSE AND OFFERS BASIC TREATMENT TO GENERAL AND MAXILLOFACIAL TRAUMA PATIENT WITH

- Management of the trauma patient using ATLS principles
- Role and utility of oral and maxillofacial surgeon in the trauma team
- Identification and management principles of life threatening, sight threatening and limb threatening injuries
- Soft tissue injuries such as abrasions, contusions and lacerations
- Traumatic injuries to teeth and supporting structures, including dentoalveolar fractures
- Facial trauma: clinical and radiological evaluation
- Fractures of mandible, condyle, maxilla and other mid facial bones
- Closed reduction techniques in management of facial fractures
- Application of basis ORIF (open reduction and internal fixation) and reconstructive surgery principles.

PRE-PROSTHETIC ORAL SURGERY

- Objectives of pre-prosthetic surgery
- Principles of evaluation, treatment planning & needs of the patient
- Various procedures of alveolar ridge augmentation and their relation with the jaws
- Maxillary and mandibular tori procedures and etc

DENTAL IMPLANTOLOGY AND ITS IMPLICATION

- Biological considerations of osseointegration
- Dental implant types and its components
- Evaluation of medical condition of the patient preoperatively
- Planning & evaluation of surgical treatment procedure including clinical and radiographic assessment of implant site and associated structures
- Basic and advanced surgical Implant techniques their complications and management

TEMPOROMANDIBULAR JOINT AND FACIAL PAIN

- Classification of temporomandibular Joint disorders
- Congenital and infectious disorders of the TMJ
- Internal derangement of the TMJ; including its management with different reversible & irreversible treatment methods
- Degenerative joint disease and systemic arthritic conditions affecting TMJ
- TMJ hypomobility disorders; including TMJ ankylosis and their management
- TMJ hypomobility disorders; recurrent dislocation and their management
- Pain neurophysiology
- Facial pain management and related neuralgias
- Oral facial and its other types; including neuropathic facial pains and chronic headache

ANAESTHESIA (LOCAL / REGIONAL / GENERAL)

- Primary goals of giving local, general and sedation anaesthesia
- Requesting preoperative G/A fitness from Anesthesiologist
- Classification, chemistry and pharmacologic effects of local and general anesthetic drugs
- Adverse effects and drug interactions of local and general anaesthetic drugs
- Preparations and dosage of local anesthetic drugs, their general therapeutic uses and side effects when used in dentistry
- Methods of administration and mechanisms of action of general anesthetic drugs including inhalation agents and intravenous agents
- Differentiation between analgesia and sedation and their application in oral surgery
- Principles of general anaesthesia and IV sedation

ESSENTIAL ORAL MEDICINE FOR THE OMFS

- Vesiculobullous lesion of the oral cavity
- Oral ulcerations
- Autoimmune disorders related to OMFS
- Red and blue lesion of the oral cavity
- White lesion of the oral cavity

BONE PATHOLOGY RELATED TO OMFS

- Fibro osseous lesions of the OMFS region
- Giant cell lesions of the OMFS region
- Metabolic bone diseases
- Developmental bone disorders

ORTHOGNATHIC SURGERY

- Dentofacial deformities
- Assessment of the dentofacial deformity patient; including clinical assessment, essential imaging, cephalometry and current assessment tools.
- Liaison between orthodontic and maxillofacial surgery in planning for orthognathic surgery
- Model surgery; including facebow transfer and articulator mounting
- Maxillary, mandibular and genioplasty osteotomies; indications and surgical technique
- Patients, attendants etc counseling where needed
- Basic concepts of distraction osteogenesis
- Perioperative care of the orthognathic surgical patient

DEVELOPMENTAL ANOMALIES RELATED TO OMFS

- Causative factors and embryology of cleft lip and palate
- Problems experienced by cleft lip and palate -afflicted individuals
- Timing and principles of treatment of cleft lip and palate and alveolar grafting
- Correction of maxillomandibular disharmonies and secondary surgical procedures
- Dental needs of cleft-afflicted patients and the concepts of multi disciplinary management

