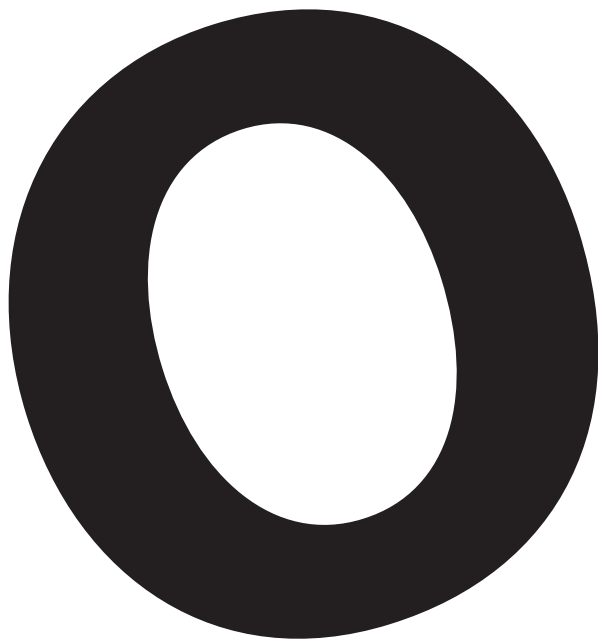


Requirements for Post IMM Fellowship Training

Orthodontics



College of Physicians and Surgeons Pakistan



2017

THIS IS AN EVOLVING DOCUMENT

The College of Physicians and Surgeons Pakistan would appreciate any criticism, suggestions, advice from the readers and users of this document. Comments may be sent in writing or by e-mail to the CPSP at:

Directorate of National Residency Program (DNRP)
College of Physicians and Surgeons Pakistan (CPSP)
7th Central Street, Defence Housing Authority, Karachi-75500.
nrp@csp.edu.pk

Contents

01 | The College

05 | Introduction

06 | General Information

09 | Supervisor's Role and Responsibilities

11 | Trainee's Roles and Responsibilities

13 | Training Program

ABOUT THE COLLEGE

The College was established in 1962 through an ordinance of the Federal Government. The objectives/functions of the College include promoting specialist practice of Medicine, Obstetrics & Gynaecology, Surgery and other specialties by securing improvement of teaching and training, arranging postgraduate medical, surgical and other specialists training, providing opportunities for research, holding and conducting examinations for awarding College diplomas and admission to the Fellowship of the College.

Since its inception, the College has taken great strides in improving postgraduate medical and dental education in Pakistan. Competency-based structured Residency Programs have now been developed, along with criteria for accreditation of training institutions, and for the appointment of supervisors and examiners. The format of examinations has evolved over the years to achieve greater objectivity and reliability in methods of assessment. The recognition of the standards of College qualifications nationally and internationally, particularly of its Fellowship, has enormously increased the number of trainees and consequently the number of training institutions and the supervisors. The rapid increase in knowledge base of medical sciences and consequent emergence of new subspecialties have gradually increased the number of CPSP fellowship disciplines to Seventy Three.

After completing two years of core training during IMM, the trainees are allowed to proceed to the advanced phase of FCPS training in the specific specialty of choice for 2-3 years. However, it is mandatory to qualify IMM examinations before taking the FCPS-II exit examinations. The work performed by the trainee is to be recorded in the e-logbook on daily basis. The purpose of the e-log is to ensure that the entries are made on a regular basis and to avoid belated and fabricated entries. It will hence promote accuracy, authenticity and vigilance on the part of trainees and the supervisors.

The average number of candidates taking CPSP examinations each year is to a minimum of 25,000. The College conducts examinations for FCPS-I (11 groups of disciplines), IMM, FCPS-II (73 disciplines), MCPS 22 disciplines, including MCPS in HPE and also Diploma in Health Care System Management (DCPS-HCSM). A large number of Fellows and senior medical teachers from within the country and overseas are involved at various levels of examinations of the College.

The College, in its endeavor to decrease inter-rater variability and increase fairness and transparency, is using TOACS (Task Oriented Assessment of Clinical Skills) in IMM and FCPS-II Clinical examinations. Inclusion of foreign examiners adds to the credibility of its qualifications at an international level.

It is important to note that in the overall scenario of health delivery over 85% of the total functioning and registered health care specialists of the country have been provided by the CPSP. To coordinate training and examination, and provide assistance to the candidates stationed in cities other than Karachi, the College has established 14 Regional Centers (including five Provincial Headquarter Centers) in the country.

The five Provincial Headquarter Centers, in addition to organizing the capacity building workshops/short courses also have facilities of libraries, I.T, and evaluation of synopses and dissertations along with providing guidance to the candidates in conducting their research work.

The training towards Fellowship can be undertaken in more than 257 accredited medical institutions throughout the country and 48 plus accredited institutions abroad. The total number of trainees in these institutions is over 17795.

These continuous efforts of the College have even more importantly developed a credible system of postgraduate medical education for the country. The College strives to make its courses and training programs 'evidence' and needs 'based' so as to meet international standards as well as to cater to the specialist healthcare needs not only for this country but also for the entire region.

