University of Colorado Denver
School of Dental Medicine

Dental Clinic Education Manual
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INTRODUCTION

The delivery of patient care by students is an important component of the educational program at the University Of Colorado Denver School Of Dental Medicine. Just as there are guidelines, requirements and expectations for didactic courses in the curriculum, there are those for clinical courses.

Presently, clinical courses are comprised of two main types - those directed by the comprehensive care faculty and those directed by the clinical divisions such as endodontics, periodontics, orthodontics, pediatric dentistry, oral surgery, operative dentistry, fixed prosthodontics, and removable prosthodontics.

In the pages that immediately follow, descriptions of clinical course evaluation procedures, clinical divisional expectations and competency examination details are provided. While there is variability in the ways that clinical evaluation is performed in all clinical courses, there are some principles common to all.

It is expected that students attend all scheduled clinic sessions and provide ethical, high quality, patient-centered care in all circumstances. Students should follow established clinical procedures and protocols when providing patient care. Violations of these procedures can result in loss of student clinic privileges, a failure to be promoted or dismissal from the School of Dental Medicine depending upon the nature of the violation.

SECTION I — STANDARD OF CARE

The following standards of care are designed to guide faculty, staff and students in the delivery of patient care at the University Of Colorado School Of Dental Medicine. These guidelines are in no way meant to abridge the professional judgement of faculty as to what is feasible, achievable and in the best interest of patients in any particular situation. These standards have been developed with the knowledge that patients have the right to decide what treatment they wish to accept, and the faculty has the right to decide if the School is able to provide reasonable care within conditions set by the patient.

I. GENERAL STANDARDS

A. ACCESS TO TREATMENT AND PATIENT PROGRESS

1. Notification of School Policies and Patient Responsibilities – Patients shall be notified of applicable School policies, procedures, and patient responsibilities prior to the initiation of treatment.

2. Patient Acceptance – Patients shall be accepted based on consideration of the patient’s dental needs; the ability of the School’s educational programs to meet patient needs; the needs of the educational program to provide clinical experience to students, residents and faculty; and the ability of the patient to meet their responsibilities.

3. Assignment – Patients shall be assigned to student(s) based on consideration of the patients’ dental needs of the educational program to provide clinical experience to students. Assignments to student shall take place as soon as possible, but no later than three weeks. Emergency care shall be available for all unassigned patients on a fee for service basis.

4. Patient Progress – Patients’ timing of treatment shall be based on each individual treatment plan. Patients will be classified based on (a) the patient’s desired level of dental treatment and (b) patient’s desired timing of treatment. Patient’s who are available should be seen 2-4 times per months until treatment is completed.

5. Periodic Examinations – All active comprehensive care patients shall have periodic examinations at appropriate intervals during treatment phase.

6. Case Completions – Upon completion of planned treatment in the dental program, each patient shall have a case completion examination including:
   a. Assessment of the technical acceptability of the care provided in the School.
   b. Patient comfort and satisfaction with the care provided.
   c. Assessment of current dental health status.
   e. Determination of continued treatment in the School or referral.
7. Preventive Maintenance program – the School shall maintain ongoing preventive maintenance for active comprehensive care patients. Determination of continuation in UCSDM preventive maintenance program or referral to outside dental program shall be based on the patient’s dental needs; the ability of the School’s educational programs to meet patient needs; the needs of the educational program to provide clinical experience to students, residents and faculty; and the ability of the patient to meet their responsibilities.

8. Referrals – Patients may be referred from the School’s programs at any time when it is determined that the School is unable to meet the patient’s dental needs and/or when the patient is unable or unwilling to meet their responsibilities. When it is determined that an active patient needs to be referred outside of the School’s programs, the patient shall be notified in writing, the patient’s dental condition shall be stabilized if appropriate, and emergency care shall be provided for a reasonable period of time.

9. Dental Emergency – There shall be a 24-hour emergency service for all patients of record.
   a. A dentist shall always be on call when the clinics are not open for regular educational programs.
   b. Emergency care for patients who are not of record will be provided on a space available basis only.

B. DOCUMENTATION OF PATIENT TREATMENT

1. Patient Record Availability – Patient records of all active patients are computerized and maintained in the School’s dental software system, axiUm, and shall be available for use when requested as described in the UCSDM Policy and Procedure Manual. Patient records of all inactive patients are either in the computer system, or if prior to 8/2006, stored at an offsite location which fulfills both the requirements of the statute of limitations and confidentiality laws of the State of Colorado. The patient record shall be present whenever care is provided.

2. The patient record shall be a record of all diagnostic and treatment services rendered by UCSDM, and be completed and maintained as outlined in the UCSD Clinic Policy and Procedure Manual.
   a. Radiographs of all active patients are digital and are computerized for accessibility.
   b. Forms – Dental Forms shall be completed, signed, and approved by faculty, within axiUm.
   c. Informed Consent – All informed consents shall be signed by the patient in axiUm.
   d. Progress Notes – All notes are entered into axiUm and approved by faculty. All progress notes shall be written in compliance with the UCSDM Policy and Procedure Manual.

3. Confidentiality of the patient record shall be maintained at all times.

4. Records Requests – Duplicates of UCSDM dental records shall be available upon receipt of a written and signed request of the patient. Reasonable notice shall be required, and reasonable fees may be charged. Original records shall not be released without maintaining a duplicate

C. INFECTION CONTROL

1. Faculty, students, staff and patients shall follow all policies and procedures in the UCSD Exposure Control Plan. Part of the Clinic Policy & Procedure Manual.

D. MEDICAL EMERGENCY

1. Emergency procedures as described in the UCSDM Clinic Policy and Procedure Manual shall be followed.

E. SAFETY

1. Radiation
   a. All dental radiographic equipment within the School shall be tested annually for timer accuracy and reproducibility, exposure reproducibility and mAs linearity, kVp accuracy, half-value layer, and beam restriction system by personnel registered with the Colorado Department of Public Health and Environment, Division of Laboratory and Radiation Services.
   b. Occupationally exposed faculty and staff shall wear a personal radiation monitoring device (i.e. dosimeter) during work hours.
   c. Appropriate shielding shall be used on all patients receiving radiographs.
   d. All operators of x-ray units shall be thoroughly familiar with radiation safety standards and practices including federal, state and local regulations.
2. Nitrous Oxide
   a. All nitrous oxide/oxygen delivery equipment shall be inspected annually for proper function and shall be maintained in proper working order.

3. Mercury Hygiene
   a. Premade units of disposable capsules shall be used.
   b. Amalgam scrap shall be turned in from treatment and preclinical areas and recovered from waste traps and stored in tightly closed containers and coerced with water.

4. Chemicals
   a. All hazardous chemicals shall be appropriately labeled, stored and dispensed in accordance with OSHA and EPA standards as outlined in the UCDSDM Clinic Policy and Procedure Manual.
   b. Personnel who use hazardous materials shall be trained in knowledge of hazards, avoidance of problems and emergency procedures in event of injuries exposures.
   c. Eyewash stations shall be accessible in or near all clinical and laboratory areas where hazardous materials are or may be used.

5. Fire
   a. Fire extinguishers, periodically inspected for operability, shall be conspicuously located and accessible throughout the School.
   b. Smoke and fire alarm systems shall be operational in all areas of the School.

F. PATIENT MANAGEMENT
1. The patient shall receive considerate, respectful and confidential treatment at all times and under all circumstances.

2. The patient shall have access to complete and current information about their condition. The patient shall have reasonable, informed participation in decisions concerning their dental health. Patients shall be informed of treatment alternatives, benefits, risks, cost and prognosis in terms they can understand. No patient shall have a procedure performed, even in an emergency, if the patient or their representative objects to it.

3. The patient shall receive treatment that meets the standard of care as outlined in this document.

4. The patient shall have treatment delivered in a timely fashion and in an appropriate sequence.

5. The use of quantitative criteria for student advancement and graduation must not compromise the delivery of comprehensive care.

6. Faculty, students and professional staff may opt not to treat if patients request treatment that is inappropriate relative to these standards of care.

G. DIAGNOSIS
1. A thorough diagnosis of the patient's dental condition shall consist of a documentation of the patient's current health status including specifics about any current medications, previous medical conditions, and surgical procedures performed.

2. The patient shall be referred for medical consultation if a medical condition is thought to influence dental care. Copies of all medical consultations/referrals, made with the patients’ permission, shall be maintained electronically in the patient chart.

3. Diagnostic aides shall be ordered and used as needed including, but not limited to radiographs, study casts, periodontal probing, pulp tests, percussion and palpation tests, transillumination, laboratory screening tests, and soft tissue biopsy.

4. Radiographs
   a. A DDS/DMD faculty member order is required for the prescription of radiographs following a visual examination of the patient and review of relevant portions of the medical and dental history.
   b. All radiographs must be reviewed by qualified faculty, prior to being used. Interpretation of radiographs will become a permanent part of the dental record.
   c. The selection criteria used for prescribing radiographs are based upon current clinical guidelines for the selection of patients for dental radiographic examinations. The selection criteria include:
      i. Establishment of whether patient is new or recall patient.
      ii. Determination of patient chronological age or developmental status.
      iii. Risk assessment for caries and periodontal disease.
d. Radiographs are individually prescribed based upon the presenting characteristics of the individual patient.
   i. For adult dentate patients intraoral radiographs consisting of periapical and bitewing exposures will be taken as baseline information.
   ii. For most adult patients with multiple missing teeth, a panoramic radiograph and selected periapical radiographs will be taken.
   iii. For edentulous patients, a panoramic radiograph will be taken.
   iv. For children with primary dentition only, radiographs will be taken if it is difficult to see between the proximal surfaces of teeth, or if there are special problems. For children with a transitional dentition, individualized radiographic examination may include periapical/occlusal views and posterior bitewings, or a panoramic film and posterior bitewings.
   v. For adolescents with an adult dentition, an individualized survey will be ordered based upon history and clinical findings.

e. Exceptions to the requirements for baseline radiographic survey will be made if a recent series of diagnostic quality radiographs are available from previous dental care providers.

f. Recall radiographs shall be taken at an appropriate individualized maintenance interval based upon a risk assessment for caries and periodontal disease.

g. Radiographs shall have the proper density, contrast, and detail.

h. Bitewing radiographs shall demonstrate open contacts. The series of bitewings shall include the distal aspect of the canine teeth.

i. Periapical radiographs shall demonstrate the length of the entire tooth, and demonstrate at least two millimeters of bone beyond the root apex.

j. Panoramic radiographs shall be of adequate technical quality to include demonstration of the condylar heads, the mandibular symphysis, and the teeth or ridges demonstrated with a minimum of distortion.

k. Lateral cephalometric radiographs shall be taken with relaxed lips and with the Frankfort horizontal plane parallel to the floor. Sufficient anterior filtering shall be used to allow visualization of soft tissue profile.

l. Patient permission is required before radiographs will be released to other care providers.

m. Patient rejection of radiographs recommended by the supervising dentist shall be documented, and may be cause for the termination of further treatment at the School of Dental Medicine.

H. TREATMENT PLANNING

1. A treatment plan shall include a phased description of the intended services to be provided for the patient. Treatment decisions are based upon history, examination, interpretation of diagnostic tests, and discussion of the chief complaint of the patient.

2. The treatment plan shall be written in the following sequence:
   a. Emergency Care
   b. Phase I treatment-removal of all disease in the periodontium, teeth, soft and bony tissues.
   c. Phase II treatment-restoration of form and function.
   d. Recall/Maintenance

3. Treatment planning shall be based upon a diagnostic summary and shall reflect attention to the patient’s present medical conditions.

4. There shall be discussion with the patient to include patient understanding of alternative treatment approaches.

5. The following shall be part of the discussion with the patient regarding treatment planning.
   a. Diagnostic findings
   b. Chief complaint
   c. Proposed treatment and alternatives
   d. Prognosis
   e. Description of the services to be provided
   f. Rationale for the sequence of care
   g. Patient responsibilities
   h. Possible sequelae if treatment is not performed
i. Possible risk of treatment
j. Cost of the treatment planned
k. Time involved in completing treatment

6. Informed consent shall be obtained from the patient prior to initiating any treatment on the treatment plan.

7. Patient consent on the treatment plan does not imply patient financial obligation, until specific treatments are initiated. The patient must verbally agree to previously planned and consented treatment when it is initiated.