**MEDICO-LEGAL AND ETHICAL ISSUES IN ORAL SURGERY/
DENTISTRY**

- Legal concepts influencing liability and risk reduction
- Principles of dental ethics and steps in ethical decision making
- Basis of obligations in the Dentist-Patient relationship
- Informed consent, informed refusal, record keeping and documentation including referral letters
- Counseling in cases of complications
- Documentation of patient management problems in case of non-compliance or patient abandonment

CORE COMPETENCIES

The level of competence to be achieved each year is specified according to the key, as follows:

Levels of Competencies:

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

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

SYLLABUS

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- Surgically important and communicable microbes related to OMFS
- Differentiation between sterilization, disinfection, asepsis etc.
- Different techniques of instrument sterilization by heat, gas and by chemicals
- Methods of maintenance of sterility in Dental Surgery Unit, Room and OT
- Methods of scrubbing, gowning, gloving and assisting the surgical staff
- Managing postsurgical asepsis & documents/ reports of unfortunate incidents

ANTIMICROBIAL THERAPY / ANALGESICS USE IN OMFS / DENTISTRY

- Commonly used antimicrobials and analgesics
- Basic principles of prophylactic and therapeutic antibiotic use
- Basic principles of analgesic use
- Indications, precautions & contraindications of antibiotic therapy
- Drug interactions, advantages and disadvantages of combination therapy
- Significance of culture and sensitivity testing with basic knowledge of dosage and routes of administration & their issues
- Consequences of under or over dosage, allergic reactions to antibiotics and analgesics and their management

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- Ordering various techniques of radiology and imaging used, including intra- and extraoral radiological investigations
- Evaluate and interpret them for providing OMF Surgical Care

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- Drugs that should be included in a dental emergency kit. When, how and whom to refer patients, having serious medical emergencies

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- Basic microbiology of odontogenic infections
- Routes of odontogenic infections, spread and its natural progression
- Principles of managing and preventing odontogenic infections
- Prophylaxis against spread of metastatic infection
- Management of all complex odontogenic facial space infections
- Diseases of the maxillary sinus and their management

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- Clinical evaluation and differential diagnosis of suspected lesions of the head and neck
- Principles and mode of action of chemotherapy and associated medicines
- Manage dental problems in patients undergoing brachytherapy, radiotherapy and chemotherapy.

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- Soft tissue injuries such as abrasions, contusions and lacerations
- Traumatic injuries to teeth and supporting structures, including dentoalveolar fractures.
- Facial trauma: Clinical and Radiological evaluation
- Fractures of mandible, condyle, maxilla and other mid facial bones
- Closed reduction techniques in management of facial fractures.
- Application of basis ORIF (Open Reduction and Internal fixation)

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- Dental implant types and its components
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- Basic and advanced surgical Implant techniques their complications and management

PRE-PROSTHETIC ORAL SURGERY

- Objectives of pre-prosthetic surgery
- Principles of evaluation, treatment planning & needs of the patient
- Various procedures of alveolar ridge augmentation and their relation with the jaws
- Maxillary and mandibular tori procedures and etc
- Advantages, Disadvantages and techniques for immediate and over dentures.
- Concept of Maxillary and Mandibular nerve repositioning

TEMPOROMANDIBULAR JOINT AND RELATED DISORDERS

- Clinically evaluate and classify Temporomandibular Joint disorders
- Internal derangement of the TMJ; including its management with different reversible and irreversible treatment methods
- Differentiate between causes of limited mouth opening
- Diagnose and manage Temporomandibular Joint Ankylosis

FACIAL PAIN AND RELATED NEURALGIAS

- Pain neurophysiology
- Facial pain management and related neuralgias
- Oral facial and its other types; including neuropathic facial pains and chronic headache