Prof. Zafar Ullah Chaudhry

President

College of Physicians and Surgeons Pakistan

TRAINING AND EXAMINATIONS SUMMARY

The College lays down the training programs and holds examination for the award of Fellowship in the following disciplines:

Disciplines for 1st Fellowship

1. Anatomy	24. Neurosurgery
2. Anesthesiology	25. Nuclear Medicine
3. Biochemistry	26. Obstetrics and Gynaecology
4. Cardiac Surgery	27. Operative Dentistry
5. Cardiology	28. Ophthalmology
6. Chemical pathology	29. Oral & Maxillofacial Surgery
7. Clinical Haematology	30. Orthodontics
8. Community Medicine	31. Orthopaedic Surgery
9. Dermatology	32. Otorhinolaryngology (ENT)
10. Diagnostic Radiology	33. Paediatric Surgery
11. Emergency Medicine	34. Paediatrics
12. Family Medicine	35. Periodontology
13. Forensic Medicine	36. Pharmacology
14. Gastroenterology	37. Physical Medicine & Rehabilitation
15. General Medicine	38. Physiology
16. General Surgery	39. Plastic Surgery
17. Haematology	40. Prosthodontics
18. Histopathology	41. Psychiatry
19. Immunology	42. Pulmonology
20. Medical Oncology	43. Radiotherapy
21. Microbiology	44. Thoracic Surgery
22. Nephrology	45. Urology
23. Neurology	46. Virology

Disciplines for 2nd Fellowship

1. Child and Adolescent Psychiatry	15. Paediatric Gastroenterology Hepatology & Nutrition
2. Cardio-Thoracic Anesthesiology	16. Paediatric Haematology Oncology
3. Clinical Cardiac Electrophysiology	17. Paediatrics Infectious Diseases
4. Community and Preventive Paediatrics	18. Paediatric Nephrology
5. Critical Care Medicine	19. Paediatric Neurology
6. Developmental and Behavioural Paediatrics	20. Paediatric Ophthalmology
7. Endocrinology	21. Pain Medicine
8. Gynecological Oncology	22. Reproductive Endocrinology and Infertility
9. Infectious Diseases	23. Rheumatology
10. Interventional Cardiology	24. Surgical Oncology
11. Maternal and Fetal Medicine (MFM)	25. Urogynaecology
12. Neonatal Paediatrics	26. Vitreo Retinal Ophthalmology
13. Orbit & Oculoplastics	27. Vascular Surgery
14. Paediatric Cardiology	

Fellowship of the College of Physicians and Surgeons Pakistan is awarded to those residents who have:

- a recognized dental degree;
- completed one year house job in a recognized institution
- passed the relevant FCPS Part I Examination;
- registered with R&RC
- undergone specified years of supervised accredited training on whole time basis;
- passed IMM examination in Orthodontics.
- obtained approval of dissertation/ two research articles (related to the specialty) published/ accepted for publication in CPSP approved journal(s)
- completed entries in e-logbook along with validation by the supervisor.
- been declared successful in examinations carried out by the Examination Department of the CPSP; and
- been elected by the College Council.

It is important to note that all applicants must undergo a formal examination before being offered Fellowship of the relevant specialty, except in case of Fellowship without examination.

TRAINING ENQUIRES AND REGISTRATION

All residents should notify the college in writing of any change of address and proposed changes in training (such as change of supervisor, change of department break in training etc) as soon as possible.

INTRODUCTION

The College of Physicians and Surgeons Pakistan introduced Fellowship programs in five main specialties of Dentistry: Oral and Maxillofacial Surgery (OMFS), Orthodontics, Prosthodontics, Periodontology and Operative Dentistry in 1994. The fellowship programs in Dentistry, like other disciplines, have been continuously reviewed and updated. As a result the duration of the programs was increased to from three to four years in July 2009 and in the subsequent year the training in each specialty has been divided into two phases: Intermediate Module comprising first two years of training covering the principles and practice of the discipline, whereas the last two years are dedicated to the acquisition of advanced competencies related to each specific specialty.

The objective of orthodontics and dentofacial orthopedic therapy for a growing child is to optimize the attainment of full facial developmental potential. Countless environmental influences can intervene in the progression of growth and development often with disastrous results from the view point of oral and facial health and well being. Redirection of those processes, with timely guidance towards the most beneficial form and functional capabilities attainable within the growing phase can do much to minimize the effects of unfavorable genetic and environmental influences. Adult therapy can no longer influence growth; the facial structures have already achieved their full size. These structures are the foundation on which any corrective effort must be built, and treatment can still provide great benefits in optimizing form and function, even within those narrow confines.

All of the above require specialized training and expertise. The curriculum for FCPS in Orthodontics is designed accordingly to cover all these important areas.

GENERAL INFORMATION

GENERAL REGULATIONS

The following regulations apply to all the candidates taking the FCPS-II Examination.

Candidate will be admitted to the examination in the name (surname and other names) as given in the BDS degree. CPSP will not entertain any application for change of name on the basis of marriage/divorce/deed.

ELIGIBILITY REQUIREMENTS FOR ENTERING THE FELLOWSHIP TRAINING PROGRAM IN ORTHODONTICS

- Passed FCPS-I in Dentistry or granted exemption

EXEMPTION FROM FCPS PART-I

An application for exemption from FCPS Part-I must be submitted to the College with all the relevant documents and a bank draft for the prescribed fee.

After due verification, the College may grant exemption from FCPS Part-I to those applicants who have acquired any of the following qualifications in dentistry:

- Diplomat American Board of Orthodontics.
- FCPS Part-I College of Physicians and Surgeons Bangladesh .

In all other cases, after proper scrutiny and processing, the College shall decide acceptance or rejection of the request for exemption from FCPS-I on case to case basis.

All applicants who are allowed exemption will be issued an **EXEMPTION CERTIFICATE** on payment of exemption fee. A copy of this certificate will have to be attached with the application to the Registration & Research Cell (R&RC) of the CPSP, for registration as FCPS Part-II trainee and later with the application for appearing in FCPS Part-II examination.