8. Faculty shall not allow a student to proceed with any component of the treatment plan that will not benefit the patient.

II. SERVICE QUALITY

A. PREVENTION OF DISEASE

1. Disease prevention is an important aspect of patient care in each clinical discipline.

2. The treatment plan for each patient shall be directed toward maintenance of function and prevention of disease. Disease risk will be assessed and services appropriate to the risk status will be included in the treatment plan.

3. A critical factor in disease prevention for dentate individuals is control of plaque. This is achieved through: instruction and motivation of patients for optimal oral hygiene practices; professional mechanical plaque removal performed at intervals appropriate to patient; dental treatment which restores function, provides optimal potential for maintenance by the patient, and minimizes the likelihood of future plaque formation.

4. Prevention of caries is mediated not only by plaque control and restorative, prosthodontic, or orthodontic treatment, but also by appropriate use of fluorides, sealants, dietary counseling, pharmacotherapy, and regular assessment of disease status by a dental professional.

5. Prevention of periodontal disease is mediated by plaque control and soft tissue management appropriate to disease status, as well as appropriate restorative, prosthodontic or orthodontic treatment; dietary counseling; pharmacotherapy; and regular assessment of disease status by a dental professional.

6. Prevention of soft tissue disease in edentulous individuals is mediated by appropriate use of prostheses, good nutritional habits, and overall systemic health.

7. Oral and systemic health shall also be promoted through the appropriate use of medical history taking, recording of vital signs, and thorough examination of head, neck, and mouth. Health and wellness shall be promoted through all of the efforts already and through encouragement of good dietary habits, education in the risks of tobacco use and the benefits of cessation, and support for injury prevention.

B. OPERATIVE DENTISTRY

1. Patient treatment in the discipline of Operative Dentistry is directed toward the restoration of single teeth to form, function, health, and appropriate esthetics. Recognizing that each patient has individual treatment needs, treatment will be planned to meet those needs. This treatment will be planned to coincide with the overall treatment goals for the patient including restorability and value of the tooth in a particular oral condition, choice of materials, techniques and sequencing of treatment. All planning will be done with an appreciation for the patient’s desired dental outcomes.

2. Specific treatment areas include prevention both through treatment and education, non-surgical and surgical management of carious lesions, appropriate pulp management, appropriate selection of materials, establishment of proper function, appropriate referral for additional or complex treatment when necessary, and meeting the patient’s desires and needs. When surgical intervention is needed, treatment will be provided based on the problem presenting and not on rigid predetermined rules. Tooth preparation design and materials employed will be based on extent of the lesion and not structured preparation rules.

3. Protection and preservation of tooth structure underlies all operative dental procedures. Minimally invasive operative dentistry techniques will be used at all times and only the amount of tooth structure required to solve the patient’s problem will be performed. When discovered, all areas of gross or extensive decay should have provisional restorations placed until definite treatment can be rendered. In the posterior area of the mouth, this will usually be accomplished with any material that will provide the appropriate therapy and is deemed a provisional restoration. In the areas where esthetics is a concern, glass ionomer will generally be placed. Indirect pulp capping procedures will be utilized when indicated.
to help preserve pulp vitality. Individual restorations will have adequate pulpal protection with an appropriate material. Calcium hydroxide will be used in situations of close approximation to the pulp or in direct or indirect pulp capping procedures. Thermal insulation will be provided by glass ionomer, a suspension liner, and/or a dental cement depending upon the clinical indication. Dentin bonding resins will be used under all amalgam restorations as a sealer.

4. Posterior intracoronal restorations will be restored with amalgam, cast gold, composite resin, or in selected indications, lab fabricated ceramic. In situations where cuspal involvement occurs, cast gold is usually the material of choice. Amalgam is the material of choice as a foundation material for all subsequent extra-coronal restorations. Composite resin “core” materials may be used in selected clinical situations. Foundation restorations will use supplemental retention features as needed such as pins, adhesives, retention grooves, etc. to provide proper retention form. All posterior restorations will establish form and function for stable occlusion, oral function, patient comfort and periodontal health.

5. Anterior restorations for minimal to moderate tooth loss will normally be restored with composite resins. Glass ionomer restorative material may be indicated in cervical lesions or small interproximal lesions. In larger tooth structure loss situations requiring strength and maximum esthetics, laboratory fabricated indirect restorations will provide more proper form and function for the patient as well as satisfy esthetic demands.

6. Unique treatment situations will be handled in the most appropriate manner to meet the presenting condition. Such situations may include the following: extensive breakdown of a tooth requiring a provisional crown, deciduous teeth with no successor, medical condition, pregnancy, time availability, etc. Referrals to other specialists or specialties will be made when appropriate.

7. Oral isolation will be achieved with rubber dam at all times except when not appropriate. Other oral isolation techniques will be employed when rubber dam application is not possible. Air/water cooling with the handpiece during cutting procedures is mandatory. Protection of the patient through physical means (such as protective eyewear) and infection control procedures will always be used.

8. All procedures and techniques will conform to accepted dental practice. New materials and techniques will be implemented when available and supported by evidence.

C. FIXED PROSTHODONTICS

1. Before beginning any fixed prosthodontic procedures on a patient, there is to be a complete diagnosis, evaluation and treatment plan, approved by faculty and the patient in axiUm. This must include a complete health history, dental history, head and neck examination, intraoral examination, probing depths, tooth charting, appropriate radiographs, periodontal assessment (including mobility and mucogingival condition), pulp vitality and plaque control assessment. In addition to the above, it is expected that all cases that require fixed prostheses of any type be subjected to occlusal analysis on accurately mounted casts. When indicated either by symptoms or analysis, there should be a trial equilibration and/or trail wax-up on duplicate study casts. Consideration must be given to the possible need for an occlusal splint for bruxism or other symptoms. Treatment and control of symptomatic TMD must be accomplished before any irreversible fixed prosthodontic procedures are begun.

2. When indicated, the replacement of one or two posterior teeth should suggest dental implants or a fixed partial denture. This depends upon lack of specific contraindications in general or periodontal health as well as the patient's desires, willingness, and acceptance of such treatment. This treatment of choice may be modified for any number of reasons including the need for a removable partial denture on the contralateral side of the same arch. Each case must be individually assessed for treatment on the basis of the factors discovered in the diagnostic workup.

3. When incisors are missing and acceptable abutments are present, dental implants or a fixed partial denture is the restoration of first consideration even if a distal removable partial denture is needed in the same arch to replace posterior teeth.

4. Retainers for conventional fixed partial dentures may include full veneer gold crowns, porcelain-fused-to-metal crowns, and in appropriate situations partial veneer crowns or all-ceramic retainers.

5. Cantilever bridge replacement of lateral incisors is acceptable when the canine is suitable as an abutment, the adjacent central incisor is intact, and the occlusal scheme is favorable. First premolars can be replaced by using cantilever bridges when conditions suggest such treatment in order to spare the preparation of an intact canine.
6. Foundation restorations may be either amalgam or composite resin, but not glass ionomer.
7. Posts, when necessary for retention of the restoration, are to be a separate unit from the crown or abutment casting.
8. It is not necessary to replace all missing teeth. The decision to replace a tooth or teeth is based on dental findings, occlusal considerations, the ability of the patient to maintain the prosthesis, the probability of drift or supraeruption, tooth position and patient preference. Esthetics plays a major factor in whether or not to replace.
9. Malposed or maligned teeth, when used as abutments should be considered for orthodontic therapy. This is usually preferable to over-contoured prostheses since such restorations may pose a liability to periodontal health as well as esthetics.
10. Resin-bonded fixed prosthodontic devices are acceptable for tooth replacement under certain circumstances, but are mainly indicated for the replacement of one or two lower incisors. Conservative preparation is usually indicated for such restorations. Indications for posterior resin bonded fixed prosthetic restorations replacing missing teeth are extremely unusual and are considered to be temporary restorations.
11. Porcelain veneers which require enamel preparation must be evaluated carefully.
12. Margins, contours and interproximal contacts are taught in the preclinical courses.
13. Materials for fixed prosthodontic restoration are either high noble or noble (approximately 50% gold content) alloys either with or without porcelain veneering.
14. Periodontal splinting may be accomplished with one of several techniques and is done in cooperation with the periodontic faculty.
15. It is the responsibility of the student and the covering faculty to assure that the patient is thoroughly instructed in oral hygiene and other preventive measures concerning their fixed prosthodontic devices.
16. Patients must be informed when dental implants are a desirable option for the replacement of missing teeth, after careful evaluation by a restorative and surgical faculty.
17. Radiographs may be requested by the supervising faculty to judge integrity of margins.
18. Dental Implants
   a. The patient should be informed when dental implants are an appropriate treatment alternative.
   b. A diagnostic work-up, including a diagnostic wax-up, appropriate radiographs, radiology stent and advanced imaging (cone beam CT), when indicated, must be accomplished prior to finalizing the implant treatment plan.
   c. Diagnostic casts must be mounted in CR for evaluation. Also procedures through the wax trial denture may be required in the diagnostic phase.

D. REMOVABLE PROSTHODONTICS
1. Removable Partial Dentures
   a. At the initial examination appointments, all remaining teeth must be evaluated as to periodontal and endodontic status. This includes evaluation of current radiographs, probing depths, mobility, attached tissue measurements, pulpal vitality tests and assessment of plaque control. The remaining tissues will be assessed at the clinical exam.
   b. Diagnostic casts are made from preliminary alginate impressions. The casts are mounted with facebow for diagnostic purposes.
   c. A duplicate of the diagnostic cast for the partially edentulous arch will be surveyed and designed for the proposed treatment plan.
   d. Removable partial dentures are the treatment of choice when a fixed partial denture and/or dental implants are not indicated, recommended, or desired by the patient.
   e. Abutment teeth requiring restoration should be restored with a survey crown or onlay if areas supporting rests would be entirely restored. This also applies to previously restored teeth.
   f. In a tooth-borne removable partial denture, the tissue bearing areas should be extended maximally within physiologic and esthetic limits.
   g. Patients will receive thorough homecare instruction and special oral hygiene procedures.
   h. Patients may be placed on a monitored continuing hygiene maintenance program consistent with the School's General Standards in this document.
2. Complete Dentures
   a. At the initial examination appointments, an intraoral soft tissue examination will be completed. A
      panoramic radiograph will be made before proceeding with procedures for prosthesis fabrication.
   b. Diagnostic casts are made from preliminary impressions using either impression material. The casts
      are mounted with facebow in CR at an approximate vertical dimension in a semi-adjustable articulator
      for diagnostic purposes.
   c. Overdentures may be considered for the partially edentulous patient.
   d. Implant retention should be considered and discussed for all denture patients, particularly those with
      complete lower dentures.
   e. The denture base should maximally cover the supporting anatomic areas within physiologic limits.
   f. Dentures shall be esthetic and restore appropriate form and function.
   g. Patients shall receive thorough instruction for home care and special oral hygiene procedures related
      to the prosthesis.
   h. Patients should be re-evaluated on an annual basis.

3. Dental Implants
   a. The patient should be informed when dental implants are an appropriate treatment alternative.
   b. A diagnostic work-up, including a diagnostic wax-up, appropriate radiographs, radiology stent and
      advanced imaging (cone beam CT), when indicated, must be accomplished prior to finalizing the
      implant treatment plan.
   c. Diagnostic casts must be mounted in CR for evaluation. Also procedures through the wax trial denture
      may be required in the diagnostic phase.

