# BALTIMORE COLLEGE OF DENTAL SURGERY DENTAL SCHOOL UNIVERSITY OF MARYLAND, BALTIMORE BALTIMORE, MARYLAND

PROSTHODONTIC RESIDENCY PROGRAM 2017-2018

# I. INTRODUCTION

### INTRODUCTION

The purpose of this manual is to give the resident a general overview of the residency program. The information was current when printed but may not totally reflect the day to day resident activities due to time constraints and scheduling difficulties.

A tremendous amount of knowledge in all aspects of prosthodontics must be acquired in the span of three years. The educational program requires complete dedication of all participants. A strong desire to learn and excel is essential for success.

### PURPOSE OF THE PROGRAM

The purpose of the Prosthodontic residency program is to provide progressive clinical, laboratory and didactic training, closely supervised, at the post-graduate level in fixed, removable, and implant prosthodontics. Temporomandibular dysfunction, maxillofacial prosthodontics, implant placement, the interrelation of other medical/dental clinical specialties as well as the role of the prosthodontist is also included. The program integrates all facets of the biomedical sciences with a comprehensive clinical experience culminating in the award of the certificate in prosthodontics. A Master of Science is also available.

### PROGRAM GOALS AND OBJECTIVES

The Prosthodontic Residency Program has the following goals and objectives:

- 1. Preparation of knowledgeable and skilled prosthodontic clinicians.
- 2. Preparation and qualification of prosthodontists for certification by the American Board of Prosthodontics.
- 3. All residents will engage in research activities.
- 4. Preparation of prosthodontists qualified to serve as mentors in academic programs.

# SCOPE OF TRAINING

Training will include all clinical and laboratory phases of prosthodontic practice to include implant placement. The resident will be exposed to a broad range of techniques, including digital technology, used in fixed, removable, implant and maxillofacial prosthodontics, thus gaining the background and experience necessary to select those techniques which work best in their hands, and to instruct others in their use. New and improved materials will be evaluated as they are introduced to the profession.

# **II. GENERAL**

### MASTER OF SCIENCE

The Master of Science is especially designed for the residents enrolled in a clinical specialty program. The program will prepare the dentists for careers in dental education and research. Courses are comprised of both lecture and laboratory formats. A significant portion of the program is devoted to the design and completion of a thesis research project, which is a requirement of the program. A separate application to the Graduate School is required for admission into this program.

# PERIOD OF TRAINING

The period of training is three years of not less than 48 weeks each year.

### **SELECTION PROCESS**

Residents are selected with no pre-determined quotas or bias to gender, religious affiliation, or ethnicity. Selection is based on a composite of dental school grades, grades on national tests, interviews, letters of recommendations, and personal attributes. Applicants apply through the PASS program and are screened by the Prosthodontic Residency Screening committee, consisting of the Program Director and two Residency Prosthodontic faculty members. These three individuals reviewed records independently and a candidate is offered an interview if two out of the three members recommend it. Candidates are notified of the available interview dates. An interview day consists of tours of the facilities, meeting with faculty and current residents, clinical observation and lunch. At the conclusion of the interviews, the Program Director, faculty members and current residents discuss each candidate and a ranking is developed. The program does participate in the MATCH process.

### **AUTHORIZED ABSENCES**

Residents are allowed ten days off per school year for any reason: i.e. vacation, personal time, illness, medical or religious reasons. Requests for leave will be authorized, subject to approval by the Director of the Prosthodontic Residency, as long as there is minimum conflict with the training schedule. Any additional days, away from the program, will necessitate an additional period of time at the end of the three years. Residents are required to be present during all scheduled hours unless excused by the Program Director.

# TRAINING SUPERVISION

The program was fully accredited by the American Dental Association and the Commission on Dental Accreditation in 2011 without any recommendations. The Prosthodontic residents are under the direct supervision and guidance of the Director of the Program and trained prosthodontists. Resident progress is closely monitored and evaluated by oral and written methods. Resident/mentor counseling sessions allow for close communication between the resident and the program director.

# ACADEMIC DUE POLICY PROCESS

Voluntary or involuntary withdrawal, probation or termination of residency status is governed by the rules of the Dental School. To avoid any misunderstandings concerning the consequences of unacceptable resident performance of behavior, each resident should be familiar with this policy below, prior to enrollment.