DURATION OF TRAINING IN ORTHODONTICS

Total duration of training is four years, divided into following two phases

- Intermediate Module (IMM) in orthodontics for first two years, after which the trainee becomes eligible to appear in the Intermediate Module Examination. For further details about the Intermediate Module refer to the booklet "Intermediate Module in Orthodontics" published separately by the College.
- Last two years consist of advanced training in orthodontics.

APPROVED TRAINING CENTERS

Training must be undertaken on whole time basis in units/ departments/ institutions approved by the College.

A current list of approved locations is available from the College and its regional offices as well as on the College website. www.cpsp.edu.pk

REGISTRATION AND SUPERVISION

All training must be supervised and undertaken on whole time basis. The trainees are required to register with the R&RC and submit the name of their supervisor(s) by the date indicated on the registration form. The supervisor will normally be a Fellow of the College. However, another supervisor may be accepted if no Fellow is available to offer appropriate supervision. Only that training will be accepted which is done under a CPSP approved supervisor. Normally, only one supervisor is

nominated, and if the trainee spends significant periods working in an area where the supervisor has no personal involvement, the supervisor must certify that suitable supervision is being provided. The nomination of more than one supervisor is needed only if the trainee divides the year between two or more unrelated units, departments or institutions. The trainees are not allowed to work simultaneously in any other department/institutions for financial benefit and/or for another academic qualification.

RESEARCH

One of the training requirements is a dissertation or two research papers on a topic related to the field of specialization. Synopsis of the dissertation or research papers must be approved from the Registration & Research Cell (R&RC) of CPSP before starting the research work. The dissertation must be submitted for approval to the R&RC before or during the first six months of fourth year of training program.

ROLE AND RESPONSIBILITIES

Training held under the aegis of CPSP is compulsorily supervised. A supervisor is a CPSP fellow or a specialist with relevant postgraduate qualifications recognized by CPSP.

Supervision of a trainee is a multifaceted job. Arbitrarily the task is divided into the following components for the sake of convenience. This division is by no means exhaustive or rigid. It is merely meant to give semblance to this abstract and versatile role.

EXPERT TRAINER

- This is the most fundamental role of the supervisors. They have to not only ensure and monitor adequate training but also provide continuous helpful feedback (formative) regarding the progress of the training.
- This would entail observing the trainee's performance and rapport with all the people within his work environment.
- They should teach the trainee and help them overcome the hurdles during the learning process.
- It is the job of the supervisor to make the trainee develop the ability to interpret findings in his patients and act suitably in response.
- The supervisor must be adept at providing guidance in writing dissertation /research articles (which are essential components of training).
- Every supervisor is expected to participate actively in supervisors' workshops conducted regularly by CPSP, and do their best to implement the newly acquired information/skills in the training. It is a basic duty of the supervisors to keep abreast of the innovations in their field of expertise and ensure that this information percolates to trainees of all years under them.

RELIABLE LIAISON

- The supervisor must maintain regular contact with the College regarding training and the conduct of various mandatory workshops and courses.
- It is expected that the supervisor will establish direct contact with relevant quarters of CPSP if any problem arises during the training process, including the suitability of trainee.
- They must be able to coordinate with the administration of their institutions/ organizations in order to ensure that their trainees do not have administrative problems hampering their training.

PROFICIENT ADMINISTRATOR

- They must ensure that the trainees regularly fill their e-logbook.
- Provide quarterly feedback regarding each trainee through e-log system.
- The supervisors might be required to submit confidential reports on trainee's progress to the College.
- The supervisor should notify the College of any change in the proposed approved training program.
- In case the supervisor plans to be away for more than two months, he/she must arrange satisfactory alternate supervision during the period.

ROLE AND RESPONSIBILITIES

Given the provision of adequate resources by the institution, residents should:

- Accept responsibility for their own learning and ensure that it is in accordance with the relevant requirements;
- Investigate sources of information about the program and potential supervisor, and play an informed role in the selection and appointment of the supervisor;
- Seek reasonable infrastructure support from their institution and supervisor and use this support effectively;
- Ensure that they undertake training diligently.
- Work with their supervisors in writing the synopsis/ research proposal and submit the synopsis/ research proposal within six months of registration with the RTMC;
- Accept responsibility for the dissertation and plan and execute the research within the time limits defined;
- Be responsible for arranging regular meetings with the supervisor to discuss any hindrances to progress and document progress etc. If the supervisor is not able/willing to meet with the student on a regular basis, the student must notify the College;
- Provide the supervisor with word-processed updated synopsis and dissertation drafts that have been checked for spelling, grammar and typographical errors prior to submission;
- Prior to submission of dissertation, the student should ensure that the supervisor has all the raw data relevant to the thesis;

- Submit completed dissertation to R&RC or evidence of publication/ acceptance for publication of two research papers in CPSP approved journal (s) or JCPSP six months before the completion of (last year of) training. The trainee should be the first or second author of both papers and the synopsis of both papers must have a prior approval of R&RC;
- Follow the College complaint procedures if serious problems arise;
- Complete all requirements for sitting an examination;
- Provide feedback regarding the training post to the College on the prescribed confidential form;