E. ENDODONTICS
1. Endodontics is usually the treatment of choice for restorable and functional teeth with irreversible pulps
   or pulpal necrosis. Extraction is another treatment option.
2. Endodontic therapy should be initiated only after a pulpal and/or periapical diagnosis has been rendered.
   An endodontic diagnosis requires an adequate medical and dental history, examination tests, such as thermal,
   percussion, periodontal probing, should be accomplished.
3. Indirect pulp capping should be the treatment of choice when the endodontic diagnosis is reversible pulp.
   Every effort should be made to not expose the pulp.
4. Direct pulp capping is usually indicated for aseptic small mechanical or iatrogenic pulpal exposures in
   vital teeth with no signs of irreversible pulpitis.
5. Pulpotomies are only indicated as an emergency treatment for permanent teeth, except when apexogenesis
   is the desired outcome. Pulpotomies or pulpectomies are indicated when appropriate for the primary
   dentition.
6. As a general rule, endodontic therapy is always carried out under rubber dam isolation.
7. Endodontic therapy on permanent teeth should be carried out as follows:
   a. Access should remove the entire roof of the pulp chamber and be of sufficient size to allow identification
      and instrumentation of all root canals.
   b. A working length of 1mm only. From the radiographic apexes ideal and should be confirmed with the
      radiograph.
   c. Irrigation should be accomplished with sodium hypochlorite.
   d. Instrumentation should allow root canal contents and associated dentin to be removed. The preparation
      should have apical resistance form and be smooth and well flared. The original shape of the canal
      should not be transported.
   e. Obturation should incorporate a root canal sealer and laterally or vertically condensed gutta percha.
      The obturation should be placed apically to the point of instrumentation and should be packed densely
      in three dimensions.
   f. The tooth should be sealed with a temporary or restorative material that will protect the underlying
      root canal material.
   g. A post obturation radiograph should be taken to confirm the quality of the completed endodontics.
8. Radiographs - a diagnostic, working length, master apical file, cone fit, partial obturation and complete
   obturation radiograph will be necessary for each endodontic case. Student retakes of radiographs should
   be prescribed and performed under direct supervision of endodontic faculty.
9. Patients are encouraged to return for periodic clinical evaluations. This is generally scheduled for 6 months post obturation.

10. Root canal instruments occasionally fail and fracture within the root canal space. Such instruments should be removed when possible, or sealed within the obturation material. Such occurrences should be recorded in the patient record and the patient informed. These patients require recall examination.

11. Treatment records should include sufficient information to document the diagnosis and treatment performed, as well as any special treatment considerations or occurrences.

12. Endodontic surgery is not considered an alternative for non-surgical endodontic therapy. If indicated, non-surgical re-treatment should be considered prior to endodontic surgery. Any surgical treatment plan should consider the adjacent periodontal and restorative conditions. Surgical soft tissue specimens must be submitted for histological examination and diagnosis.

13. Patients who require emergency care because of an endodontic problem will require a careful history, clinical exam, diagnosis and plan of treatment. This will usually involve endodontic treatment of the tooth involved, surgical drainage if indicated, and prescription of appropriate antibiotics and analgesics. Patients who present with swelling of tissue spaces should be followed closely until healing is evident.

14. Bleaching of teeth should be undertaken only after a careful diagnosis and explanation of risks versus benefits. Prognosis and duration of esthetic changes should be discussed.

F. PERIODONTICS

1. All dentate patients or patients with dental implants should receive a thorough periodontal examination (probe all surfaces of all teeth, check for bleeding upon deep probing, examine furcations, keratinized tissue, recession, mobility and radiographic analysis). This examination also includes: the identification, etiology, establishing objective therapy, prognosis, and establishing a peri treatment plan.

2. All patients should have their oral hygiene efforts evaluated (modified O’Leary Plaque Index) and receive appropriate oral hygiene instructions.

3. All patients should receive a thorough debridement that is appropriate for their periodontal status. This may include the use of locally and/or systematically delivered antimicrobial agents.

4. All complex patients should receive a periodontal reevaluation (new examination) after Phase I therapy is complete.

5. Surgical therapy should be offered to patients when necessary.

6. All patients should be placed on an appropriate maintenance program.

G. ORAL AND MAXILLOFACIAL SURGERY (Dentoalveolar Surgery)

1. Informed Consent. Informed consent is obtained after the patient has been informed of the indications for the procedure(s), the goals of treatment, the known benefits and risks of the procedure(s), the factors which may affect the known risks and complications, the treatment options, and the favorable outcomes.

2. Indications for surgical care of the dental alveolar-structures include, but are not limited to:
   a. Odontogenic infections (e.g.: symptomatic with pain, swelling, and trismus).
   b. Extraction of erupted teeth (e.g.: symptomatic with pain and/or ectopic position or patient refusal of appropriate endodontic/periodontal therapy).
   c. Extraction of unerupted or partially erupted teeth (e.g.: impacted, malposed, non-restorable or non-functioning tooth).
   d. Surgical correction of dentoalveolar deformities or defects.

H. ORTHODONTICS

1. Every new comprehensive care patient must be evaluated for the presence of malocclusion and/or space management needs.

2. If the new comprehensive care patient is interested in treatment in the student clinic, a decision must be made regarding the appropriateness of performing a diagnostic work-up in the student clinic and the patient must be informed of this decision.

3. All patients for whom orthodontic treatment is undertaken must have a clinical examination that includes an interview as well as radiographs, photographs, and diagnostic casts as indicated. Potential etiologic factors should be evaluated as well as the status and normality of growth and development.
4. All patients for whom orthodontic treatment is undertaken must have a written diagnosis and treatment plan and a written informed consent document. Factors that may influence the outcome of treatment and appropriate treatment modalities should be discussed with the patient and/or parent.
5. The treatment plan should be completed and discussed in the clinic with the patient and/or parent within 3 months of the clinical examination.
6. Treatment procedures must be documented concurrent with treatment.
7. Patients in active treatment should be seen at least every 5 weeks.
8. After treatment has been completed, the treatment results must be retained with an individually developed retention plan, and the patient must be monitored for a minimum of 2 years after the end of active treatment.

I. PEDIATRIC DENTISTRY

Pediatric dentistry includes treatment of infants, children, adolescents, and special health care needs patients. A dental home will be established for each patient from which comprehensive care will be provided.

1. Assessment and diagnosis
   a. Medical, dental, learning assessment histories
   b. Extraoral and intraoral evaluation
   c. Anticipatory guidance and recognition of the need for an individualized approach for patients with special health needs
   d. Caries risk assessment, oral hygiene and dietary education and assessment
   e. Occlusal and orofacial development, habits
   f. Assessment of urgent or emergent needs
   g. Radiographic examination based on history and clinical findings according to the American Academy of Pediatric Dentistry and FDA radiographic guidelines

2. Behavior management will be based on the American Academy of Pediatric Dentistry guidelines including:
   a. Communicative management
      i. Tell-show-do
      ii. Voice control
      iii. Positive reinforcement
      iv. Distraction
   b. Physical Domain
   c. Mouth prop
   d. Positioning/lap exam
   e. Pharmacological
      i. Nitrous oxide/oxygen under faculty supervision
      ii. Recognition of the need for procedural sedation or general anesthesia

3. Preventive therapy individualized for each patient including:
   a. Education regarding the etiology of dental disease
   b. Oral hygiene instruction
   c. Appropriate fluoride therapies
   d. Sealants
   e. Dietary assessment and counseling
   f. Trauma prevention
   g. Caries risk assessment and assignment of recall frequency

4. Guidance of eruption and development of the primary and permanent including:
   a. Clinical evaluation of occlusal and orofacial development
   b. Diagnostic casts when indicated
   c. Management of deleterious oral habits
   d. Space maintenance
   e. Recognition of malocclusion due to skeletal and dental etiologies
   f. Referral for orthodontic intervention
5. Restoration of primary and permanent teeth including:
   a. Sealants
   b. Composite resin and glass ionomer restorations
   c. Amalgam restorations
   d. Stainless steel crown restorations
   e. Removable space maintainers
   f. Referral for advanced restorative and prosthodontic needs
6. Pulpal therapy for primary and permanent teeth including:
   a. Pulpotomy
   b. Pulpectomy: (approval required by the supervising faculty)
   c. Protective base
   d. Indirect pulp treatment
   e. Direct pulp capping
   f. Emergency or partial pulpotomy
   g. Apexogenesis
   h. Apexification
   i. Referral for conventional and surgical endodontics
7. Pediatric periodontal therapy for primary and young permanent teeth including:
   a. Debridement
   b. Prescription of therapeutic agents
   c. Periodontal assessment as part of the recall program
   d. Referral for specific therapeutic intervention
8. Oral surgery for primary and permanent teeth
   a. Routine dental extractions
   b. Recognizing indications for referral

SECTION II — COMPETENCIES FOR THE GENERAL DENTIST

Practicing general dentistry requires that a dentist possess the ability to incorporate understanding, skill, and values in an integrated response to clinical and other professional challenges. Competency statements have been compiled to describe the performance of UCDSDM graduates as they enter dental practice settings rather than students in individual courses. The statements should be seen as dynamic rather than static. As the practice of dentistry changes, so will the expectations for new dentists.

The competencies include professional/practice competencies as well as patient care competencies organized into four domains. The four domains are 1) ethics and professionalism, 2) assessment and diagnosis, 3) establishment and maintenance of a healthy oral environment, and 4) practice administration. These competencies apply to treatment or management of the child, adolescent, adult, geriatric and medically compromised patient. When graduates are expected to perform the necessary treatment procedures, the words such as “perform”, “provide”, “restore”, or “treat” are used. When the new dentist is likely to oversee treatment or to refer to another provider, the terms, such as “manage” and “recognize” are used.
# Clinical Operations: General Competencies for the New Dentist

<p>| | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>I</strong></td>
<td><strong>Ethics and Professionalism</strong></td>
</tr>
</tbody>
</table>
| 1 | Ethics  
Make professional decisions that satisfy legal, societal and ethical principles. |
| 2 | Provide care for all patients, including members of diverse and disadvantaged populations |
| 3 | Critical Thinking and Information Management  
Use self-evaluative skills to assess individual knowledge and abilities, to practice within the scope of one’s competence and make appropriate professional referrals, and to identify areas of deficiency to correct through lifelong learning |
| 4 | Continually analyze the outcomes of patient treatment to improve patient care |
| 5 | Use the scientific literature and information management resources to provide evidence-based care |
| 6 | Community Health  
Assume a role in improving the oral health of individuals, families, and groups in the community through diagnosis, treatment and education |
| 7 | Communication  
Obtain appropriate informed consent from patients, parents or guardians |
| 8 | Communicate effectively with dental auxiliaries, dental laboratory technicians and other health care providers to ensure appropriate patient treatment |
| **II** | **Assessment and Diagnosis** |
| 9 | Examination of the Patient  
Perform an examination that collects biological, psychosocial, clinical, radiographic, and other diagnostic/consultative information required to evaluate the health, oral conditions, needs, and expectations of patients of all ages |
| 10 | Diagnosis  
Recognize, diagnose, and interpret normal and abnormal conditions of the orofacial complex, occlusal and temporomandibular disease and craniofacial growth and development that require monitoring, treatment or management. |
| 11 | Treatment Planning  
Develop, present and discuss individual sequenced treatment plans for patients of all ages consistent with the patient’s condition, interest, goals and capabilities |
### Clinical Operations: General Competencies for the New Dentist