All matters of professional ethics and conduct that involve ADE students will be referred to the Judicial Board of the Dental School for adjudication. The ethical and conduct standards for student enrolled in ADE programs are identical to the standards of conduct for students enrolled in the pre-doctoral and dental hygiene programs. Judicial Board matters are not governed by the policy contained in this document. An Advanced Dental Education student who believes he or she has been harassed on the basis of his/her sex shall be referred to the UMB Policy on Sexual Harassment of Students, VI-1.20(B).

### I. Academic Standards

A. Students in ADE Programs are expected to maintain high levels of academic success. Academic dismissal from an ADE Program can result from failure to achieve a Program's requirements or failure to meet minimal levels of academic achievement as they are defined in the Catalog of the Baltimore College of Dental Surgery. Clinical competence in all areas of patient management and treatment constitutes a vital sector of academic achievement. A student must maintain a B (3.0) or better overall average to remain in good standing. If the student's performance falls below this level of performance he/she will be placed on academic probation during the following semester. In the event that the student's overall average remains below a 3.0 at the end of the semester of probation, he/she will be dismissed from the Program. All failing and incomplete grades must be rectified before a certificate is conferred.

B. Faculty will provide feedback to students in all matters related to didactic and clinical performance. This feedback can be oral or written, but must be in writing, at appropriate intervals, as determined by each Program's accreditation standards noted under "Evaluation." Program directors will ensure that each ADE student receives a copy of the Program's Accreditation Standards as part of the program orientation for new residents.

### II. Unsatisfactory Performance

A. Unsatisfactory performance in knowledge, skills, clinical competence and/or patient management may be documented in several ways, and corrective actions or sanctions can range from oral or written counseling to dismissal from the Program. The process for such actions is as follows:

1. Initial notification of a deficiency/problem can be addressed orally by the program director or the faculty identifying the problem. After so doing, a dated notation will be placed in the student's file by the program director.

2. Should the problem continue, or new problems develop, the student will be sent a letter or counseling form by the program director, identifying the deficiency/deficiencies and required actions to be taken by the student to correct the deficiency/deficiencies. A time period for correcting the deficiency/deficiencies will be specified. A copy of the counseling form will be kept in the program or course director's file, and a copy will be sent to the Assistant Dean for Research and Graduate Studies. The student should acknowledge receipt of the letter or counseling form by signing the original and returning it to the program director. The letter or counseling form will be placed in the student's file. The student should keep the copy for future reference.

3. Should student performance still not improve, the program director, or program's designate acting in (his/her)stead, will notify the student in writing that he/she will be placed on academic probation. Actions required of the student and a time line (not exceeding those of academic probation noted above) to correct the deficiency/deficiencies will be detailed in the letter. The student must sign the letter, keep a copy for his/her files and return the original letter to the program director, who will place the letter in the student's file. Copies will be sent to the department chair and the Assistant Dean for Research and Graduate Studies.

4. If the student fails to rectify the deficiency/deficiencies in the time specified, the program director, in consultation with the program faculty, will recommend dismissal from the program to the department chair, the Assistant Dean for Research and Graduate Studies, and the Advanced Dental Graduate Education (ADGE) Committee. The ADGE Committee will review the recommendation for dismissal.

### III. Review

A. The student will be given the opportunity to be heard by the ADGE Committee on the recommendation for dismissal by offering his/her own statements, and, if appropriate, testimony of witnesses and presentation of evidence. The ADGE Committee may choose to call for further testimony and documents. Hearsay evidence is admissible only if corroborated. Any irrelevant or unduly repetitive evidence will be excluded. If the student fails to appear for his/her hearing without good cause, he/she will be deemed to have waived his/her right to meet with the ADGE Committee.

B. Following its review and any subsequent meetings, the ADGE Committee will

conduct its deliberation and make a decision on the basis of a majority vote. If the ADGE Committee determines that the student should be dismissed, the recommendation will be forwarded to the Dental School's Faculty Council for action. In the case of dismissal decisions, the Assistant Dean for Research and Graduate Studies will notify the student in writing that s/he has been dismissed from the Program.

C. The Assistant Dean for Research and Graduate Studies shall maintain the documentary evidence from the hearing for at least 4 years from the date of the hearing. The student may obtain a copy of the record upon paying the cost of reproduction.

### **IV. Appeals Process**

A. In the event that the student elects to appeal the dismissal decision, the student may not take part in any academic or clinical activities of the program until and unless action on the appeal reverses the decision for dismissal.