HOSPITALIZED AND MEDICALLY COMPROMISED PATIENT

- Features of hospital dentistry including consultations and patient referrals
- Evaluate and manage patients preoperatively with compromised medical conditions such as : CVS, Diabetes etc.
- Manage pregnant and postpartum patients with OMFS/ Dental Issues
- knowledge of operating room protocols and dental surgeon and assistant preparation
- Prescribe medications & takes appropriate measures for prevention of postoperative complications

ANAESTHESIA (LOCAL/ REGIONAL/ GENERAL)

- Primary goals of giving local and general anaesthesia, and sedation
- Requesting preoperative G/A fitness from Anesthesiologist
- Classification, chemistry and pharmacologic effects of local and general anesthetic drugs
- Mechanism of action, absorption , fate and excretion of local and general anesthetic drugs.
- Adverse effects and drug interactions of local and general anesthetic drugs
- Preparations and dosage of local anesthetic drugs, their general therapeutic uses and side effects when used in dentistry
- Methods of administration and mechanisms of action of general anesthetic drugs including inhalation agents and intravenous agents
- Differentiation between analgesia and sedation and their application in oral surgery

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- Legal concepts influencing liability and risk reduction
- Principles of dental ethics and steps in ethical decision making
- Basis of obligations in the Dentist-Patient relationship
- Informed consent, informed refusal, record keeping and documentation including referral letters
- Counseling in cases of complications
- Documentation of patient management problems in case of non-compliance or patient abandonment
- Knowledge of ethical & legal issues related to Hepatitis, HIV etc. affecting being either patient or dental/medical Health Care Professional
- Areas of dental litigation, its prevention and counter action professional responsibilities towards incompetent or chemically dependent colleagues ethical problems related to dental hygienists and dental assistants

INVESTIGATING AND MANAGING OMFS INFECTIONS

- Bacterial infections
- Viral infections
- Fungal infections
- Parasitic infections

ESSENTIAL ORAL MEDICINE FOR THE OMFS

- Vesiculobullous lesion of the oral cavity
- Oral ulcerations
- Autoimmune disorders related to OMFS
- Red and blue lesion of the oral cavity
- White lesion of the oral cavity

BONE PATHOLOGY RELATED TO OMFS

- Fibro osseous lesions of the OMFS region
- Giant cell lesions of the OMFS region
- Metabolic bone diseases
- Developmental bone disorders

RECONSTRUCTIVE AND FLAPS SURGERIES

- Assess soft and hard tissue reconstruction
- Types of flaps used for reconstruction including orofacial flaps, skin grafting, major flaps, free transfer flaps, free flaps with and without bone
- Indications, contraindications and complications
- Bone reconstruction / cartilage harvesting types of bone grafts principles of mandibular and maxillofacial bone-grafting procedures

ORTHOGNATHIC SURGERY

- Dentofacial deformities
- Presurgical, surgical and postsurgical treatment phases
- Distraction osteogenesis, where needed
- Preoperative care of the orthognathic surgical patient



COLLEGE OF
PHYSICIANS AND
SURGEONS
PAKISTAN

Task-Orientated Assessment of Clinical Skills

Guidelines
for developers and assessors

TOACS

C

ontents

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Introduction

The College of Physicians & Surgeons Pakistan (CPSP) as a matter of policy keeps itself continuously abreast of the developments in the disciplines it offers courses as well as the emerging innovations in educational and assessment methodologies. Ronald Harden in 1975 presented a new format, which incorporates multiple assessment tools (e.g. spotting, observation, patient encounters, MCQs, SAQs). It focuses on testing clinical competence, but avoids the disadvantages of traditional clinical examination. The method gained wide acceptance among clinicians during 80s and 90s. Prof. Fazal Elahi, Director, Department of Medical education, CPSP published a Guide Book on OSCE as early as June 1984, and the revised edition in 1991. The CPSP introduced OSCE first time in Pakistan as a component of Diploma in Family Medicine examination in April 1990. It subsequently was incorporated in some of its fellowship examinations as well.