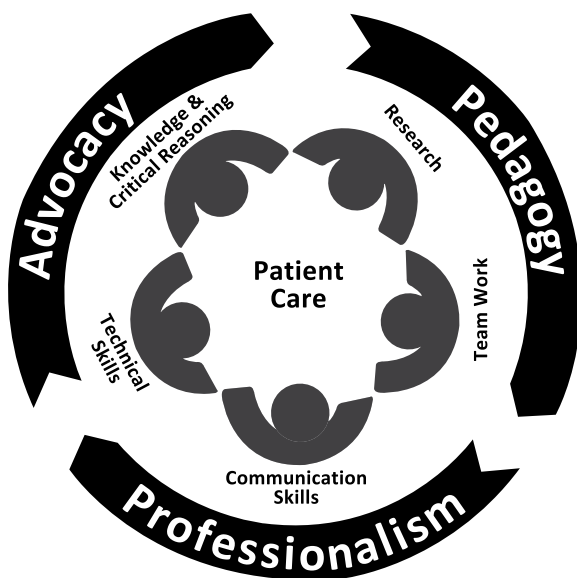
AIM

The aim of the Fellowship Programme in Orthodontics is to produce specialists in the field who have attained the required competencies. By the end of the residency programme, the graduate will be able to

- Take appropriate histories
- Demonstrate proficiency in the requisite physical examinations
- Justify the ordering and interpretation of tests and investigations
- Appropriately diagnose and rule in and rule out contending conditions
- Manage the problem in a cost effective manner
- Apply the requisite knowledge and skills to think critically and solve problems
- Be an effective team player, leading the team if necessary
- Communicate effectively with:
 - o patients and their attendants with empathy and compassion, in interviewing, counseling, breaking bad news, behavioural modification and shared decision-making, recognizing the impact of the condition on the patients and their families
 - o seniors, peers, juniors, learners and other health professionals;
- Demonstrate risk analysis and emphasis on prevention
- Ensure patient safety
- Manage emergencies related to the specialty
- Present well in clinics, rounds and conferences
- Document concise and accurate histories, prescriptions, progress notes, discharge summaries and referrals
- Keep up to date and practice evidence based medicine
- Demonstrate putting patients first
- Demonstrate honesty, integrity and timeliness (punctuality and task completion)

- Maintain confidentiality, patient autonomy, take appropriate consent and do no harm
- Consults with colleagues and refer as necessary
- Demonstrates effective teaching skills
- Exhibit advocacy for their patients, practice (service/ department), profession (discipline/specialty) and population-based problems related to their specialty
- Participate in clinical governance and clinical audit
- Demonstrate research, and use of research in improving clinical practice
- Maintain highest standards of practice
- Demonstrate conflict resolution, management skills and leadership

The competencies outlined above have been reflected in the Competency model of the CPSP as depicted below:



Following is a global and extensive, yet not the total, list of learning outcomes recommended by the College.

OUTCOMES RELATED TO:

COGNITION

The learning outcomes will all be at the application level since that is the gold standard. Therefore the residents should be able to:

- Relate how body function gets altered in diseased states
- Request and justify investigations and plan management
- Assess new medical knowledge and apply it to their setting

SKILLS

WRITTEN COMMUNICATION SKILLS

The residents should be able to:

- Correctly write updated medical records, which are clear, concise and accurate.
- Write clear management plans, discharge summaries and letters for outpatients after referral from a general practitioner.
- Demonstrate competence in academic writing

VERBAL COMMUNICATION SKILLS

The residents should be able to:

- Establish professional relationships with patients and their relatives or caregivers in order to obtain a history, conduct a physical examination and provide appropriate management.
- Demonstrate usage of appropriate language in seminars bedside sessions outpatients and other work situations
- Demonstrate the ability to communicate clearly, considerately and sensitively with patients, relatives, other health professionals and public.
- Demonstrate competence in presentation skills

EXAMINATION SKILLS

The residents should be able to:

- Perform an accurate physical examination in orthodontic patients.
- Interpret physical signs so as to formulate further management.

PATIENT MANAGEMENT SKILLS

The residents should be able to:

- Interpret and integrate the history and examination findings and arrive at an appropriate differential & definite diagnoses
- Demonstrate competence in problem identification, analysis and management of the problem at hand by the use of appropriate resources and interpretation of lab results.
- Apply the knowledge of therapeutic interventions used in the field of Orthodontics for patient management.
- Prioritize different problems within a time frame.

SKILLS IN RESEARCH

The residents should be able to:

- Use evidence based medicine and evidence based guidelines.
- Conduct research individually by using appropriate research methodology and statistical methods.
- Correctly guide others in conducting research by advising about study designs, research methodology and statistical methods that are applicable.
- Interpret and use results of various research articles.

ATTITUDES

TOWARDS PATIENTS

The residents should be able to:

- Establish a positive relationship with all patients in order to ease illness and suffering
- Facilitate the transfer of information important to the management and prevention of disease
- Demonstrate awareness of bio-psycho-social factors in the assessment and management of a patient
- Consistently show consideration of interests of the patient and the community as paramount and these interests are never subservient to one's own personal or professional interest.

TOWARDS SELF DEVELOPMENT

The residents should be able to:

- Demonstrate, consistently, respect for every human being irrespective of ethnic background culture socioeconomic status and religion
- Deal with patients in a non-discriminatory and prejudice-free manner
- Deal with patients with honesty and compassion
- Demonstrate flexibility and willingness to adjust appropriately to changing circumstances
- Foster the habit and principle of self-education and reflection in order to constantly update and refresh knowledge and skills and as a commitment to continuing education.
- Recognize stress in self and others
- Deal with stress and support medical colleagues and allied health workers.
- Handle complaints including self-criticism or criticism by colleagues or patients.
- Understand the importance of obtaining and valuing a second opinion.