B. If the student disputes the dismissal, he/she may contact the Program Director within five business days of notification of dismissal for informal discussion. Should the student remain dissatisfied, the student may file a formal appeal.

C. A student wishing to file a formal appeal of a dismissal decision must initiate the appeal process regarding dismissal from the Program within 10 business days of receiving the written notification. The appeal must be submitted in writing to the Assistant Dean for Research and Graduate Studies. The written appeal must include: the decision the student is appealing; the specific ground for the appeal (only newly discovered evidence or lack of due process); and the academic status that the student is requesting. The student may present and prioritize more than one alternative to dismissal from the Program.

D. The Assistant Dean for Research and Graduate Studies will review the appeal and designate a three person Appeals Panel. Faculty who have been substantially involved in this or any other decision or actions against the student prior to dismissal are excluded from the Panel. Where possible and practical, the Panel will consist of three members of the full-time faculty. The Assistant Dean for Research and Graduate Studies will appoint one of these three as Chairperson of the Appeals Panel.

E. The Chairperson will then schedule a meeting with the members of the Panel within 5 business days when possible or practical. The Panel will determine whether the student's written appeal meets the criteria outlined in C. and report their decision in writing to the Assistant Dean for Research and Graduate Studies. Should the Panel determine that an appeal lacks the required evidence, the appeal will be denied. In these circumstances, there is no further appeal.

F. If the Panel determines that newly discovered information, not originally considered by the ADGE Committee does exist, then the matter should be referred

back to the ADGE Committee for reconsideration.

G. If the Panel determines that there was a failure of due process, an appeal on the record will be heard. The decision of this Panel will be final. The student and the Assistant Dean for Research and Graduate Studies will be notified of the decision in writing.

Approved by Dental School Faculty Council: April 8, 2003 Approved by University Counsel: June 19, 2003 Approved by Dean: April 13, 2018

# JUDICIAL POLICY

The judicial policy is listed on the dental school's website.

# **COMPLAINTS TO THE COMMISSION ON DENTAL ACCREDITATION**

The Commission on Dental Accreditation will review complaints that relate to a program's compliance with the accreditation standards. The Commission is interested in the sustained quality and continued improvement of dental and dental-related education programs but does not intervene on behalf of individuals or act as a court of appeal for individuals in matters of admission, appointment, promotion or dismissal of faculty, staff or students.

A copy of the appropriate accreditation standards and/or the Commission's policy and procedure for submission of complaints may be obtained by contacting the Commission at 211 East Chicago Avenue, Chicago, IL 60611-2678 or by calling 1-800-621-8099 extension 4653.

# RECORDS AND REPORTS

The administrative responsibilities assigned to the resident are designed to enable them to gain the Competency necessary to manage a clinical practice or academic position upon completion of training. Each resident is required to prepare and submit daily records and reports to complete documentation of the program. Additional administrative responsibilities will also be delegated throughout the training.

# LIBRARY FACILITIES

A state of art medical/dental library is maintained which contains a diversified collection of current dental, medical and other pertinent reference books. The library contains approximately 2,300 periodical subscriptions and over 325,000 volumes. It ranks among the 20 largest health science libraries in the United States. In addition, the department maintains a complete set of the Journal of Prosthetic Dentistry as well as many other prosthodontic textbooks and journals. Book purchase requirements are kept to a minimum due to our vast resources. Residents are given MEDLINE access free of charge.

# **CLINICAL PHOTOGRAPHY**

Each incoming resident is required to have a digital clinical camera capable of photography from profile to 1/1. Photographic documentation of clinical and laboratory work is required.

# SOCIETY MEMBERSHIP

Active membership in professional organizations and societies is essential in maintaining high professional standards. Membership in the American Dental Association, American College of Prosthodontists, American Academy of Maxillofacial Prosthetics, Academy of Osseointegration, and the Maryland Chapter of the American College of Prosthodontists are highly recommended. Student membership rates are available at a considerable reduction in dues or are free.

### MANDATORY TRAINING

Residents are required to attend scheduled training such as CPR, Bloodborne Pathogens, Risk Management, HIPPA, Infection Control, and Hazardous Material handling as provided by the dental school.

# FINANCIAL ADVANTAGES

A work study program may fund up to \$12,500 per year for qualified residents. This amount varies from year to year. There is also a stipend available based on the residency 's excess revenue from the previous year. All photocopying is free of charge and to date, all research costs have been borne by the program. Equipment use is included in tuition and fees and includes the use of a variety of articulators. We currently have the following articulator systems: Hanau, Denar, Whip Mix, Panadent, Dentatus, SAM, Stratos, and TMJ.