The growing network of CPSP fellowship training programs across the country unfolded the problem of variation in quality of training due to variations of the physical facilities and equipment as well as varying context and experiences of the supervisors and teachers at each site of training. This situation demanded a standardized format of clinical examination, which exposes all candidates appearing in an examination to be tested on same or similar clinical material and should cover all essential clinical competencies. OSCE served these requirements. But the OSCE lacked the opportunity to explore the depth of knowledge as well as the thought processes including clinical reasoning and decision making, which an experienced examiner can invoke by asking questions related to the given situation. The format of OSCE employs mainly simulated patients or mannequins and the examiners silently rate the performance of the candidates on the check list or the rating scale. However, in our country the variety of skills can be tested much more cost effectively on real patients. Moreover, our examiners deeply entrenched in the traditional methods of examinations, found it difficult to reconcile with their role as silent observers at the OSCE stations and to part away with the powerful tool of oral examination.

With this back ground an extensive review of the fellowship part II examination of the College was conducted by the Department of Medical Education of the CPSP in collaboration with international experts in medical education. It was recommended that a greater emphasis be given to the actual clinical tasks and these tasks should be so structured that the examiners could interact with the candidates to elicit their thought processes and the background knowledge related to the tasks. Thus the system of oral examination was replaced with a modified form of OSCE - the Task-Orientated Assessment of Clinical Skills (TOACS), which is now a component of IMM and FCPS final examinations. TOACS has replaced both viva voce and OSCE in almost all CPSP examinations except few. Since 2009, the clinical part of IMM examination comprise of TOACS only, while large number of MCPS examinations too include TOACS as part of the clinical examination.

In TOACS, the candidates are assessed on tasks designed to demonstrate the desired clinical skills. It is developed on the basis that consultants apply both clinical reasoning skills and procedural skills to solve a problem or arrive at a conclusion, hence in this examination both these essential attributes are tested. As the format allows sampling of larger number of clinical skills in all domains of learning in the form of patient related tasks, it has greater content validity and reliability. It also allows testing of the competencies such as communication and interpersonal skills, presentation skills, clinical reasoning and decision making skills and the skills for conducting research. The details of clinical competencies that can be tested in TOACS are listed later in the booklet.

This booklet provides detailed guidelines for developing and scoring TOACS stations, and conducting TOACS examination. It is expected that these guidelines will enable the supervisors and the examiners to:

- 1.** Understand the rationale, advantages and limitation of TOACS as a format for assessing clinical skills
- 2.** Develop TOACS stations along with scoring key for IMM, FCPS final and MCPS examinations
- 3.** Score the candidates and make defensible pass fail decisions
- 4.** Use TOACS for formative assessment during training

TOACS Format

The number of TOACS stations varies with the available physical resources reliability of an exam. The College recommends 10-15 stations in each exam. Similarly, allocation of time for stations also varies depending upon the tasks to be tested. CPSP prescribes 4-8 minutes for each station with a change time of one minute for the candidate to move from one station to the other. However, it must be ensured that the task selected at each station can be comfortably completed within the allotted time.

The College now prefers all stations to be interactive as it is moving towards computer based assessment which allows projection of high quality graphs & pictorials thus eliminating the need of static stations.

There will be two types of stations: static and interactive. On static stations the candidate will be presented with patient data, clinical problem or a research study and will be asked to give written responses to questions asked. In the interactive stations the candidate will have to perform a procedure for example taking history, performing focused clinical examination, computer applications, clinical/surgical procedures, counseling, assembling an instrument etc. One examiner will be present at each such station to rate the performance of the candidate or/and ask questions testing the reasoning and problem-solving skills.