TOWARDS SOCIETY

The residents should be able to:

- Understand the social and governmental aspects of health care provision.
- Offer professional services while keeping the cost effectiveness of individual forms of care.
- Utilize hospital and community-based resources available for patients and care givers in underserved areas.

Objectives

At the end of FCPS II orthodontics training the residents are be able to:

1. Apply and demonstrate knowledge of genetics, growth and development; pre-natal and postnatal, of child and adult.
 - Demonstrate in depth knowledge of myology, osteology, embryology, histology and physiology of stomatognathic system.
 - Understand clinical implications of timing, pattern, and variability of growth.
 - Apply methods of studying growth.
 - Understand genetic influence, nature, site and type of growth in craniofacial complex.
 - Understand theories of growth, jaw rotations.
 - Understand clinical applications of maturational and aging changes.
2. Understand and apply principles of dental development and occlusion.
 - Demonstrate knowledge of ideal occlusion.
 - Understand pattern of attrition.
 - Understand and identify occlusal changes during mandibular growth and facial growth.
 - Understand changes in alignment in occlusion during different eruptive phases.
 - Understand of occlusal changes during adolescence and adulthood and its implications.
 - Understand and apply space analysis principles.
 - Perform Bolton discrepancy and interrupted tooth discrepancies.
 - Identify the factors influencing the development of normal occlusion.

3. Demonstrate in depth knowledge of classification and etiology of malocclusion.
 - Understand and apply different systems of malocclusion classification.
 - Demonstrate knowledge of role of genetics in development of malocclusion.
 - Understand etiological role of embryological disturbances, habits and other causes and their clinical implications.
 - Understand epidemiology of malocclusion.
 - Understand clinical implication of malocclusion on speech disturbances and TMJ.
4. Diagnose and plan treatment
 - Document case history.
 - Perform clinical examination independently.
 - Develop and maintain study models in clinical settings.
 - Take intraoral and extra oral photographs of patients.
 - Demonstrate knowledge of radiology, its analysis and interpretation.
 - Develop problem list
 - Demonstrate knowledge of Maturity indicators (hand and wrist+CVM stages) and its clinical applications
 - Demonstrate in depth knowledge of Cephalometric techniques, analysis and diagnosis.
 - Perform Prediction tracings (growth and surgical) for patients.
 - Demonstrate knowledge of computerized diagnostic system.

5. Understand biology of tooth movement and its clinical relevance e.g.:
 - Theories of orthodontic tooth movement.
 - Bone physiology, tissue reaction and biological basis of orthodontic therapy.
 - Effect of drugs in orthodontic tooth movement.
 - Understand and implement biomechanics, applied physics and chemistry of dental materials.
 - Demonstrate knowledge of types of orthodontic forces.
 - Demonstrate knowledge of types of orthodontic tooth movement.
 - Demonstrate knowledge of anchorage and friction including TAOs.
 - Demonstrate knowledge of mechanical basis of force system.
 - Demonstrate knowledge of relation of force and time with tooth movement.
 - Demonstrate knowledge of skeletal effect of orthodontic forces (ideal timing/rate of movement).
 - Demonstrate knowledge of types of expansion, their timing and their effect on bone.
6. Be able to plan and perform preventive and interceptive orthodontics, including habit breaking appliances and methods, serial extractions, make space maintainers, perform early corrections and develop preventive methodology where applicable.
7. Treat malocclusions with.
 - Removable orthodontic appliances:
 - Indications
 - Contraindications
 - Material
 - Principles of actions
 - Classification and patient's compliance

- Functional appliances(Removable and fixed)
 - Fixed orthodontic appliances including:
 - Different types of Bracket systems
 - Direct and indirect bonding methods, their advantages and disadvantages
 - Fabrication of appliances
8. Understand temporomandibular joint dysfunction TMJ diseases etc. and show adequate clinical competence in treating such problems.
 9. Demonstrate knowledge of retention and relapse and its prevention and retention of treated cases with different kinds of retention approaches.
 10. Demonstrate knowledge and skill for management of complex orthodontic treatments:
 - Malocclusions requiring orthognathic surgery, both in pre surgical and post surgical phases.
 - Distraction osteogenesis.
 - Cleft lip and palate (CLAP)
 11. Comprehend biomaterials employed in orthodontics and demonstrate appropriate clinical implications of:
 - Arch wires, Bands Brackets and auxiliaries, impression materials, luting and bonding materials, orthodontic instruments.
 12. Demonstrate in depth understanding of perio-orthodontic inter relationship.
 13. Understand the need for a multi-disciplinary approach, involving periodontics, prosthodontics and operative dentistry in patients and be able to collaborate with other specialties for management of patients.

14. Follow up patients and maintain record keeping for future reference.
15. Conduct research in field of Orthodontics by:
 - Understanding bio-statistics, epidemiology and interpretation of data
 - Demonstrating research skills by carrying out a research project, requiring at least six months of full time work, writing a dissertation or writing two publishable papers
 - Critically evaluating and analyzing published literature
 - Developing an understanding of computerized orthodontic data processing and storage
16. Demonstrate abilities to initiate clinical practice in Orthodontics and/or contribute to teaching of subject of Orthodontics.