<table>
<thead>
<tr>
<th>III</th>
<th>Establishment and Maintenance of a Healthy Oral Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td><strong>Disease Prevention and Health Promotion</strong>&lt;br&gt;Recognize that many oral diseases (dental caries, periodontal disease, oral cancer, for example) are preventable and that risk assessments are an important component of the maintenance of optimal oral health for patients of all ages.</td>
</tr>
<tr>
<td>13</td>
<td>Select, administer or prescribe pharmacological agents in the treatment of dental patients and manage complications arising from their use</td>
</tr>
<tr>
<td>14</td>
<td><strong>Management of Emergency Situations</strong>&lt;br&gt;Anticipate, diagnose, and provide initial treatment and follow-up management for medical emergencies that may occur during dental treatment</td>
</tr>
<tr>
<td>15</td>
<td>Recognize and manage dental emergencies to include acute pain, hemorrhage, trauma, and infection of the orofacial complex</td>
</tr>
<tr>
<td>16</td>
<td><strong>Control of Pain and Anxiety</strong>&lt;br&gt;Employ pharmacological agents and techniques to manage orofacial discomfort and psychological distress</td>
</tr>
<tr>
<td>17</td>
<td><strong>Periodontal Therapy</strong>&lt;br&gt;Diagnose, treatment plan, comprehensively treat, and maintain patients with periodontal disease in the primary, mixed, and permanent dentitions</td>
</tr>
<tr>
<td>18</td>
<td><strong>Endodontics Therapy</strong>&lt;br&gt;Diagnose and treat diseases of pulpal and periradicular origin in the primary, mixed, and permanent dentitions</td>
</tr>
<tr>
<td>19</td>
<td><strong>Surgical Therapy</strong>&lt;br&gt;Diagnose and treat conditions requiring reparative surgical procedures on the hard and oral soft tissues</td>
</tr>
<tr>
<td>20</td>
<td><strong>Restorative/Prosthodontic Therapy</strong>&lt;br&gt;Provide single or multiple tooth restorations, with appropriate fixed or removable techniques, to restore anatomic form, function, and esthetics to patients of all ages</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IV</th>
<th>Practice Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td><strong>Establishing a Practice</strong>&lt;br&gt;Understand the business and legal principles necessary for the assessment, development and management of a dental practice</td>
</tr>
<tr>
<td>22</td>
<td>Understand regulatory agency requirements for dental practices such as infection control and environment safety programs</td>
</tr>
</tbody>
</table>
## SECTION III — DIVISION CLINICAL EDUCATION EXPERIENCE

### COMPREHENSIVE PATIENT CARE COURSES

#### STUDENT EVALUATION

Dental students at the University Of Colorado School Of Dental Medicine will be enrolled in Comprehensive Patient Care courses beginning with the summer semester of the DS-II year, and continuing through the spring semester of the DS-IV year. The course numbers and scheduled semesters are as follows:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Scheduled Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSRE 6615</td>
<td>Comprehensive Patient Care Clinic &quot;A&quot;</td>
<td>DS-II Summer</td>
</tr>
<tr>
<td>DSRE 7717</td>
<td>Comprehensive Patient Care Clinic &quot;B&quot;</td>
<td>DS-III Fall</td>
</tr>
<tr>
<td>DSRE 7719</td>
<td>Comprehensive Patient Care Clinic &quot;C&quot;</td>
<td>DS-III Spring</td>
</tr>
<tr>
<td>DSRE 7721</td>
<td>Comprehensive Patient Care Clinic &quot;D&quot;</td>
<td>DS-III Summer</td>
</tr>
<tr>
<td>DSRE 8817</td>
<td>Comprehensive Patient Care Clinic &quot;E&quot;</td>
<td>DS-IV Fall</td>
</tr>
<tr>
<td>DSRE 8827</td>
<td>Comprehensive Patient Care Clinic.</td>
<td>DS-IV Spring</td>
</tr>
</tbody>
</table>

### COMPREHENSIVE PATIENT CARE PHILOSOPHY

A primary overall goal of the Comprehensive Care Program is to fulfill our school’s commitment to providing a clinical learning environment which is patient-centered rather than procedure-oriented, yet still provides students a sufficient number and breadth of clinical experiences.

*The most important expectation and responsibility of dental students in the Comprehensive Care Clinic is that they deliver, in a timely manner, the comprehensive dental treatment appropriate to each patient.*

Each individual patient’s oral health needs, personal preferences, and their social, economic, and emotional circumstances must be sensitively considered. It is expected that students attend all scheduled clinic sessions and provided ethical, high quality, patient-centered care in all circumstances.

### APPROPRIATE TREATMENT PLANNING AND CASE MANAGEMENT

Appropriate treatment of patients by students in the Comprehensive Care Clinic must include consideration of the following:

- thorough examination and diagnosis of each patient; to include accurately mounted diagnostic casts, and, when appropriate, diagnostic wax-up.
- formulation of appropriate comprehensive treatment plan, including appropriate preventive elements
- clearly communicated case presentation and treatment plan acceptance
- timely completion of each phase of treatment plan
- plan and execution of appropriate maintenance treatment plan
- patient financial management

### CLINIC ATTENDANCE

Students are expected to be present and to have patients appointed for all scheduled Comprehensive Care Clinic sessions (according to the student clinic schedules, published and distributed prior to the start of each semester).

### CLINIC STANDARDS AND POLICIES

Students are expected to be in compliance at all times with the standards and policies specified in the UCDSDM Clinical Education Manual and the UCDSDM Clinic Policy and Procedure Manual.

### CLINICAL PRIVILEGES

All students' must be granted clinical privileges in accordance with minimum criteria set forth in section 1-9 of the Policy and Procedure Manual.
Student should be aware that the clinical privileges may be temporarily or permanently suspended if the Comprehensive care faculty in consultation with the student performance committee determine that a patient's health or well being is being compromised by a student's treatment or lack of treatment. In addition, failure to comply with other Clinical and/or Honor code policies may result in clinical privilege suspension.

PRACTICE AND PATIENT MANAGEMENT
All students will be scheduled for regular individual Practice and Patient Management Meetings (“Advocate Meetings”) with their Comprehensive Care Group Leader. At these meetings, feedback will be provided to students relative to their individual progress in the Comprehensive Care Clinic. These meetings also provide a forum for one-on-one discussion of practice and patient management issues.

TEAM MEETINGS
Regularly scheduled meetings are held for the comprehensive care teams to meet with the faculty team leader. These meetings allow for seminar experiences in treatment planning, patient pool management, and any other clinical topic the team members and faculty elect to pursue.

RECOMMENDED CORE EXPERIENCES
“Recommended Core Experiences” have been established by each specialty discipline. It is expected that if a student manages all assigned patients in an appropriate and efficient manner, the Recommended Core Experiences should be achieved in the course of comprehensive treatment of these patients.

It is important to note that the “Recommended Core Experiences” are recommendations, not requirements or quotas. On the basis of each student’s demonstrated clinical performance, faculty may recommend that the number and/or distribution of Core Experiences be modified to meet an individual student’s educational needs. Comprehensive Care Group Leaders will work with students on an ongoing basis to assure that the assigned patient pool provides an adequate mix of experiences to satisfy the clinical experience needs of each individual student.

COMPETENCY EXAMINATIONS
Competency Examinations have been established by each specialty discipline. The procedures, timing, prerequisites, and other details of these Competency Examinations are specified by the individual specialty divisions. Students must successfully complete all Competency Examinations in the specified timeframe. Those students who fail to successfully complete all Competency Examinations in the specified timeframe are considered not to be “on track” to complete the Comprehensive Patient Care Clinic Curriculum in a timely manner which may result in the inability to participate in ACTS rotations, or the suspension of ACTS rotation privileges.

STUDENT PROGRESS IN THE COMPREHENSIVE CARE CLINIC
The School of Dental Medicine Student Performance Committee reviews the progress of students in the Comprehensive Care Clinic on a regular basis. The membership of this committee includes all Comprehensive Care Group Leaders and faculty representatives from each specialty division. Each semester, each student will receive written feedback from the Student Performance Committee regarding her/his progress in the Comprehensive Care Clinic.

The following factors will be considered by the Student Performance Committee in formulating the feedback for each student:
• student’s demonstrated performance in delivering, in a timely manner, the comprehensive dental treatment appropriate to each assigned patient
• quantity, quality, and breadth of clinical experiences in all specialty division areas
• successful completion of all Competency Examinations in specified timeframe
PROMOTION TO THE FULL-TIME ACTS PROGRAM
It is expected that dental students will complete the Comprehensive Patient Care Clinic Curriculum and concurrently participate in selected ACTS experiences beginning summer semester of the DS III year. Full-time ACTS participation begins early in the spring semester of the DS IV year. In order to be promoted from the Comprehensive Care Program to the full-time ACTS Program, a student must have successfully completed all Competency Examinations and be recommended for promotion to the ACTS Program by the Comprehensive Care Group Leader and by all division heads.

GRADING CRITERIA
The Semester Grade in these Comprehensive Patient Care Clinic courses will be based on the following criteria:
- Time management
- Independence, Critical Thinking
- Timing of Treatment
- Ethics and professionalism
- Clinical Skills
- Progress in completing division competencies and recommended core experiences

CLINICAL ENDODONTICS
The School of Dental Medicine has a stated clinical competency for endodontics. This is the Division of Endodontic's desired outcomes for you.

COMPETENCY STATEMENT FOR ENDODONTICS:
#18 Endodontic Therapy
Diagnose and treat diseases of pulpal and periradicular origin in the primary, mixed, and permanent dentitions

Specific goals leading to competency for statement #18:
- Be able to interpret patient signs and symptoms that lead to a pulp and periapical diagnosis
- Understand how to prevent and manage pulpal disorders through the performance of indirect and direct pulp therapy.
- Understand evaluation of clinical success and how to arrive at a diagnosis, prognosis, and alternative plans of treatment when healing has not occurred.
- Recognize complicated endodontic situations and develop a sense of practice limitation leading to an understanding of when patients should be referred.
- Be able to manage pulpal and periradicular disorders of traumatic origin.
- Understanding treatment of the young permanent tooth and the immature apex.
- Discuss the indications and procedures for surgical endodontics.
- Recognize and describe the bleaching of endodontically treated teeth.

CLINICAL EVALUATION AND GRADING
Student cases are evaluated at the time of treatment and graded (A - F) upon review of case documentation and radiographs.

Appropriate patient care, professionalism and treatment outcomes are complex issues. The following issues may be discussed and evaluated during clinical patient care:
- appropriateness of care
- standard of care
- technical competence
- critical thinking
- clinical judgment
- ethical decision making
- the need for additional experiences
- student strengths and weaknesses
- limitation of abilities and the need to network with specialists if appropriate
- review of endodontic recall radiographs
- professionalism
EVALUATION:
Students are expected to critically evaluate their own daily performance during and at the conclusion of each patient contact appointment. This is enabled through mentoring and questioning by Division faculty. Faculty complete their evaluation of student performance through direct feedback to the student at the time of treatment and by completing the Division’s daily teaching log. The teaching log is used to establish patterns of behavior and to have written documentation concerning patient care issues that may require additional follow-up.

GRADING:
Students are graded on individual procedures after all case documentation has been completed and turned into the Division of Endodontics. Case documentation consists of the yellow copy of Endodontic form 5C together with the case radiographs. Digital radiographs should be printed on one sheet of photographic paper and attached to the yellow Form 5C. These completed cases are then placed in the case completion box located in the endodontic clinic. Instructions for printing radiographs and for turning in completed endodontic cases are posted in the 2nd floor endodontic clinic. Grades are assigned according to the following scale:

A. Outstanding: procedures accomplished correctly in a timely manner with little or no instructor changes or assistance.
B. Above Average: procedures accomplished correctly with only minor changes necessary or with minor instructor assistance.
C. Average: procedures accomplished correctly with several changes and with significant instructor assistance.
D. Unacceptable: procedures accomplished correctly only with significant instructor assistance. Procedure not accomplished correctly. Procedures not accomplished in a timely manner. Student has significant lack of conceptual knowledge of procedure. Student is unprepared to begin treatment.
F. Unacceptable: Procedures not accomplished correctly resulting in a treatment compromise. Student demonstrates fundamental lack of understanding or significant technical problems.

FINAL DETERMINATION OF COMPETENCY OR NEED FOR REMEDIATION

SIMULATED COMPETENCY EXAMINATION
A simulated examination is one method of evaluating student competency. In addition to specific evaluation and grading as discussed above, this competency examination is an opportunity for the student to demonstrate an independent grasp of treatment concepts and skills. The simulation examination has been profiled with the CRDTS and WREB regional board examinations. Detailed instructions for the examination are given during the fall term of your 4th year. Evaluation criteria are specified in the Endodontic Preclinical Manual.