Developing TOACS Stations

Each TOACS station has to be prepared on a standardized format with its description, instructions and procedures given in detail. These details will enable each station to be clearly identified, to be set up and run in the manner intended, and to allow for scoring of candidates to be done in a systematic and standardized way. The information that is required for each station is indicated in the sections below. Sample sheets are annexed.

Cover sheet

This sheet contains information about the test station and allows it to be clearly identifiable as part of a TOACS station bank. Its contents are:

- Station title
- Competency/ Outcomes to be assessed
- Area/ topic covered
- Type of station (interactive / static)
- Resource requirements (patient, equipment, clinical photographs, laboratory data, x-rays etc.)
- Names of examiners developing the station
- Date the station was developed
- Dates on which station was used in previous examinations along with its performance history

Detailed outline of the station

This section should give a very detailed description of the station, including the clinical task or skills that will be assessed. Of considerable importance are the key features of the task identifying the aspects of a candidate's performance on the station, which should be demonstrated for satisfactory completion of the task. Its contents should include:

- Station title
- Competency/Outcomes to be assessed
- Area/ topic covered
- Skills/clinical task to be assessed
- Key features of clinical task

Instructions for Examiners

The procedure instructions are to be given, again in detail, so that the station can be implemented in a standardized manner on repeated occasions. This sheet should include all the instructions to the examiners on how to introduce the task to candidates and how to manage the time allocated to each component. These instructions must be written down so as to ensure their presentation in a similar fashion to each candidate. The instructions must include:

- Station title
- Introduction of the station and task to the candidate
- Instructions to candidates on how to proceed with the clinical task
- Indicate time distribution for different components of task within that station
- Prompt questions to be used i.e. the questions, which will be asked by the examiners to assess the key features of that station
- Ways in which examiners will be best able to observe or interact with candidates
- Any other pertinent information necessary to ensure that the station runs smoothly

Standardized patient instructions (if real or simulated patients are used)

If standardized patients are being used the instructions should be written for training the person in giving the required answers and in responding to physical examination in a consistent and standardized manner. The patient has to be advised on how to react to expected situations, questions and statements, but also know the bounds within which they may respond to unanticipated situations.

Scoring instructions

This is for the examiner to score each candidate in a standardized and systematic manner through interaction and/or observation. The scoring approach adopted in TOACS includes identification of the most relevant and essential steps a candidate has to take for resolving the given problem or for accomplishing the required task. Hence “Key Features” for each task are scored according to their importance.

The operational definition of a key feature contains one or a number of the following characteristics:

- The critical or essential steps in the resolution of the problem,
- The elements most likely to lead to an error in the resolution of a problem by the candidate taking the examination, or
- The difficult aspects of the identification and management of the problem in practice.

The candidate's performance is thus scored globally against each key feature of the task depending on their completeness. These scores are entered on the structured scoring scale developed in the station plan and are made available to the Chief Examiner at the end of the examination.

The instruction must include:

- Station title
- Structured scoring scale including key features
- Weightage of station components
- Indication of acceptable score (pass marks) for candidates reaching a minimally acceptable standard of performance
- Space for recording the assigned score

Procedure Instruction Sheet

It is for the candidates and contains information on the procedure and tasks that the candidate has to perform on a station. The task should be clearly worded and without any ambiguity.

Question Sheet (if needed)

This sheet would contain the questions of which written answers are needed from the candidate. The questions should not be testing factual recall as these can be tested in a theory examination. Short answer questions are best suited for this type of examination. A panel of examiners should agree upon the keys to the questions prior to its administration and the keys submitted to the examination department along with the other sheets for that specific station.

Organizing TOACS Examination

THE TOACS EXAMINATION PHYSICAL SETTING

As a clinical examination, based on a series of realistic clinical tasks, it would be appropriate to provide a setting for the TOACS examination that minimizes interference from extraneous sources. The room, in which TOACS is set up, should only be accessible to persons involved in the examination.