CLINICAL COMPETENCIES

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

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

COMPETENCIES

	Third Year		Fourth Year	
	Level	Cases	Level	Cases
History taking	4	2	-	-
Diagnostic/retainer impressions	4	4	2	2
Study models/base forming	4	2	4	2
Cephalometric/panoramic x-rays taking	4	2	4	2
Growth prediction on cephalometric x-rays	4	5	4	5
Cephalometric tracings and analysis	4	2	4	2
Surgical/Prediction tracing	4	5	4	5
Extra oral and Intra oral Photographs	4	2	4	2
Patient Case Presentations	4	2	4	2
Treatment Planning	4	2	4	2
Banding	4	5	-	-
Bonding	4	5	-	-
Wire bending skills	4	2	4	2
Soldering and welding	4	4	4	4
Anchorage planning	4	5	4	5
Treatment transfers	4	2	4	2
Appliance Removal	4	15	4	20
Arch Expansion	4	3	4	3
Minor Orthodontic Surgical Procedures	3	2	3	2
Orthodontic treatment with growth modification appliances with appliance fabrication	4	5	-	-

COMPETENCIES

	Third Year		Fourth Year	
	Level	Cases	Level	Cases
Management of TMD & OSA	4	1	4	1
Fabrication of splints/Wafers	3	2	4	2
Face bow record	3	1	4	1
Ortho Implant	1	1	1	1
Interdisciplinary Management (Orthodontic part)	3	3	4	3
Model Surgery	3	2	4	2
Orthognathic Surgery/Distraction Osteogenesis	1	2	2	2
Orthodontic treatment of cleft lip and palate	4	1	4	1
Retainers	4	15	4	20
Relapse Management	3	2	4	2

SYLLABUS

The course will endeavor to encourage the quest for knowledge, which will bring the residents up to a good level of specialty practice and teaching and also open doors for acquiring further knowledge and expertise throughout life. The Syllabus includes:

- Anatomy of the head and neck.
- Physiology of the stomatognathic system
- Neuromuscular Physiology
- Genetics, embryology and histology
- Anthropology as related to dental evolution
- Physiology of mastication and deglutition.
- Growth and development pre-natal post-natal child and adult
- Cephalometry
- Orthodontic diagnostic procedures and aids
- Physiology of occlusion
- Classification & etiology of malocclusion
- Temporomandibular joint pathology and dysfunction
- Myofascial Pain Dysfunction
- Biomechanics and applied chemistry of dental materials
- Biology of tooth movement
- Development and principles of orthodontic appliances e.g.
- Activators, functional appliances, removable appliances
- fixed appliances edgewise appliances etc.
- Construction and fabrication of appliances
- Palatal expansion.
- Extra oral forces used in orthodontic treatment
- Preventive and interceptive orthodontics
- Serial extractions.
- Habits; their sequel and treatment
- Treatment of Class I Malocclusion
- Treatment of Class II Malocclusion
- Treatment of Class III Malocclusion
- Treatments which do not fall in above classifications e.g. of long face syndrome, cleft palate etc. and treatment and adult patients

- Treatment of temporomandibular joint disorders, facial, cervical and myofascial pain.
- Sequel of orthodontic treatment & oral hygiene
- Management and prevention of other problems
- Speech: physiology, pathology and treatment
- Orthognathic Surgery: diagnosis, planning and related orthodontic treatment both pre-surgical and post-surgical
- Multidisciplinary science and approaches including periodontal and prosthetic considerations
- Retention and relapse
- Bio-statistics
- Educational teaching and communication skills
- Patient management, behavioral psychology and patient motivation
- Management of critical routing patient's emergencies
- Dis-infection and sterilization procedures
- Practice management, record keeping, computerization etc.

MULTIDISCIPLINARY CONFERENCES

Participation in Multidisciplinary Conferences is encouraged.

E-LOGBOOK

The CPSP council has made e-logbook mandatory for all residency program trainees inducted in July 2011 and onwards. Upon registration with RTMC each trainee is allotted a registration number and a password to log on all work performed and the academic activities undertaken in the logbook on daily basis. The concerned supervisor is required to verify the entries made by the trainee. This system ensures timely entries by the trainee and prompt verification by the supervisor. It also helps in monitoring the progress of trainees and vigilance of supervisors.

TYPE OF CASE	HEADING ON COVER	COLOUR CODE
Surgical cleft/ multidisciplinary care	Fully documented including mid treatment records	A-Green
Growth modification	Fully documented including mid treatment records	B-Blue
Camouflage	Fully documented case mid treatment records	C-Red
Class 1 Extraction	Fully documented case mid treatment records	D-Yellow
Any case of candidate's choice excluding class 1 Non extraction	Fully documented case mid treatment records	E-White

Five fully completed and documented cases to be uploaded before the FCPS-II practical examination. Candidate failing in examination can upload ten additional completed cases before the next exam according to the format given on e-logbook. Candidate is allowed to choose five cases out of fifteen cases for assessment.

- Each case history should be comprehensive, give general standards of Oral and Dental Health and contain all relevant information assessed from clinical examination, study of radiographs and models.
All radiographs to be arranged and numbered serially. The Cephalometric Index used should be made clear.

- Aims and objectives of treatment should be clear with reasons supporting each method used.
- Complete description of Appliance Components is required along with archwire details.
- The case records, text and treatment records should all show logical progress of the case with reasons for modification or change of treatment.
- An objective discussion on treatment problems encountered during the course of treatment must be given along with any possible modification of treatment to obtain better results.
- Case histories should be accompanied by clear, black and white or colour prints. Illustrations showing anterior, lateral and occlusal inter-oral details, before and after treatments full face and profile views.
- Study models of pre and post treatment to be submitted with each case history. Fully documented case including mid treatment records where required.