If the faculty find that competency has not been achieved then remediation will be required. This may take the form of additional reading, competency examinations, and additional patient care. Remediation is constructed on an individual basis and is directed toward improving areas of perceived weakness.

COMPETENCY STATEMENT FOR DENTAL EMERGENCIES
#18 Recognize and manage dental emergencies to include acute pain, hemorrhage, trauma, and infection of the orofacial complex.

- Definitions / clarification
- Understand control of pain and anxiety, clinical pharmacology, and management of related problems.
- Understand when complicated dental emergencies should be referred for follow-up care.
- Develop confidence, respect and trust in patient relationships.
- Gain experience in using drug reference sources.
**CLINICAL EVALUATION AND GRADING**
Student's overall performance during rotation through the dental emergency clinic is evaluated and documented in the teaching log. Factors considered are organization and clarity of thought process, clinical problem solving, critical thinking and patient management. Data gathering, medical history and appropriate referrals are also considered.

The overall clinical experience is pass/fail.

**FINAL DETERMINATION OF COMPETENCY OR NEED FOR REMEDIATION**

**PORTFOLIO PRESENTATION**
A Portfolio presentation is a method of evaluating student progress towards competency. In addition to specific evaluations and grading as discussed above, this portfolio review is an opportunity for the student to demonstrate a global grasp of treatment concepts and skills. Prior to being releasing into the ACTS program, the student must present past or present cases to discuss patient diagnosis, achievement of technical skills in endodontics, and treatment outcomes.

Appropriate patient care, professionalism and treatment outcomes are complex issues. The following issues may be explored during the portfolio presentation:
- appropriateness of care
- standard of care
- technical competence
- critical thinking
- clinical judgement
- ethical decision making
- the need for additional experiences
- student strengths and weaknesses
- limitation of abilities and the need to network with specialists if appropriate
- review of endodontic recall radiographs
- professionalism

If the student or faculty find that competency has not yet been achieved then additional exercises will be assigned. These may take the form of additional reading, OSCEs (Objective Simulation Clinical Experiences), and additional patient care.

**CLINICAL PROSTHODONTICS**
The Division of Prosthodontics within the Department of Restorative Dentistry is comprised of three disciplines: Fixed Prosthodontics, Removable Prosthodontics, and Implant prosthodontics. The clinical experiences are discussed for each discipline, separately. For all disciplines, it is necessary to realize that completion of the core experiences are essential and credit is awarded after evaluation forms have been received demonstrating clinical completion of a treatment. As with any patient care, the paperwork (grade slips) must be turned in for proper credit. If the documentation has not been received in a timely manner, this could result in loss of credit for the treatment or clinical activity.

General Information: The student is expected to utilize the techniques and instrumentation taught in the preclinical prosthodontic courses including fixed, removable complete and removable partial prosthodontics, as well as implant prosthodontics. Also note the credit received for diagnostic wax-ups, mountings, and occlusal splints are awarded in the Prosthodontics division. The principles taught in the Division of Occlusion are supported for clinical credit.

It is imperative for efficient delivery of patient care that the student doctor has all instruments available prior to treating patients in the clinic. The student doctor is expected to plan ahead for the clinical procedure and have all necessary support procedures completed PRIOR to seating the patient. A well-organized dental treatment operatory is essential for professional delivery of care and to gain the patient’s confidence in your abilities.
Patient Selection
When screening new patients for clinical care within the School of Dentistry, be cognizant of the needs of the patient but also remember that some patients may require a level of care that cannot be provided by dental students. During the screening process patients may be rejected due to overly complex fixed prosthodontic needs. These may include, but are not limited to: Patients that need more than 6-8 units of Fixed Prosthodontic treatment, a change in vertical dimension, significant change in occlusal plan, and/or significant existing fixed restorations that require replacement. Each patient is evaluated on an individual basis and although may be denied for definitive Phase II treatment, may be eligible to have treatment completed through Phase I.

Clinical Fixed Prosthodontics Courses
The following list contains courses for successful completion for graduation. Credit and grades will be awarded only when the work is completed.

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSFD 7755</td>
<td>Clinical Fixed Prosthodontics DSFD 7755</td>
</tr>
<tr>
<td>DSFD 7757</td>
<td>DS-III Competency</td>
</tr>
<tr>
<td>DSFD 8855</td>
<td>Clinical Fixed Prosthodontics DSFD 8855</td>
</tr>
<tr>
<td>DSFD 7759</td>
<td>DS-IV Competency</td>
</tr>
</tbody>
</table>

Clinical Core Experiences
The following lists the Core Experiences expected during direct patient care. Certain experiences should be completed by the end of your Spring Semester of the DS-III year to achieve “Level 5” status. This also includes completion of the DS III Competency. Failure to achieve this level of clinical activity may have negative consequences on the cumulative grade received for the semester.

Some of the “Core Experiences” listed refer to the philosophies and methodology taught in the Division of Occlusion. This includes consultation with Division faculty on patients requiring irreversible changes necessary for equilibration of a patient’s natural dentition, fabrication of a heat processed occlusal splint, or other occlusal therapy.

<table>
<thead>
<tr>
<th>DISCIPLINE</th>
<th>CORE EXPERIENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIXED PROSTHODONTICS</td>
<td>Diagnostic casts &amp; records</td>
</tr>
<tr>
<td></td>
<td>Diagnostic work-up</td>
</tr>
<tr>
<td></td>
<td>Equilibration</td>
</tr>
<tr>
<td></td>
<td>Occlusal splint therapy</td>
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<tr>
<td></td>
<td>Full coverage restorations</td>
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<tr>
<td></td>
<td>Restoration of endodontically treated teeth: intracanal</td>
</tr>
<tr>
<td></td>
<td>Posterior experiences: fixed partial denture AND single units</td>
</tr>
<tr>
<td></td>
<td>Anterior experience – fixed partial denture and/or multiple single units</td>
</tr>
<tr>
<td></td>
<td>Anterior porcelain veneers</td>
</tr>
</tbody>
</table>

Clinical Fixed Prosthodontics Competency: Do not challenge a competency on your first fixed prosthodontic clinical experience. The threshold experiences needed to challenge the clinical competency minimum of 4 single units, prior to attempting the first clinical competency. You will need to obtain the Fixed Competency Form and have the Comprehensive Care Leader approval to verify completion of the appropriate number of units prior to challenging either of the Fixed Competencies.

DS-III Competency: Single Unit Restoration
This competency consists of direct patient treatment restoring a posterior full coverage restoration, whether the restoration consists of a porcelain-fused-to-metal restoration or a complete coverage gold restoration. The competency will be performed during normally scheduled clinic coverage on one of the student’s patients of record. All clinical work must be completed by the student without professional guidance. If during the procedure, the cov-
An evaluation of a minimum of 3.0 or better is considered to be a passing grade. If the examination does not meet the criteria, the crown is completed to the satisfaction of the assigned instructor and credit for a single unit is awarded with a maximum grade of 2.0. In case the examination is not successfully passed by the last day of the Fall DS4 Semester, a grade of “IP” is assigned until the competency is completed.

Carefully review the separate DS-III Fixed Competency Clinical Form for appropriate patient selection. Also details about this competency are explained in detail including the multi-part evaluation of the preparation, impression, and indirect temporization.

**DS-IV Competency: Multi-Unit Restoration**
This competency consists of direct patient treatment requiring restoration of multiple units to include the diagnostic mounting, diagnostic wax-up, diagnostic preparations, treatment plan, and execution of a multi-unit restoration, either an FPD or adjacent crowns, or opposing crowns. The case presentation of diagnostic work-up will occur prior to the actual patient appointment when an instructor will be assigned to cover the direct patient care. The competency will be performed during normally scheduled clinic coverage on one of the student’s patients of record. **All clinical work must be completed by the student without professional guidance.** If during the procedure, the covering faculty member deems it necessary to intervene in the patient’s best interest, the procedure will not be allowed to serve as a competency but can be used as one of the recommended clinical experiences.

**CLINICAL REMOVABLE PROSTHODONTICS**

**General Information**
Clinical removable Prosthodontics consists of the following courses:
- DSRP 6655
- DSRP 7759
- DSRP 8865
- DSRP 7755
- DSRP 8855

Each course proceeds in a progressive manner, meaning advancement of skills and knowledge cumulative in the dental curriculum by year.

The Division of Removable Prosthodontics observes all of the general clinical policies as written in the Dental Clinical Educational Manual Distributed by the Office of Clinical Affairs. This includes areas of dress code, clinical utilization, asepsis and sterilization, ethical behavior, patient management, patient abandonment, etc.

The student is expected to utilize the techniques and instrumentation taught in the preclinical removable complete and partial denture courses. It is imperative for efficient delivery of patient care that the student doctor has all instruments available prior to treating patients in the clinic. The student doctor is expected to plan ahead for the clinical procedure and have necessary lab procedures completed **PRIOR** to seating the patient. A well-organized dental treatment operatory is essential for professional delivery of care and to gain the patient’s confidence in your abilities!

**Evaluation Criteria**
All clinical procedures will be evaluated for technical accomplishment, patient and procedural considerations, and clinical judgment by the student doctor. Student doctors will usually receive immediate feedback on clinical procedures both during and after the procedure. Some modifications may be required to allow smooth progress through the many clinical procedures required in removable prosthodontics.

If a procedure is evaluated as clinically unacceptable, the faculty member may request the student doctor to reappoint the patient or make necessary corrections prior to further clinical treatment. The faculty member may also intervene to prevent poor clinical treatment.
**Patient Selection**

Clinical Removable Prosthodontics includes patient treatment for both edentulous and partially edentulous patients. These same patients may be candidates for implant prosthodontic treatment which may be offered as an option in your treatment planning phase of care. If the patient appears to be more complicated than initially believed from the screening appointment, seek the appropriate consultation from the divisional faculty prior to accepting the patient for dental treatment. Each patient is evaluated individually and may require care by a specialist, especially when referring to patients with Edentulism Classification III and IV levels. In this situation, the patient will not be accepted for care within the SODM, predoctoral clinic. The patients who are accepted for removable prosthodontic treatment may be elderly, medically compromised or physically challenged. In this situation, your efficiency and preparation makes each visit more comfortable when considering time management and physical demands made of the patient.

**Clinical Removable Prosthodontics Courses**

The following list contains courses needed for successful completion for graduation. Credit and grades will be awarded only when the work is completed. For removable prosthodontic care, work is completed after postinsertion appointments have been completed.

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSRP 7755</td>
<td>1.0</td>
</tr>
<tr>
<td>DSRP 8855</td>
<td>2.5</td>
</tr>
</tbody>
</table>

**DISCIPLINE**

**REMOVABLE PROSTHODONTICS**

**CORE EXPERIENCES**

- Diagnostic work-up
- Diagnostic casts and records
- Tissue Conditioning
- Interim Prosthesis
- Complete dentures
- Immediate dentures
- Overdentures
- Removable Partial Dentures
- Combination of Edentulous & Partially Edentulous Pt.
- Prosthesis Repair

**Clinical Removable Prosthodontics Competency**

The [CD Competency Forms](#) will be available through the Department of Restorative Dentistry. You may need to discuss if the patient selected is appropriate for the competency process. It may also be possible to proceed with both the DS-III Edentulous Patient competency and DS-IV Edentulous Patient competency using one patient. This possibility should be discussed with Division faculty. A minimum of four units of complete dentures must be completed prior to challenging a CD Competency and you must receive approval from the Comprehensive Care group leader.