Preparation before the TOACS

- Form a group comprising of subject experts and a medical educationist.
- Keep the outcomes/ objectives of training and the examination and a table of specifications in front of you
- Develop TOACS stations according to the required framework
- Review the stations in the light of the outcomes/ objectives and the Table of Specifications to ensure their consistency and validity with the required competencies
- Make a list of staff needed for smooth running of TOACS
- Prepare guidelines for examiners and candidates
- Ensure availability of examiners, patients and other required examination material
- Draw a plan showing the layout of the TOACS stations
- Ensure the availability of the venue for the day of the examination
- Ensure that the stations are all set a day before the TOACS starts (tables, chairs, couches, screens, bell, stopwatches etc.)

On the day of the TOACS

It will be the responsibility of the convener to:

- Arrive well before time
- Re-check the stations
- Designate a timekeeper at a central place
- Distribute plans to invigilators and examiners
- Meet with the examiners and brief them about the plan of the day
- Explain the whole procedure in detail to the candidates
- Ensure that the examination runs smoothly and on time
- Attend to any irregularities that may arise
- Collect all candidates' score sheets from all stations
- Note and record any situations that might have influenced candidate performance
- Ensure score sheets are conveyed to the Examinations Department with appropriate security

SCORING PROCEDURE

Each candidate is to be given a score out of ten marks for each station in the TOACS. Half marks are permissible, but no other fractions or decimal parts are to be given. The aggregate mark for all stations will then be regarded as the total raw score achieved by each candidate with each station contributing equally to that total score.

As each station will be scored by only one examiner it is important that examiners on all stations are well trained on the construction, implementation and scoring of the station for which they are responsible. Further, when a TOACS station is to be repeated at more than one time or in more than one site it is essential that all examiners responsible for the same station are trained and calibrated together to ensure consistency of standards of scoring.

A scoring scheme or template is to be established for each TOACS station consistent with the objectives and skills being assessed. The scoring scheme is based on following steps:

- Identifying all components of the task given on each station,
- Brief description of key features, and
- Allocation of weightage of each component i.e. the component score, and calculation of the acceptable (pass marks) for each component.

A global approach is used for scoring of each significant component of the clinical task that each candidate is to perform. Opposed to a very detailed checklist approach to scoring, global scoring allows for qualitative judgment of each candidate's performance. The scoring will take into account the systematic approach to the clinical task, its appropriateness for the clinical situation and the skill with which it is performed. It will take into account such features as the ability to justify, synthesize and prioritize findings and the appropriateness of the communication and interpersonal skills for the patient, including any cultural or ethical considerations.

Examiners are to agree in advance on the key features and answers to each key feature necessary for a candidate to reach a level of performance that would be considered to be a borderline but minimally acceptable level of performance in each component and overall. The sum of these minimally acceptable scores would indicate a level of performance that might be expected from a candidate who completes all segments of the TOACS station successfully.

Annex

AREAS OF CLINICAL COMPETENCE

Areas of Clinical Competence

The following clinical competencies are essential to be acquired in the process of becoming a physician. Research over the time has established that most of these competencies are highly case specific. That is, one's competence is highly variable across cases due to variable experience, interest, ability and knowledge.

Application of Knowledge

The application of clinical and basic science knowledge in order to diagnose and manage a patient's medical problems.

History/Physical Exam Technique (Data Collection)

Includes the technical skills involved in interviewing a patient and conducting a satisfactory physical examination. Also required is knowing all the questions and physical examination manoeuvres in the physician's repertoire.

It is the ability to perform an appropriate focused history and physical examination giving information about a patient's chief complaint and pertinent demographic information establishing facts.

Clinical reasoning

Recognition of significant findings established through questions (history), inspection, palpation, auscultation, and percussion (physical examination), and to interpret these findings to arrive at a diagnosis or solution to a problem.

Patient Problem Identification

Ability to integrate the information in a most plausible problem.