ASSESSMENT

Eligibility Requirements For FCPS Part-II Examination

The eligibility requirements for candidates appearing in FCPS Part II are:

- Passed FCPS Part-I in Dentistry or granted exemption from FCSP Part-I by CPSP as per rules.
- To have undertaken four years of the specified training in Orthodontics all of which should be after passing FCPS Part-I in an institution recognized by the CPSP.
- Passed IMM examination in orthodontics.
- Completion of entries in e-logbook along with validation by the supervisor.
- To provide a certificate of approval of dissertation or acceptance of two research papers in CPSP approved journal(s).
- To provide a certificate of attendance of mandatory workshops.
- To provide a certificate of having finished five treated cases with variety as mentioned in the e-log book and signed by the supervisor.

EXAMINATION SCHEDULE

- The FCPS Part-II theory examination will be held twice a year.
- Theory examinations are held in various cities of the country usually at Abbottabad, Bahawalpur, Faisalabad, Hyderabad, Islamabad, Karachi, Larkana, Lahore, Multan, Peshawar, Quetta and Rawalpindi centres. The College shall decide where to hold oral/practical examination depending on the number of candidates in a city and shall inform the candidates accordingly.
- English shall be the medium of examination for the theory/practical/ clinical and viva examinations.
- The College will notify of any change in the centres, the dates and format of the examination.

- A competent authority appointed by the College has the power to debar any candidate from any examination if it is satisfied that such a candidate is not a fit person to take the College examination because of using unfair means in the examination, misconduct or other disciplinary reasons.
- Each successful candidate in the Fellowship examination shall be entitled to the award of a College Diploma after being elected by the College Council and payment of registration fees and other dues shall be entitled to the award of a College Diploma after being elected by the College Council and payment of registration fees and other dues.

EXAMINATION FEES

- Applications along with the prescribed examination fees and required documents must be submitted by the last date notified for this purpose before each examination.
- The details of examination fee and fees for change of centre, subject, etc. shall be notified before each examination.

REFUND OF FEES

If, after submitting an application for examination, a candidate decides not to appear, a written request for a refund must be submitted before the last date for withdrawal with the receipt of applications. In such cases a refund is admissible to the extent of 75% of fees only. No request for refund will be accepted after the closing date for receipt of applications.

If an application is rejected by the CPSP, 75% of the examination fee will be refunded, the remaining 25% being retained as a processing charge. No refund will be made for fees paid for any other reason, e.g. late fee, change of center/subject fee, etc.

FORMAT OF EXAMINATION

Every candidate vying for the Fellowship of the College of Physicians and Surgeons Pakistan must pass both parts of the Fellowship examination unless exemption is approved.

Since the College is continually seeking to improve its examinations. Candidates will be notified well in advance of any such changes.

From July 2018, one of the theory papers will be MCQ based.

PART I THEORY EXAMINATION

The written examination consisting of two papers:

Paper- I: 10 Short Answer Questions (SAQs) 3 hours

Paper- II: 10 Short Answer Questions (SAQs) 3 hours

PART II CLINICAL EXAMINATIONS

Only those candidates who qualify in theory will be called for Practical, Clinical and Viva examination. Detailed instructions will be sent out to all candidates who pass the theory exam regarding the date and particulars of the clinical exam.

The Clinical section comprises of two components with two sub components in each. First component comprises of long case and short cases, treated cases and the Viva Voce are included in the second component. It is mandatory to score a minimum of 50% of the available marks in each subcomponent.

It consists of:

- One Long Case
- Four Short Cases
- Fully documented case histories of 5 treated cases. Out of these 5 cases any 4 cases will be assessed by the examiner.
- Viva Voce (One station)

FORMAT OF LONG CASE

Each candidate will be allotted one long case. Candidates should take a careful history from the patient (or relative) and after a thorough physical examination identify the problems which the patient presents with. During the period a pair of examiners will observe the candidate. In this section the candidates will be assessed on the following areas:

INTERVIEWING SKILLS

- Introduces one self. Listens patiently and is polite with the patient.
- Is able to extract relevant information.

CLINICAL EXAMINATION SKILLS

- Takes informed consent
- Uses correct clinical methods systematically.

CASE PRESENTATION/DISCUSSION

- Presents skillfully • Gives correct findings
- Gives logical interpretations of findings and discusses differential diagnosis. • Enumerates and justifies relevant investigations.
- Outlines and justifies treatment plan (including rehabilitation).
- Discusses prevention and prognosis.
- Has knowledge of recent advances relevant to the case.

During the long case, the candidate may be asked by the examiners to perform a specific procedure/skill.

During case discussion the candidate may ask the examiners for laboratory investigations which shall be provided, if available. Even if they are not available and are relevant, candidates will receive credit for the suggestion.

FORMAT OF SHORT CASES

- Candidates will be examined in four short cases jointly by a pair of examiners. Candidates will be given a specific task to perform on patients, one case at a time. During this part of the examination, the candidate will be assessed in:

CLINICAL EXAMINATION SKILLS

- Takes informed consent.
- Uses correct clinical methods.
- Examines systematically.

DISCUSSION

- Gives correct findings.
- Gives logical interpretations of findings.
- Justifies diagnosis.

As the time for this section is short, the answers given by the candidates should be precise, succinct and relevant to the patient under discussion.

FORMAT OF TREATED CASES

Candidate will be examined by a pair of examiners. During the examination, the candidate will be assessed in:

- Quality of records including documented case histories.
- Treatment mechanics
- Finishing
- Answering the relevant questions asked by the examiners.

FORMAT OF VIVA VOCE

Candidates will be examined jointly by 2 pairs of examiners. This part of the examination will assess the candidate's ability to solve problems, reaction in emergency situation, concepts and overview of the current issues relevant to the specialty. The candidates will be assessed according to the curriculum.