The Edentulous Patient Competencies must be completed within the normal time sequence for fabrication of a complete denture. The competency will be performed during normally scheduled clinic coverage on one of the student’s patients of record. **All clinical work must be completed by the student without professional guidance.** If during the procedure, the covering faculty member deems it necessary to intervene in the patient’s best interest, the procedure will not be allowed to serve as a competency but can be used as one of the recommended clinical experiences. Carefully review the separate Competency Clinical form for appropriate patient selection, which also includes the details regarding the evaluation process. An evaluation of a minimum of **3.0 or better** is considered to be a **passing** grade. If the examination does not meet the criteria, the dentures are completed to the satisfaction of the assigned instructor and credit for normal procedures is awarded with a maximum grade of 2.0 on that clinical sequence.
DS-III Edentulous Patient (CD Comp I): The DS-III Edentulous Patient competency is a clinical evaluation comprised of two parts. The first part of Removable Competency I is designed to evaluate your skills in making preliminary impressions by reviewing your diagnostic casts and custom trays for an edentulous patient requiring maxillary and mandibular complete dentures. The second part will evaluate your ability in making final impressions by reviewing your final impressions and master casts.

DS-IV Edentulous Patient (CD Comp II): The DS-IV Edentulous Patient competency is a clinical evaluation of the insertion appointment for maxillary and mandibular complete dentures. This is designed to evaluate your skills in fitting and adjusting complete dentures and correcting the occlusion following a clinical remount procedure.

DS-IV Partially Edentulous Patient (RPD Comp): The DS-IV Partially Edentulous Patient competency is an assessment of your ability to survey and design a removable partial denture on diagnostic casts. The patient selected as a competency patient does not infer that both arches must be restored with a RPD; only one arch will be evaluated. The arch selected for this competency must not have been previously restored with a removable partial denture. All diagnostic work and survey & design ideas must be completed by the student without professional guidance. The color-code and design criteria taught in the preclinical course will be followed for this competency.

CLINICAL OPERATIVE DENTISTRY

STUDENT EVALUATION OF COMPETENCE
Dental Student Class of 2008

Caution: The following information is subject to change based on ongoing curriculum revision and modification discussions.

General Information:
Clinical Operative Dentistry consists of the following courses:

- DSOP: 6655 CLINICAL OPERATIVE DENTISTRY
- DSOP: 7755 CLINICAL OPERATIVE DENTISTRY
- DSOP: 7757 CLINICAL OPERATIVE DENTISTRY
- DSOP: 7759 CLINICAL OPERATIVE DENTISTRY
- DSOP: 8855 CLINICAL OPERATIVE DENTISTRY
- DSOP: 8857 CLINICAL OPERATIVE DENTISTRY

Each course corresponds to advancement in the dental curriculum by year.

Credits
A total of 5.0 credit hours are allowed for Clinical Operative Dentistry. These credits are distributed among each semester of the three courses based on a percent of the time expended. Credit is awarded upon successful completion of the course expectations during that semester.

Grades
The grades given in Operative Dentistry each semester are determined by a formula. Fifty percent of the final grade will be based on the clinical competency examinations for that semester; 30% of the grade will be based on the clinical operative dentistry activity occurring during each semester compared to a norm (an equal distribution of effort should be made); the final 20% of the grade will be based on subjective evaluation input from comprehensive care and other clinic faculty.

Evaluation Criteria
Daily clinical activity is evaluated. The criteria used are those established by the Comprehensive Care Program with modification by the Division of Operative Dentistry. The Operative Dentistry Clinical Competency Examinations use the criteria as established and used in the preclinical courses.
In order to be prepared to challenge the operative dentistry clinical competency examinations and to be competent and comfortable in operative dental practice, students must complete a reasonable number of operative dentistry activities similar to the operative dentistry competency examination they choose to challenge. For example, if a student wishes to challenge a class II amalgam preparation he/she should have successfully performed a reasonable number of acceptable class II amalgam preparations in the clinic before taking this examination.

Other
The Division of Operative Dentistry observes all of the general clinical policies as written in the Clinical Manual distributed by the Office of Clinical Affairs. This covers the areas of dress code, clinic utilization, asepsis and sterilization, honesty, patient management, patient abandonment, etc.

The student is required to utilize the techniques, materials and instrumentation taught in the pre clinical operative dentistry courses at all times. Faculty may wish to expose students to new materials and techniques; if done this must be under the direct supervision of the faculty member. It is essential the student have all necessary instruments available and in good condition while treating patients in the clinic. The student is also expected to plan ahead for each day’s procedure and must be able to obtain the necessary supplies to complete the procedure.

CLINICAL OPERATIVE DENTISTRY

CLINICAL ACTIVITIES AND EXPERIENCES
Acceptable operative dentistry clinical activities are designed to provide the student with a reasonable opportunity to learn the various methods of operative dentistry treatment of the dental patient and to develop competence in this subject. The acceptable activities are established to help a student become competent in operative dentistry but, by themselves do not determine a competent end point. The division of operative dentistry reserves the right to change the kinds and numbers of activities an individual student may need to perform in order to achieve clinical competence in operative dentistry. There is no serial listing of the kinds of operative dentistry activities a student must experience. However, a list of acceptable operative activities is available for review. This list is not exclusive.

It is advised that students seek a wide range of experiences in operative dentistry by performing multiple and varying activities. It is believed that the comprehensive care environment will provide that distribution. Students should treat their patients appropriately. Activities will be any service rendered to single teeth to prevent disease and its sequelae, and preserve or restore their health, form, and function; this service does not necessarily require cutting of the hard tissue. The distribution and quantity of activities, the quality of performance during the clinical operative session, subjective evaluation by comprehensive group leaders, and results of the Operative Dentistry Clinical Competency Examinations will be used to determine a student’s competency in this discipline. The student should spend a reasonable amount of their clinic time each semester performing operative dentistry activities. The goal is to perform operative dentistry activities on a regular basis to develop competence continuously and not to be overly weighted in operative dentistry in any one semester. This statement does not imply that the student is not able to perform more or less operative dentistry during each semester based on the needs of the patients. The table below is only a guideline of expenditure of clinic hours in operative dentistry.

<table>
<thead>
<tr>
<th>SUGGESTED EXPENDITURE OF OPERATIVE DENTISTRY CLINICAL HOURS*</th>
</tr>
</thead>
<tbody>
<tr>
<td>DS 2 Summer</td>
</tr>
<tr>
<td>DS 3 Fall</td>
</tr>
<tr>
<td>DS 3 Spring</td>
</tr>
<tr>
<td>DS 3 Summer</td>
</tr>
<tr>
<td>DS 4 Fall</td>
</tr>
<tr>
<td>DS 4 Spring</td>
</tr>
</tbody>
</table>

*By the end of the semester listed the student should have completed the indicated percent of operative dentistry clinical hours.
The Policy
The determination of clinical competency in operative dentistry is made, in part, by students’ participation in clinical competency examinations. Clinic Competency Examinations alone do not determine competence. Eight clinical competency examinations will be spaced at regular intervals throughout the students assigned clinical operative dentistry program. Each student will be responsible for completion of the listed competency examination(s) during each semester in which they are required (see Table 1). Students will also be expected to treat all of the operative dentistry needs of their assigned patients in a timely basis. Ethical patient care is paramount.

A student should not attempt an examination or a particular procedure from the Skill Level list until he/she believes they are ready to demonstrate that they are in fact competent in that particular procedure. The student should consult with their Group Leader to help assess their readiness to participate in these examinations. Please note that delay in taking any of these exams could delay the students’ completion of the clinical Operative Dentistry curriculum. Examinations not attempted during the required semester carry forward to the last semester where they will be taken only after consultation with the chair of the division of operative dentistry. There are no make-up or catch-up examinations allowed until the last semester (spring of fourth year).

Students are required to actively participate in 8 competency exams distributed throughout the clinical program as indicated in the Table 1 below. You must participate in all eight examinations.

<table>
<thead>
<tr>
<th>Semester</th>
<th>Exams Required</th>
<th>Skill Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>DS 3 - Fall</td>
<td>2+1*</td>
<td>1</td>
</tr>
<tr>
<td>DS 3 - Spring</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>DS 3 - Summer</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>DS 4 - Fall</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>DS 4 - Spring</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

*Includes two surgical caries management activities and one yearlong non-surgical caries management activity. See details below.

The skill level determines the allowable procedures that may be performed for the examinations during each semester. Students may choose procedures from the list in table 2 relative to their current clinic activities and skill level and subject to the conditions listed in table 3. The skill levels were established to prevent a student from challenging an especially complex restoration with too little clinical experience.
<table>
<thead>
<tr>
<th>Skill Level</th>
<th>Procedure Choices*</th>
</tr>
</thead>
</table>
| 1           | Class I Amalgam (simple pits excluded; new, non-restored carious lesion required)  
Class II Amalgam  
Class V Amalgam  
Class I Composite (simple pits excluded; new, non-restored carious lesion required)  
Class III Composite  
Class V Composite  
Non-surgical caries management |
| 2           | Class I Amalgam (simple pits excluded; carious lesion required)  
Class II Amalgam  
Class V Amalgam  
Complex restoration utilizing pins – Not a build-up or foundation for a crown.  
Class I Composite (simple pits excluded; new, non-restored carious lesion required)  
Class II Composite  
Class III Composite  
Class IV Composite  
Class V Composite  
Class V Glass Ionomer (must be a new, non-restored carious lesion) |
| 3           | Class II Amalgam  
Class V Amalgam  
Complex restoration utilizing pins – Not a build-up or foundation for a crown.  
Class II Composite  
Class III Composite  
Class IV Composite  
Class V Composite  
Class V Glass Ionomer (must be a new, non-restored carious lesion)  
Class II gold inlay  
Gold onlay |

*Unless stated otherwise (Table 3) procedures may replace existing defective restorations, which need total replacement.
Students must participate in no less than eight (8) competency examinations and the following 5 required procedures must be performed to receive a grade in Clinical Operative Dentistry courses.

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Number Required</th>
<th>Special Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-surgical caries management</td>
<td>1</td>
<td>Full documentation and yearlong effort required.</td>
</tr>
<tr>
<td>Class II Amalgam</td>
<td>1</td>
<td>None.</td>
</tr>
<tr>
<td>Class II Composite</td>
<td>1</td>
<td>Must be a new (unrestored) proximal carious lesion.</td>
</tr>
<tr>
<td>Class III Composite</td>
<td>2</td>
<td>One of which must be a new (unrestored) proximal carious lesion.</td>
</tr>
</tbody>
</table>

One class II and one class III examination restoration must be completed by the end of the Spring semester of the DS-3 year. Also, by the end of that semester, you must pass both of the required exam procedures and must pass a minimum of 3 of the first 4 exams (75%) in order to pass Clinical Operative Dentistry DSOP 6655, 7755 and, 7757 regardless of other competency evaluations. Failure to pass these examinations will result in a recommendation to the Student Performance Committee (SPC) that the student receive special enhancement sessions and/or repeat Clinical Operative Dentistry course(s).

During the Fall semester of the DS3 year a student is required to start a non-surgical caries management program on at least one patient (more than one is recommended). This program will include the assessment of risk, a plan of treatment, execution of treatment, and evidence of successful effort at controlling, preventing and reversing/remineralizing dental caries. This effort can take up to one year. Full documentation of the program must be supplied at the completion of the examination. Details of the examination will be distributed to students at the beginning of the Fall DS 3 semester.

The other required exam procedures must be completed by the due date (usually late April) of the Spring semester of the DS-4 year. Students must pass 3 of the 5 required exam procedures (including at least one Class II Amalgam and one Class III Composite) and must pass a minimum of 6 of the 8 exams (75%) in order to pass Clinical Operative Dentistry DSOP 7759, 8855 and 8857 regardless of other competency evaluations. Failure to pass these examinations will result in a recommendation to the Student Performance Committee that the student receive special enhancement sessions and/or repeat Clinical Operative Dentistry course(s).

A grade of “failure” occurs if you receive a score of 1.0 (on a 4.0 scale) or less for either the preparation or restoration portion of each examination. A score of 1.0 or less must be a consensus of both examiners. In all cases the results of both the preparation scores and restorations scores will be averaged to determine a score for calculating a semester grade. In all cases the entire procedure should be completed and graded by both instructors even if a portion is deemed a failure.