Plan of investigation

Systematic choice of laboratory tests and other diagnostic investigations.

Diagnostic procedures

Ability to perform diagnostic procedures.

Procedural skills

The ability to perform a technical procedure without causing any or minimal discomfort to the patient

Patient Management

The ability to plan and carry out an appropriate approach to manage the patient's Health related problem.

Communication

The ability to communicate clearly and effectively with patients, their attendants and professional colleagues through, both written and spoken language.

Counseling

The ability to educate the patient effectively regarding the nature of the medical problem, the plan for dealing with the problem and the patient's role in management.

Professional Behavior

The ability to interact and work effectively with patients and other health professionals. This includes key personal traits as organization, dependability, and ethical conduct.

Annex

Sample sheets

2

COLLEGE OF PHYSICIANS AND SURGEONS PAKISTAN

7th CENTRAL STREET DEFENCE HOUSING AUTHORITY PHASE-II KARACHI

Specialty

COVER SHEET

STATION NO.: _____

AREA: _____

TOPIC: _____

COMPETENCE TO BE ASSESSED: _____

OBJECTIVE TO BE ASSESSED: _____

TYPE OF STATION : _____ STATIC/INTERACTIVE

RESOURCES REQUIRED:

(Please write number of item required where necessary and put a tick mark before it)

Table (1) Chairs(1) Couch Illuminator
Paper Pencil/s Eraser Screen/s

Any other, please write the item and the number required below:

Date when developed / previously used	Difficulty index	Discrimination index

COLLEGE OF PHYSICIANS AND SURGEONS PAKISTAN
7th CENTRAL STREET DEFENCE HOUSING AUTHORITY PHASE-II KARACHI

Specialty

INSTRUCTIONS FOR EXAMINERS

STATION NO.: _____

AREA: _____

TOPIC: _____

COMPETENCE TO BE ASSESSED: _____

OBJECTIVE TO BE ASSESSED: _____

TYPE OF STATION : _____ STATIC/INTERACTIVE

INSTRUCTIONS AS GIVEN TO CANDIDATE IN HIS / HER INSTRUCTION SHEET:
QUESTIONS TO BE ASKED FROM THE CANDIDATE ARE ON THE SCORING SHEET
(IF APPLICABLE)

Q.1 _____

Q.2 _____

Q.3 _____

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Specialty

PROCEDURE INSTRUCTIONS FOR CANDIDATES

STATION NO: _____

TIME ALLOWED: 07 minutes (including 1 minute change over time) _____

DESCRIPTION OF THE TASK TO THE CANDIDATES: (information and instructions)

Max. Marks 10

Q.1 _____

Q.2 _____

Q.3 _____

COLLEGE OF PHYSICIANS AND SURGEONS PAKISTAN

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Specialty	Station No.
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TOACS - FCPS / MCPS / IMM