The college reserves the right to alter/amend any rules/regulations. It is, therefore, important that the candidates keep visiting CPSP website regularly to know of any changes notified by the college. Any decision taken by the College on the interpretation of these regulations will be binding on the applicant.

RECOMMENDED READING MATERIAL

Books

- Contemporary Orthodontics by William R. Proffit
Current edition (Mosby).
- Orthodontics current Principles and Techniques
by T.M. Graber- Current edition (Mosby).
- Contemporary treatment of dentofacial deformities
by Proffit, White and Sarver- Current Edition.
- Dentofacial Orthopedics with functional appliances
by T.M. Graber- Current edition.
- Facial growth by D.H.Enlow- Current edition.
- Any other relevant book.

Journals

- American Journal of Orthodontics and Dentofacial
Orthopedics.
- Angle Orthodontist.
- Journal of Clinical Orthodontics.
- European Journal of Orthodontics.
- Journal of Orthodontics.
- Seminars in Orthodontics.

Published: 11 March 2017

COLLEGE OF PHYSICIANS AND SURGEONS PAKISTAN

7th Central Street, Defence Housing Authority, Karachi-75500.
Phone No. 99266400-10, UAN: 111-606-606, Fax No. 99266432



FCPS Orthodontics

Guidelines for Formative Assessment

FORMATIVE ASSESSMENT

College of Physicians and Surgeons Pakistan, in order to implement competency based education in letter and spirit, is introducing Work Placed Based Assessment (WPBA) in addition to institutional/ departmental assessments. To begin with college is introducing Mini-CEX and DOPS to ensure that the graduates are fully equipped with the clinical competencies.

- Workplace-Based Assessment (WPBA) tools are entirely formative and should be accompanied by constructive feedback.
- Each Mini-Clinical Evaluation Exercise (Mini-CEX) or Direct Observation of Procedural Skills (DOPS) encounter lasts approximately 20 minutes, with an additional 5 minutes allocated for feedback and further action planning.
- Depending on the availability of cases, any of the topics/areas/procedures listed below may be covered in the WPBA sessions. However, each time focus should be on a different area/topic/procedure.
- The resident has the onus to report to the Parent Supervisor when they are prepared to appear for either a Mini-CEX or DOPS session.
- The Resident will schedule and arrange for the WPBA session in consultation with the Parent Supervisor. The assessment may either be conducted by the Parent Supervisor or delegated (by the parent supervisor) to another qualified faculty member or assessor within the department.
- Direct observation of the encounter by the Assessor is a must, followed immediately by specific and constructive feedback to the resident.
- The prescribed assessment forms are available on the e-portals of both the Parent Supervisors and the residents. If the Parent Supervisor conducts the assessment, they are responsible for completing the form and making digital entries via their e-portal. Digital entries can be made directly via a mobile phone or other digital device without the need to first fill out a hard copy. If the assessment is conducted by another assessor, the resident must retrieve the online form from their e-portal and provide it to the assessor. After completing the assessment, the assessor will coordinate with the Parent Supervisor and hand over the filled form for digital entry.
- Once the Parent Supervisor has entered the assessment details, the resident must provide their reflection and indicate their satisfaction with the encounter through their e-portal.
- Entries from both the supervisor and the resident are saved in the e-portal database and are visible to both parties.
- In case of unsatisfactory performance of the resident on any of the prescribed WPBAs, a remedial has to be completed within the stipulated time frame.
- Non-compliance by the resident has to be reported in the quarterly feedback.

Details about Mini-CEX requirement

Mini-CEX encounters will be arranged to cover skills essential to provision of good clinical care including History taking, Oral Examination, Management & Communication skills.

1st Year

1st & 2nd Quarters:

- Minimum One Mini-CEX Assessment

3rd & 4th Quarters:

- Minimum Two Mini-CEX Assessments

2nd Year

1st & 2nd Quarters:

- Minimum Two Mini-CEX Assessments

3rd & 4th Quarters:

- Minimum One Mini-CEX Assessment

Note: Mini-CEX is to be conducted in first and second years of training only. There will be no Mini-CEX completion requirement in third or fourth year as Orthodontic Residents do not take up new cases in the latter half of training.

Details about DOPS requirement

Minimum 1-2 DOPS encounters are to be conducted per quarter of training, as detailed below

1st Year

1st Quarter:

- Impression taking & Wax Bite 1

2nd Quarter:

- Impression taking & Wax Bite 2
- Clinical Photography

3rd Quarter:

- TMJ Examination
- Fitting Molar Bands

4th Quarter:

- Radiography (Lateral Ceph/OPG/Periapical/Bitewing)

2nd Year

1st Quarter:

- Bracket Bonding
- Fitting Removable Functional appliance

2nd Quarter:

- Orthodontic Mini-Implant Insertion

3rd Quarter:

- Selection & Placement of archwire
- Placement of Piggyback wire

4th Quarter:

- Insertion of archwire for segmental canine retraction

3rd Year

1st Quarter:

- Anterior retraction with bilateral Helices, Class I, Class II, Class III Retraction

2nd Quarter:

- CSF/Frenectomy/Gingivectomy/Gingivoplasty
- Face Bow Recording

3rd Quarter:

- Anterior Retraction with bilateral Retraction Loops
- Placement of Crimpable Hooks/Ball stops

4th Quarter:

- Insertion of Distal Jet/Jones Jig

4th Year

1st Quarter:

- Finishing & Detailing

2nd Quarter:

- Indirect Bonding

3rd Quarter:

- Debonding & Retention

4th Quarter:

- Disciplinary Procedures