A procedure cannot be converted to an examination once it is started nor can an examination once started be converted back to a regular procedure without penalty. An examination, which is not completed in the same session it is started, will be recorded as a failure. Examinations can only be failed through errors, which are committed during the examination, if the procedure is not completed. An examination will not be recorded as a failure because of non-participation. But non-participation in all examinations will prevent the student from receiving a passing grade in clinical operative dentistry. Any examination not taken during a semester in which it was required will be recorded as incomplete and the requirement will carry forward to the last semester. A grade of incomplete will be reported for that semester.
The exams taken in the next semester will be applied to previously missed exams to fulfill those requirements. There will be no make-up sessions for any missed or excessive failed examinations without special permission. You cannot take more than the required number of exams for that semester. How missed exams are made up will be considered individually during the Spring Semester DS-4 year. All exams must be taken to fulfill operative dentistry requirements.

All exams will be performed at designated examination times during the semester. Specific dates and times of examinations and detailed instructions will be posted on the school’s web site. Faculty members assigned to the clinic during each session will serve as evaluators. Faculty have the right to assign a procedure as an examination anytime they choose during the examination “window”.

Your examination windows are (subject to change based on academic calendar):
- Fall 2006 . . . . . . . . . October 16 – December 15
- Spring 2007 . . . . . . . March 19 – May 11
- Fall 2007 . . . . . . . . . October 15 – December 14
- Spring 2008 . . . . . . . February 25 – April 25

ORAL DIAGNOSIS/ORAL MEDICINE CLINIC
STUDENT EVALUATION

Evaluation of students in the Oral Diagnosis Clinic is designed to assess clinical competency of students as the student performs diagnostic and treatment planning procedures. Evaluative procedures also provide oral and written feedback to students.

It is expected that students will be competent to:
A) Identify the chief complaint or stated reason for the patient's visit.
B) Obtain and interpret a thorough medical history, social history, review of systems and dental history.
C) Conduct an appropriate clinical and radiographic examination.
D) Distinguish between oral/facial hard and soft tissue abnormalities and normal anatomy.
E) Order and interpret appropriate clinical laboratory and other diagnostic tests.
F) Interpret findings from the history, clinical and radiographic examinations to identify the etiology and pathogenesis of disease, establish a diagnosis, identify problems requiring treatment, and to formulate a treatment plan.
G) Recognize and understand the pathophysiology of systemic disease and potential influences upon oral health.
H) Initiate an appropriate written medical consultation or referral.
I) Evaluate the database, develop a comprehensive appropriately sequenced plan of treatment.
J) Recognize when it is necessary to refer the patient for further treatment and coordinate care provided by other health care providers.

Students are evaluated in the following distinct areas:
- Medical and Dental History Collection
- Oral-Facial Assessment
- Diagnostic Summary
- Treatment Planning
- Professionalism and Patient Management
- Adherence to Infection Control Standards and Protocols

Within each of the categories listed above, a student may be assigned a grade between of:
- Honors
- Clinically Acceptable
- Standard Not Met
Additionally, clinical competency in specific diagnostic areas (head and neck examination, recognition of oral lesions, assessment of patient’s medical history) will be assessed using oral diagnosis and oral medicine competency examinations. Competency examinations will be pass/fail and must be scheduled with Dr. John McDowell.

**ORAL DIAGNOSIS/ORAL MEDICINE**
**CLINICAL EXPERIENCES/REQUIREMENTS**

There is an expectation that the student will complete approximately 20 full diagnostic workups. The student will likely have among the 20 cases, some simple, some moderate, and some complex cases. Students will be assigned credit based upon the complexity of the patient, using the following system:

Complex Patient Workup = .50 credits
Moderate Patient Workup = .20 credits
Simple Patient Workup = .30 credits
Transfer Patient Workup = .10 credits

It is projected that the student will earn a minimum of 3.5 clinical credits in the Oral Diagnosis Clinic.

**ORAL DIAGNOSIS/ORAL MEDICINE**
**CLINICAL COMPETENCY EXAMINATION SCHEDULE**

1. One oral diagnosis competency examination must be scheduled in the Spring or Summer semesters of the junior (third) dental student year, with Dr. McDowell.
   • The examination will require the student to present a patient data base collection, interpretation of physical findings and results of tests and consultations requested. The student will then develop diagnoses, formulate a problem list and present primary and alternate treatment plans for the complex patient. This process will assist in the assessment of student competency as the student performs (unassisted by faculty) the diagnosis and treatment planning process. Each case must be sufficiently medically and dentally complex (ASA II or III) to qualify for the competency examination. Prior to beginning the competency examination, the specific case must be pre-approved by Dr. McDowell.

2. One oral medicine competency examination must be successfully completed prior to entering the ACTS rotation.
   • This examination requires approximately 1.5 hours and must be scheduled with Dr. McDowell. The oral medicine competency consists of a standardized patient using actual histories, photographic slides and, when necessary, results of laboratory tests ordered by the student. Although more than one student may sit for the examination during a scheduled session, students are encouraged to schedule the examination individually to maximize the feedback on student performance.
   • Since the oral medicine competency examination is based on standardized patients, the student does not need to schedule a patient for this competency examination.

**STUDENT EVALUATION**

**Clinical Evaluation of the Patient:** The student will be evaluated in his/her ability to gather, interpret and present the physical and medical findings that the patient presents. Included in this will be a knowledge of drugs or medications that the patient may be taking.

**Radiographic Evaluation:** The student will be evaluated on his/her interpretation of the radiograph. This would include evaluation of difficulty of extraction, pathology involved, identification of landmarks and possible compromises that might be considered in treatment.

**Treatment Planning Presentation:** The student will be evaluated with regards to presenting a logical treatment plan from the information gathered. Also included will be consideration of possible sequela that might be expected, and any suggestions as to consultation or the need for additional data.
Anesthesia: The student will be evaluated with respect to identification and anatomic landmarks, technique, knowledge of the anesthetic agent, and evaluation of effectiveness of anesthesia.

Venipuncture Technique: The student will be evaluated on his/her technique and placement of any venipuncture and knowledge of the procedures, e.g. of establishing intravenous infusion for sedation; student must be knowledgeable of the drugs that may be administered. If drawing blood for diagnostic tests, the student must be knowledgeable of normal values for each test ordered.

N2O Analgesia: The student will be evaluated on his/her knowledge of the agents being administered, his/her ability to administer and monitor the administration, and to monitor the patient.

Instrumentation Proper Selection and Use: This will include the proper selection of elevator and forceps and their use without undue trauma to adjacent teeth or soft tissue. The student will be evaluated on proper and sufficient mobilization and removal of the tooth or root.

Flap Design: The student will be evaluated on the proposed flap design, keeping in mind anatomical landmarks and morphological considerations, e.g. mental foramen and fenestration over canine eminence.

Management of Soft Tissue: The student will be evaluated on any undue trauma to soft tissue, either with a simple extraction or a flap procedure.

Osseous Management: The student will be evaluated on the proper treatment of any bone fragment in a flap procedure, presence of any bony spicules, proper treatment of alveoplasty or removal of tori.

Suturing Technique: The student will be evaluated on his/her knowledge of suturing technique, materials and where used.

Biopsy Technique: The student will be evaluated on the proposed site of incision, the type of biopsy indicated, and the clinical technique to accomplish the task.

Treatment of Odontogenic Abscess: The student will be evaluated on the treatment and management of a patient presenting with an odontogenic abscess. This may include intra-oral incision and drainage, culture and sensitivity, and antimicrobial therapy.

Patient Management: The student will be evaluated on the ability to manage the patient in an oral surgery environment, to perform the required treatment without undue stress to the patient.

Sterile Technique: Gloves, mask and hair cover will be worn in the surgical suites. It will be expected that the student adhere to sterile technique while performing surgical operations.

Post Operative Management: The student will be evaluated on his/her ability to assess the healing process and provide interceptive measures if necessary.

ORAL SURGERY
CLINICAL EXPERIENCES/REQUIREMENTS

The following clinical requirements have been formulated based on the tabulation of procedures performed by previous classes. The number of patients, however, does vary and certain procedures may not always be available.

It will behoove each student to attempt to schedule oral surgery needed by his or her comprehensive care patients during the student's rotation through the Sands House Clinic so that he or she can perform the procedures.
Requirements
Simple tooth removal. ................. 80
Surgical tooth removal .................. 6
Alveoploplasty ......................... 6
(four or more teeth in a row, isolated
hypererupted teeth, or tuberosity
reduction)
Removal of impacted third molars .... 2
Intravenous administration (participate) . 2
N2O administration (perform) .......... 4
Biopsy .................................... 2
Operating Room (experience) ........ 1

NOTE: Refer to Oral Surgery Clinical Syllabus for Clinic Objectives, Patient Management and Rules and
Regulations.

UNIVERSITY OF COLORADO DENVER SCHOOL OF DENTAL MEDICINE
DIVISION OF ORAL AND MAXILLOFACIAL SURGERY
DENTOALVEOLAR COMPETENCY

Goal
The goal of these assessments is to establish that the student is capable of independent management of routine den-
toalveolar surgery and is familiar with methods of parental anesthesia.

Objectives
Pre-operative. Be able to assess the patient’s potential to undergo procedure. Be able to establish ASA classification
and justify. Be able to vocally present patient in coherent professional manner.

Pain and Anxiety. Be able to perform required local anesthesia technique for the chosen tooth/area and be able to
describe anesthetic techniques for other areas on request.

Surgical Skill. Appropriately manage technical aspects of surgery (See Score Sheet).

Management. Be able to manage and/or prevent complications and emergencies.

Post-operative. Be able to provide post-operative instructions, medications and record keeping.

Procedures to Be Assessed
Closed forceps and elevator extraction (2)
Surgical removal of tooth with flap, bone removal, sectioning (1)
Multiple extractions with alveoplasty (1)

Procedures to Be Experienced
Nitrous oxide cases (4)
IV sedation involvement (1)
General anesthesia observed (1)

Instructions
Competency assessment may be performed by any faculty on any clinic day.
Assessment sheet to be turned in to Dr. Savage.
1. Pre-operative
   _____ Data gathering
   _____ Radiograph suitability, data interpretation and treatment planning
   _____ Medical history evaluation and identification, and consideration of potential medical emergencies.
   Technical evaluation, choice of technique and consideration of potential surgical complications.
   _____ Patient preparation
       Draping
       Positioning
       Chair placed in suitable position to facilitate operator access, vision, leverage and comfort, insuring patient ease, while in operator standing position.
   _____ Consent/chart note regarding informing patient

2. Pain and Anxiety Control
   _____ Selection of local anesthetic technique/block/etc.
   _____ Administration of local anesthesia, following good aseptic technique
   _____ Evaluation of efficacy of local anesthesia pre-operatively
       Management of local anesthesia reinforcement, if necessary
       Management of complications, if any
       Maintenance of operator/patient rapport to decrease anxiety
   _____ Conscious sedation (if done)

3. Surgical Skill
   _____ Instrument selection and application
       Elevators
       Forceps
       Jaw and alveolus support
       Pharyngeal drape
   _____ Management of soft tissue during forceps/elevator extraction
   _____ Debridement
   _____ Management of changes in treatment plan due to unforeseen events: e.g. fractured crown, fractured root, excessive bleeding, alveolar complications, etc.
   _____ Surgical technique
       Flap design and formation
       Bone removal and tooth sectioning
       Suturing and homeostasis

4. Post-operative Management
   _____ Post-operative instructions
   _____ Prescription writing
   _____ Drug selection
   _____ Charting
5. **Aseptic Technique**

- Pre-operative
  - Handling of radiographs, chart, other papers
- Peri-operative
- Auxiliary Utilization

**Notes:**
1) Assessor: ( ) Check areas passed, for areas deficient and N/A as appropriate.

2) Score overall assessment as
   - 90-100 Excellent
   - 80-89 Good
   - 70-79 Pass
   - Below 70 Fail and Re-accomplish

3) Failing Score will be eliminated from record upon achieving passing score.

4) Two failures are any one competency will require remedial study. The content will be determined by a full-time OMS staff before another attempt.