COLLEGE OF PHYSICIANS AND SURGEONS PAKISTAN

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Specialty

KEY

STATION NO.: _____

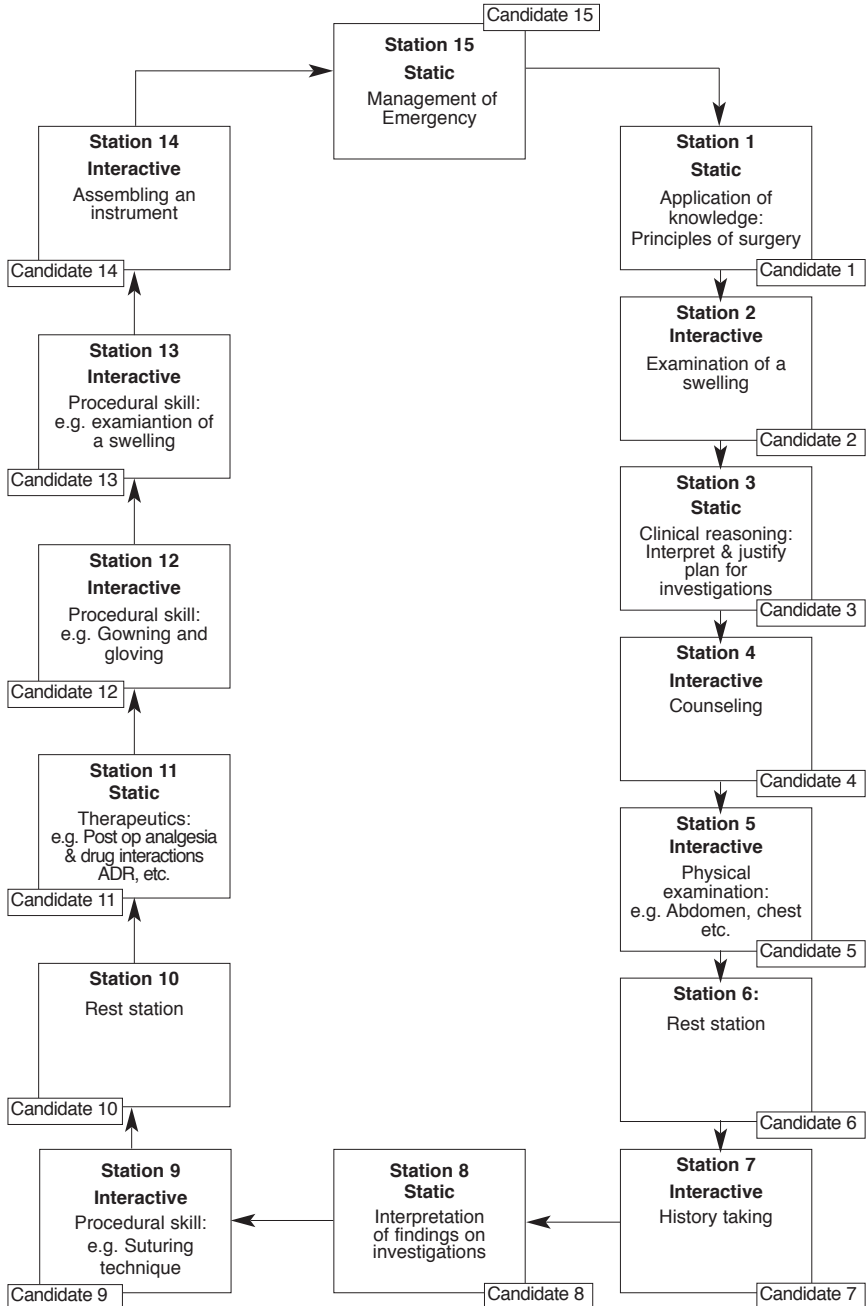
TOPIC: _____ DATE: _____

EXAM CENTER: _____

Component	Key Features/Agreed Answers	Comp Score
01)		
02)		
t03)		

Sample Template Surgery

STATION NUMBER MAY VARY FROM 12-18



Annex

Global rating scale (example)

3

Global Rating Scale (Example)

Examination of chest of eight-year-old child with asthma

TASK COMPONENTS	KEY FEATURES	AGREED ANSWERS	COMPONENT SCORE
Relevant history not presented in scenario	Onset of condition Severity, Environmental factors Concerns of parents and child Communication skills	—	2.0
Physical examination	Explanation of procedure Relationship with patient Examination technique Comprehensive and systematic approach	—	4.5
Clinical findings	Description of correct signs Ordering of signs according to significance	—	1.5
Management	Short-term treatment Long-term management Consideration of family situation and costs	—	2.0

In this example the detail for each of the components could be expanded in line with the actual presentation for the child.

In this example the total score attainable is 10 marks, of which 7 marks would be considered necessary for an acceptable level of performance in all sections. In practice, however, it a low score in station can be compensated by high score of other station(s).