

University of Massachusetts Medical School
General Practice Dental Residency
Objectives Summary – October, 2004

The following is a summary of the objectives of the General Practice Residency training program. The didactic program is held in conjunction with the Tufts University School of Dental Medicine. Clinical experiences include rotations through the Departments of Anesthesia (2 weeks) and Emergency Medicine (2 weeks) at the UMass Medical Center. Family Health Center provides the setting for the outpatient dental clinic and Family Medicine Rotations (2 weeks).

I. Patient Assessment and Diagnosis

The curriculum in this area is intended to enable the resident to:

1. Understand the indications of and interpretation of laboratory studies and other techniques used in the diagnosis of oral and systematic diseases.
2. Recognize and diagnose oral diseases based on diagnostic data, laboratory data, and information available from other health professionals.
3. Understand the relationship between oral health care and system diseases.
4. Interpret the physical evaluation performed by a physician with an understanding of the process, terms and techniques employed.
5. Using the techniques of physical examination (i.e, inspection, palpation, percussion and auscultation).
6. Develop patient assessment methodologies that lead to appropriate dental treatment recommendations and alternatives for patients with a variety of complex dental, medical, age dependent, social and economic needs.
7. Develop diagnostic methodologies using evidence based principles.

Total hours of didactic instruction in this area are: 32

The topics covered in didactic instruction include:

1. History and Physical Diagnosis
 - a. Review of general History and Physical Exam
 - b. Head and Neck Exam
 - c. Cardiac Exam and Lung Exam
 - d. Abdominal Exam
 - e. Vascular Exam
 - f. Neurological Exam
 - g. Preoperative Evaluation
 - h. Application of History and Physical Principles
2. Interpretation of Diagnostic Testing
3. Systemic Health and Oral Health Relationships
4. Radiographic Interpretation

Clinical experiences residents will receive in this area:

1. Individual patient medical risk assessment and comprehensive coordinated medical and dental treatment planning
2. Emergency Service patient evaluation
3. Anesthesia patient evaluation
4. Family Medicine patient evaluation
5. Inpatient and outpatient medical and dental evaluation and treatment

II. Planning and Providing Comprehensive Multidisciplinary Oral Health Care

The curriculum in this area is intended to enable the resident to:

1. Make referrals and obtain consultations from professional colleagues for the incorporation of dental, medical, psychological and social considerations that impact on dental treatment
2. Integrate multiple dental disciplines into effective treatment planning
3. Consider cultural background and expectation
4. Practice and promote ethical principles

Total hours of didactic instruction in this area are: 12

The topics covered in didactic instruction in this area are:

1. Case Presentations
2. Treatment Planning
3. Advanced Topics in General and Specialty Dentistry
4. Requesting and Providing Effective Consultations

Clinical experiences residents will receive in this are:

1. Residents receive ongoing clinical experience in planning and providing comprehensive multidisciplinary oral health care in the dental clinic, hospital setting and operating room.
2. Preparation and delivery of treatment plans in conjunction with individual medical and dental needs. Attending staff approves all treatment plans.
3. Exposure to systemic diseases and their relationship to oral healthcare.
4. Residents treat patients in a variety of settings with diverse patient populations

III. Obtaining Informed Consent

The curriculum in this area is intended to enable the resident to:

1. Discuss indications, options, and known risks of proposed procedures
2. Determine patient competency in decision-making
3. Understand legal implications of informed consent
4. To practice in hospital, community and private office settings and have an understanding of the medical legal issues associated with patient care

Total hours of didactic instruction in this area are: 4

The topics covered in didactic instruction in this area are:

1. Patient competency
2. Patient Rights
3. Court Decrees
4. Medical Proxy
5. Patient/Doctor Communication
6. Case Presentation
7. Guardianship Issues
8. Patient Expectations
9. Risk/Benefit Factors of Treatment

Clinical experiences residents will receive in this area:

1. Obtaining general consent for basic dental services
2. Obtaining special consent for invasive procedures.(i.e., oral surgery, periodontal surgery)
3. Obtaining general consent for special services (dental rehab in hospital environment)
4. Delivery of case presentation to patients
5. Legal implications of informed consent

IV. Promoting Oral and Systemic Health and Disease Prevention

The curriculum in this area is intended to enable the resident to:

1. Improve the residents understanding of the etiology of dental disease and to provide clinical and didactic training in currently accepted methods of disease prevention
2. Understand the relationship between oral health care and system diseases
3. Development of an awareness of and ability to work with community and professional resources to promote oral and systemic health and disease prevention
4. Develop oral and systemic health and disease prevention philosophies using evidence-based principles

Total hours of didactic instruction in this area are: 15

The topics covered in didactic instruction in this area are:

1. Tufts Dental Facilities Community Oral Health Program - Kathy Dolan RDH
2. Preventative Resins
3. Oral Manifestations of Infectious Disease
4. Oral Manifestations of Dermatologic Diseases
5. Oral Manifestations of Systemic Diseases
6. Oral Manifestations of Hematological Diseases
7. Oral Manifestations of Pediatric Pathology
8. Delta Dental Prevention Program
9. Introduction to Evidence-Based Dentistry

Clinical experiences residents will receive in this area.

1. Use of anti-cariogenic measures (i.e., preventive resin fillings, sealants, fluoride)
2. Use of antimicrobial agents for disease prevention/maintenance therapy (i.e., chlorhexidine, doxycycline)
3. Hands-on instruction in oral hygiene technique
4. Chart review for quality assurance measures (treatment planning updates, oral hygiene ratings, plaque scoring in periodontal therapy, recall status evaluation)

V. Sedation, Pain and Anxiety Control

The curriculum in this area is intended to enable the resident to:

1. Anticipate and manage anxiety and pain related to dental problems and procedures
2. Understand the theory and practice of pharmacological and non-pharmacological of pain and anxiety control
3. Use pharmacological and non-pharmacological methods of managing anxiety and pain control for effective patient management

Total hours of didactic instruction in this area are: 20

The topics covered in didactic instruction in this area are:

1. Principles of IV Sedation
2. Local Anesthetics
3. Nitrous Sedation
4. Behavior Management
5. Pharmacology of Oral Sedation
6. Ambulatory General Anesthesia and IV Techniques
7. TMD Diagnosis, Treatment and Management

Clinical experiences residents will receive in this are:

1. Appropriate referrals for patient treatment to the operating room and IV sedation clinic to control situational anxiety
2. Recommendations and prescription writing for oral sedation prior to dental treatment
3. Desensitizing techniques for anxiety management
4. Local injection technique for pain control management
5. Recommendations and prescription writing for analgesia pre and post dental treatment

VI. Restoration of Teeth

The curriculum in this area is intended to enable the resident to:

1. Develop confidence, efficiency and technical knowledge in the advanced principles of restorative dentistry
2. Diagnose and appropriate treatment plan the restorative needs of patients based on comprehensive patient assessments
3. Apply principles of occlusion and function to tooth restoration
4. Develop clinical practice philosophies in restorative dentistry using evidence-based principles

Total hours of didactic instruction in this area are: 20

The topics covered in didactic instruction in this area are

1. Current Materials of Restorative Dentistry includes: Composites, Sealants, Bonding Agents, Cavity Liners, Cements, Impressions Materials and Techniques, Prefabricated Post and Cores
2. Esthetic Dentistry
3. Concepts of Form and Function
4. Block Temporaries
5. Neutral Zone Dentures
6. Operative Dentistry for Pediatric Patients

Clinical experiences residents will receive in this area:

1. Cavity preparation and placement of appropriate restorative materials.(i.e., amalgam vs. composite, selection of therapeutic pulpal agent, cavity base/liner)
2. Fixed prosthetic preparation and temporization. (i.e., current concepts in crown and bridge restorations, impression taking and temporary fabrication)
3. Removable prosthetic fabrication. (i.e., current concepts in partial denture design and material availability and impression taking)

4. Above restorative considerations in regard to occlusion and its relationship to patient esthetic, form and function
5. Efficient dental treatment with the aid of four-handed dentistry

VII. Replacement of Teeth Using Fixed and Removable Appliances

The curriculum in this area is intended to enable the resident to:

1. Develop confidence, efficiency and technical knowledge in the advanced principles fixed and removable prosthetics
2. Diagnose and treatment plan the fixed and removable prosthodontic needs of patients based on comprehensive patient assessments
3. Apply principles of occlusion and dental rehabilitation to fixed and removable prosthetics
4. Utilize consultation and referral to most appropriately assess and treat the prosthetic needs of patients
5. Develop clinical practice philosophies for fixed and removable prosthetics using evidence based principle

Total hours of didactic instruction in this area are: 30

The topics covered in didactic instruction in this area are:

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| 1. Maxillofacial Prosthodontics | 6. Basic Implantology |
| 2. Functional Considerations in Esthetic Dentistry | 7. Commercial Dental Labs |
| 3. Impression Material and Techniques | 8. Full Mouth Reconstruction |
| 4. Cementation Techniques | 9. Patient Care Conferences |
| 5. Porcelain Veneers | |

Clinical experiences residents will receive in this area:

1. Post and core technique, prefabricated and cast
2. Preparation, impression, and temporization for single units of crown and multiple units of bridgework. This includes occlusal analysis and bite registration techniques
3. Restoration for uncomplicated implant fixed prostheses
4. Partial denture fabrication: primary impression, survey and design, rest seat preparation, secondary impression, framework try, bite registration, esthetic/functional try and insertion
5. Full denture fabrication: primary impression, secondary impression, bite registration, esthetic selection, esthetic/functional try and insertion
6. Over denture fabrication: as above with necessary dental/implant borne appliances

7. Write laboratory prescriptions for planned prostheses for approval by attending staff
8. Communication with dental laboratory personnel when indicated for prostheses design.

VIII. Periodontal Therapy:

The curriculum in this area is intended to enable the resident to:

1. Develop confidence, efficiency and technical knowledge in the principles of surgical and non-surgical periodontal therapy
2. Diagnose and treatment plan the periodontal needs of patients based on comprehensive patient assessments
3. Apply principles of occlusion to periodontal therapy
4. Utilize consultation and referral to most appropriately assess and treat the periodontal needs of patients
5. Develop clinical practice philosophies for periodontal treatment using evidence-based principles

Total hours of didactic instruction in this area are: 6

The topics covered in didactic instruction in this area are:

1. Periodontal Armamentarium
2. Measurements for Oral Hygiene and Scoring
3. Scaling and Root Planing Technique
4. Flap Design
5. Concepts in Surgical Technique
6. Fundamentals in Implantology
7. Periodontal Seminars w/ Critical Literature Review
8. Advances in Regenerative Procedures and Implant Dentistry

Clinical experiences residents will receive in this area:

1. Clinical and radiographic diagnosis of periodontal health, including periodontal charting, periodontal probing, gingival plaque scoring
2. Quadrant scaling and root planing
3. Surgical flap curettage, including gingival and osseous recontouring
4. Connective tissue grafting
5. Crown lengthening procedures
6. Periodic periodontal re-evaluations
7. Oral hygiene/pre and post surgical technique using antimicrobial agents

IX. Endodontic Therapy

The curriculum in this area is intended to enable the resident to:

1. Develop confidence, efficiency and technical knowledge in the principles of surgical and non-surgical endodontic therapy
2. Diagnose and treatment plan the endodontic needs of patients based on comprehensive patient assessments
3. Apply principles of occlusion to endodontic therapy
4. Utilize consultation and referral to most appropriately assess and treat the endodontic needs of patients
5. Develop clinical practice philosophies for endodontic treatment using evidence-based principles

Total hours of didactic instruction in this area are: 6

The topics covered in didactic instruction in this area are

1. Dento-alveolar Trauma and Endodontic implications
2. Current Concepts in Rotary Endodontics
3. Current Concepts in Conventional and Surgical Endodontic Therapy

Clinical experiences residents will receive in this area:

1. Clinical and radiographic diagnostic techniques.(i.e., pulp testing, periapical evaluation, symptom evaluation) with subsequent endodontic treatment planning
2. Conventional root canal therapy (i.e., preparations in access cavities, canal location, canal instrumentation, sealing of canal apices)
3. Surgical root canal therapy (i.e., apicoectomies)
4. Emergency diagnosis and treatment of teeth with endodontic concerns (i.e., incision and drainage, antibiotic therapy, pain management, avulsion/fracture techniques)

X. Hard and Soft Tissue Therapy

The curriculum in this area is intended to enable the resident to:

1. Develop confidence, efficiency and technical knowledge in the principles of oral surgical
2. Diagnose and treatment plan the oral surgical needs of patients based on comprehensive patient assessments
3. Utilize consultation and referral to most appropriately assess and treat the oral surgical needs of patients
4. Detect and treatment plan initial treatment for intra-oral pathology

5. Diagnose and treat intra-oral hard and soft tissue lesions of traumatic origin.
6. Understand the initial treatment and management of extra-oral facial trauma
7. Perform simple pre-prosthetic surgery
8. Develop clinical practice philosophies for oral surgery treatment using evidence-based principles

Total hours of didactic instruction in this area are: 5

The topics covered in didactic instruction in this area are:

1. Suturing: Armamentarium and Technique
2. Facial Fractures
3. Pathways of Infection: Diagnosis and Treatment
4. Facial Radiography and Interpretation
5. Pre and Post-op Management of the Oral Surgery Patient

Clinical experiences residents will receive in this area:

1. Obtain informed consent from patients for all surgical care
2. Obtain appropriate health professional consultations when necessary for surgical management
3. Simple and surgical extractions of teeth including pre-op and post op technique
4. Assist in and be evaluated to perform uncomplicated third molar impactions
5. Perform simple biopsies of oral tissue
6. Suture lacerations intra and extra-orally of a traumatic nature
7. Diagnose and assist in initial therapy for facial trauma

XI. Treatment of Dental and Medical Emergencies

The curriculum in this area is intended to enable the resident to:

1. Develop confidence, efficiency and technical knowledge in the principles of dental and medical emergency management
2. Diagnose dental and medical emergencies based on comprehensive patient assessments
3. Anticipate, prevent, diagnose and provide initial treatment and follow-up management for medical emergencies that may occur during dental treatment
4. Treat patients with intra-oral dental emergencies and infections
5. Diagnose and treat intra-oral hard and soft tissue lesions of traumatic origin

6. Understand the initial treatment and management of extra-oral facial trauma
7. Provide initial treatment and then manage patients with extra-oral and complex oral-facial emergencies and infections
8. Utilize consultation and referral to most appropriately assess and treat dental and medical emergencies
9. Develop clinical practice philosophies for management of medical and dental emergencies using evidence based principles

Total hours of didactic instruction in this area are: 15

The topics covered in didactic instruction in this area are:

1. Basic Life Support
2. Facial Fractures
3. Fernald Emergency Services Review
4. Dental Trauma
5. Emergency/On-Call Review
6. Suturing
7. Protocols Medical Emergencies
8. Management of Infection

Clinical experiences residents will receive in this are:

1. Diagnosis and treatment of dental trauma, including management of avulsions, intrusions, extrusions and fractures
2. Diagnosis and management of facial trauma, including facial film interpretation, referral to oral surgery second call, assistance in initial treatment
3. Diagnosis and treatment of facial infection and pain due to infection, including pulpotomies, placement of sedative fillings, incision and drainage, antibiotic administration (oral and IV)
4. Intra and extra-oral suturing secondary to facial/dental trauma
5. Medical management of compromised patients from inpatient consult services
6. Emergency medical management of head and neck trauma patients

XII. Medical Risk Assessment

The curriculum in this area is intended to enable the resident to:

1. Understand the relationship between oral health care and system diseases
2. Perform a history and physical evaluation and collect other data to establish a risk assessment for the use in the development of a dental treatment plan

3. Obtain and interpret clinical and other diagnostic data from dental professional and other health care providers.
4. Use the services of clinical, medical and pathology laboratories and make referrals to other health professionals for the utilization of these services

Total hours of didactic instruction in this area are: 10

The topics covered in didactic instruction in this area are:

1. CPR Certification Course
2. ACLS Certification Course
3. Emergency Room Orientation
4. Management of Office Emergencies in the OMFS Office
5. Emergency Equipment Review
6. Commonly Encountered Medical Emergencies
7. Protocols for Medical and Dental Management of Systemic Diseases

Clinical experiences residents will receive in this area:

1. Histories and physicals performed
2. Interpretation of lab values necessary prior to dental procedure
3. Modification of treatment plans based on medical needs of the patient
4. Treatment of patients with a variety of medical profiles