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**Clinical Orthodontics**

**School of Dental Medicine**

**University of Colorado Denver**

1. Overview of clinical orthodontic program for the pre-doctoral dental student
   A. The pre-doctoral clinical orthodontic experience is a 20 hour clerkship within the Department of Orthodontics in the Graduate Orthodontic Clinic to support clinically the didactic course material previously covered in Orthodontic Courses 1, 2, and 3 (laboratory).
      1) Clerkship rotation occurs during the spring of year 3 or the summer between the 3rd and 4th year
      2) 8 – 10 pre-doctoral students are assigned each week to the Orthodontic Clerkship
         a) The best learning experience results from 20 hours within the same week
      3) Pre-doctoral students are assigned to a 2nd year orthodontic resident and to a clinical group
         a) Assignment to the same resident/group assures continuity
         b) The resident must assure the requirements are met
         c) All requirements must occur under full-time faculty supervision
         d) The resident is required to meet the requirements of the pre-doctoral student either personally or if he/she does not have the clinical opportunities, by placing the pre-doctoral student with residents in his/her group that have the appropriate on-going clinical procedure
   4) Requirements
      a) 20 hours of attendance
      b) Assist resident in the making of orthodontic records
      c) Assist the resident in routine orthodontic appointments, including the removal and placement of arch wire ligation
      d) Discussion on each patient seen clinically the treatment plan and progress
      e) Attendance and participation in a minimum of 2.5 hours of Friday Treatment Planning Conference to include a written Treatment Plan and Evaluation on each patient presented with the assistance of the assigned resident
5) Evaluation
   a) Pre-doctoral student evaluation is based on:
      (1) Attendance
      (2) Clinical participation
      (3) Written Treatment Plan and Evaluation worksheets
      (4) Written summary and clerkship evaluation by the student
      (5) Grading is performed by the Pre-Doctoral Orthodontic Faculty Coordinator after reviewing the above
   b) Post-doctoral resident evaluation is based on:
      (1) Direction and teaching provided to the pre-doctoral student
      (2) Extent of clinical involvement of the pre-doctoral student
      (3) Quality of the written Treatment Plan and Evaluation worksheet
      (4) Pre-doctoral student evaluation of the clerkship experience
      (5) Grading is done by the Pre-Doctoral Orthodontic Faculty Coordinator after reviewing the above

6) Honors Clerkship
   a) Additional hours of Orthodontic Clerkship are allowed for students interested in pursuing additional orthodontic experiences
   b) Pre-doctoral students must meet the following criteria:
      (1) Have met or exceeded their pre-doctoral clinical and didactic requirements
      (2) Have performed at a grade of B or higher in all orthodontic didactic and laboratory courses
      (3) Have a high interest in the specialty of orthodontics

2. Goals of the clerkship
   A. Provide clinical experience in the examination and diagnostic work up of orthodontic patients through both clinical exposure to ongoing orthodontic patients and participation in the Orthodontic Treatment Planning Presentations by orthodontic residents to clinically support the management of the orthodontic patients in a general practice
   1) Supports School of Dental Medicine Competency Statements 9, 10 and 11
      a) Statement 9: Examination of the Patient – Perform an examination that collects biological, psychosocial, clinical, radiographic, and other diagnostic/consultative information required to evaluate the health, oral conditions, needs, and expectations of patients of all ages.
      b) Statement 10: Diagnosis – Recognize, diagnose, and interpret normal and abnormal conditions of the orofacial complex, occlusal and temporomandibular disease and craniofacial growth and development that require monitoring, treatment or management.
      c) Statement 11: Treatment Planning – Develop, present and discuss individual sequenced treatment plans for patients of all ages consistent with the patient’s condition, interest, goals and capabilities.
   B. Provide clinical experience and familiarity with fixed orthodontic appliances to provide sufficient knowledge and skills to manage simple orthodontic emergencies and provide disease prevention care to the patient undergoing orthodontic treatment
   1) Supports School of Dental Medicine Competency Statements 12 and 15.
      a) Statement 12: Disease Prevention and Health Promotion – Recognize that many oral diseased (dental caries, periodontal disease, oral cancer, for example) are preventable and that risk assessments are an important component of the maintenance of optimal oral health for patients of all ages.
      b) Statement 15: Recognize and manage dental emergencies to include acute pain, hemorrhage, trauma, and infection of the orofacial complex.

DIVISION OF PEDIATRIC DENTISTRY
STUDENT EVALUATION

1. Student preparation prior to a scheduled pediatric dental block appointment is critical for success. Students will work in pairs but alternate the roles of dentist and assistant. The student acting as the operator must review the child’s UCDSDM clinic chart before the appointment to determine and prepare for the next scheduled procedure. The student acting as the assistant should arrange for procuring all necessary instruments, material, and preparing the assigned dental unit.
A computer-generated treatment plan with the planned procedure should be produced before the beginning of the appointment.

Students should review necessary information in textbooks, course material handouts, and in discussion with pediatric dental faculty BEFORE beginning a procedure in order to maximally prepare themselves for the appointment.

**FAILURE TO BE ADEQUATELY PREPARED WILL RESULT IN THE STUDENT’S GRADE BEING SIGNIFICANTLY REDUCED AND/OR THE PATIENT BEING DISMISSED WITH THE STUDENT NOT ALLOWED TO BEGIN TREATMENT.**

2. Pediatric dentistry is comprehensive in nature and may consist of one or several of many possible procedures in diagnostic, preventive, operative, surgical, or other areas of dentistry. Besides the many possible procedures themselves, pediatric dentistry is heavily oriented towards successful patient management. Expeditious completion of quality dentistry is always the goal and students must remember to continually incorporate fundamental principles of pediatric behavior management (tell-show-do, reminders of rules, positive reinforcement, etc.) Thus, a grade is a collective appraisal of the **WHOLE APPOINTMENT**, including student preparation, timely treatment, behavioral guidance, as well as the particular procedure itself.

3. Before each appointment, the student should verbally review with the attending faculty particulars of the child’s medical history, pertinent social/behavioral background, intended goals for the appointment and any other relevant concerns. The child should be examined by the faculty prior to initiating treatment.

The maximum permissable amount of local anesthesia, rubber dam modification, or other possible limiting factors should be discussed with the attending faculty before treatment begins. Faculty consent (verbal) **MUST** be given before starting treatment.

4. Student must have appropriate steps of a procedure evaluated by the faculty member before proceeding. If not certain, the student should have a step checked (with possible recommended changes) rather than proceeding. **Only** after the student’s ability has been demonstrated over multiple appointments or procedures can permission be given to do several steps without a faculty check.

5. Clinical judgement is a critical skill to be developed in each student. In pediatric dentistry, this will be evaluated by the following:
   a. Knowledge (Do you know what you are doing **AND WHY**)
   b. Preparation (Have you reviewed the necessary and appropriate material ahead of time?)
   c. Motivation (Do you show concern for what you are being trusted to do for the child?)
   d. Effectiveness (Do you recognize your strengths and deficiencies and are you working to improve your weaknesses?)
   e. Patient management skills (do you manage yourself and the patient successfully to provide optimal treatment?)
   f. Resourcefulness (Do you know what to do if the clinic situation changes?)
   g. Attitude (Do you come with a desire to learn, a willingness to listen, and an eagerness to help children?)

6. Other critical areas of conventional dental practice must be completed and managed properly. Student will be monitored and evaluated for acceptable infection control procedures, chart entries and precision in recordkeeping, regular monitoring of prevention efforts, and other items unique to pediatric dentistry.

7. Based on the attending faculty’s impression of all the factors discussed above, the student will be verbally appraised of his/her performance. Weak areas needing improvement will be discussed as well as areas of outstanding performance. The attending faculty will also grade the 5 “Daily Clinical Evaluation” section on the computer-generated treatment form, as will the student self-evaluate. Discrepancies will be discussed and competent, expected performance will usually result in a “1” grade; “2” or “0” grades will be reserved to recognize unusually good or poor performance in a particular section.
The overall evaluation and grade at the end of the clinical block rotation will be calculated from these evaluations as well as inter-faculty discussions and a consensus of the student’s performance and the student’s overall improvement.

CLINICAL EXPERIENCES DIVISION OF PERIODONTICS
STUDENT EVALUATION AND STANDARD OF CARE

It is our desire that the CU Dental School graduate attains a level of periodontal competency that would allow him/her to successfully manage the periodontal diseases of a significant proportion of patients encountered in a typical general dentistry practice. The clinical aspect of the students’ periodontal education ought to provide the opportunity to synthesize the information gained in the various didactic courses and apply it to the management of the periodontal disease in their patient pool. In addition, it will provide the student with the opportunity to refine those skills that are learned in the preclinical laboratory courses.

It is quite apparent that the successful management of patients with periodontal disease requires routine maintenance therapy after active treatment. We will therefore place a great deal of emphasis not only on the active phase of therapy, but on the maintenance phase as well. Because periodontal disease manifests itself and responds to therapy in such a diverse way, it is necessary for the student to be exposed to a maximum number of patients and procedures.

In order to comply with this philosophy, it is necessary that:
1. All patients receive a thorough periodontal examination (probe all surfaces of all teeth, check for bleeding upon deep probing, examine furcations, keratinized tissue, recession and mobility).
2. All patients have their oral hygiene efforts evaluated (modified O’Leary Plaque Index) and that they receive appropriate oral hygiene instructions.
3. All patients receive a thorough debridement that is appropriate for their periodontal status. This may include the use of systemic, locally delivered and/or topical chemotherapeutic agents.
4. All complex patients receive a periodontal re-evaluation (new examination) after Phase I therapy is complete.
5. Surgical therapy is offered to patients when necessary.
6. All patients need to be placed on an appropriate maintenance program.

DIVISION OF PERIODONTICS

There are no formal requirements regarding how much periodontal therapy must be done, although the curriculum allotls approximately 250 hours to the clinical aspect of your perio education. We ask that you manage the periodontal needs of your patient population in a competent and professional manner. You should, by the time you graduate, complete 20-30 examinations, 15-20 adult prophys, 8-16 quadrants of scaling and root planing, 2-4 re-evaluations, 1-2 surgical procedures, and 5-15 maintenance/recall visits. If you feel that your patient population is not affording you a well-rounded experience, please consult with either Dr. Johnson, Dr. Lucas, Ms. Rzasa or your advocate.

Grade Forms
Daily evaluations will be completed by faculty on procedures completed.

Semester grades will be based on the daily grades, quantity of procedures completed, patient management as judged by timeliness/the initial debridement and maintenance, following the prescribed treatment plan and competency assessments.
DIVISION OF PERIODONTICS
COMPETENCY EXAMINATION SCHEDULE

You will be required to take a number of skill assessment and competency examinations over the next 1-2 years. Please make every attempt to adhere to the following schedule:

**Summer 2008**
- Probing (skill assessment)
- Instrument Sharpening (skill assessment)

**Fall 2008**
- Treatment Planning (competency examination)

**Spring 2009**
- Scaling and Root Planing (competency examination)

**Summer 2009**
- Maintenance (competency examination)

**Fall 2009**
- Reevaluation (competency examination)
- Mock Board (competency examination)

In the event that you fail any one of these competency examinations, you will be required to accomplish the following before retesting:

<table>
<thead>
<tr>
<th>Exam</th>
<th>Protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probing</td>
<td>Reviewing the technique with the faculty and retest.</td>
</tr>
<tr>
<td>Sharpening</td>
<td>Reviewing the technique with the faculty and retest.</td>
</tr>
<tr>
<td>Treatment Planning</td>
<td>Reviewing the case with the faculty. This exam must be retaken utilizing a different patient.</td>
</tr>
<tr>
<td>Scale/Root Plane</td>
<td>One or more hours of one-on-one remediation with one of the hygienist on the perio faculty.</td>
</tr>
<tr>
<td>Reevaluation</td>
<td>Review the case with the faculty. This exam must be retaken utilizing a different patient.</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Review the case with the faculty. This exam must be retaken utilizing a different patient.</td>
</tr>
</tbody>
</table>

For additional information regarding your clinical experience in periodontics, please consult the course syllabus DSPE 6655, 7759, 8855.