Costs of fabrication of table clinics, publication fees, local study club dinner meetings, and travel to a prosthodontic meeting each year are provided by the program, if funding is available. In addition, residents who present table clinics at a national meeting are eligible for travel funds.

### JOURNAL SUBSCRIPTIONS

Residents are strongly encouraged to subscribe to the Journal of Prosthetic Dentistry, Journal of Prosthodontics, International Journal of Prosthodontics, and the International Journal of Oral and Maxillofacial Implants. Selected articles are reviewed monthly from these and other journals. The Journal of Prosthodontics is a benefit of membership in the American College of Prosthodontists. Many of these journals are included in the membership fees of the above-mentioned organizations.

# **REQUIRED TEXTBOOKS**

Prosthodontic residents are expected to study and review the literature pertaining to prosthodontics. Residents should maintain a personal reference library of prosthodontic and related texts. The only highly suggested purchase is Beumer's Maxillofacial Textbook.

### **COMPUTERS**

All incoming residents will be required to have in their possession a laptop computer.

# III. GOALS AND REQUIREMENTS

# **1ST YEAR RESIDENT**:

- 1. Competency and confidence in the application of basic fixed prosthodontic clinical and laboratory procedures.
- 2. Competency in basic complete denture clinical and laboratory techniques.
- 3. Understanding of complete denture occlusion.
- 4. Competency in basic RPD clinical and laboratory procedures.
- 5. Understanding of basic RPD principles, design and function.
- 6. Understanding with overdenture techniques.
- 7. Understanding with immediate denture techniques.
- 8. Understanding with reline/rebase techniques.
- 9. Competency in waxing techniques and restoration contouring.
- 10. Competency in single survey crown preparation and fabrication.
- 11. Competency in use of the semi-adjustable articulators, facebows and Understanding with concepts of occlusion and fully adjustable articulators.
- 12. Understanding with basic tissue integrated prostheses techniques.
- 13. Understanding with diagnosis and treatment of patients with temporomandibular disorders and facial pain.
- 14. Identify a research project with a submitted protocol.
- 15. Understand the requirements of the American Board of Prosthodontics by the end of first year.
- 16. Prepare a lecture utilizing Power Point and clinical photographs/radiographs.

### 2ND YEAR RESIDENT:

- 1. Competency in diagnosis and treatment planning with an understanding of the relationship of prosthodontics to the various specialties of dentistry in the comprehensive care of patients.
- 2. Competency and confidence in the treatment of combination cases involving fixed, removable, and tissue integrated prostheses.
- 3. Competency in the application of the various concepts of occlusion for both fixed and removable and competency in the use of pantographic, stereographic and quick mount recorders, semi- and fully adjustable articulators.
- 4. Competency and confidence in the application of prosthodontic laboratory procedures.
- 5. Understanding with the prosthodontic literature and its support of and application to treatment.
- 6. Develop and present a table clinic at a professional dental meeting.
- 7. Have placed dental implants for their patients.

# 3rd YEAR RESIDENT:

- 1. Understanding with the maxillofacial prosthodontic literature and with the treatment of patients with maxillofacial developmental or congenital defects.
- 2. Competency with the use of digital technology in diagnosing, planning and performing complex prosthodontic procedures.
- 3. Competency with intra-oral implants in their indications and use.
- 4. Competency in treating the full scope of prosthodontic patients.
- 5. Complete a Prosthodontic Board treatment and make a commitment to challenge the Board.
- 6. Complete a research project suitable for presentation and publication.
- 7. Display the ability to prepare and present lectures on selected prosthodontic topics to fellow residents.

# **GRADUATION**:

The following requirements must be met before a certificate is awarded from the residency program:

- 1. Satisfy all academic and clinical requirements as determined by the Program Director and CODA Standards.
- 2. Completed research project. The research paper must be ready to be submitted to a refereed dental journal.
- 3. Completed final write-up and casts for a Prosthodontic Board presentation case. Resident must have taken a Mock Board examination in all sections of Part B.

# DIDACTIC OBJECTIVE AND GUIDELINES

# PROSTHODONTIC LECTURE SEMINARS:

The prosthodontic lecture seminars are conducted once a week, for one and one-half hours from August through May. Material is presented from the following selected topic areas. Lectures will include Power Point/Keynote presentations, handouts, and any other items that will help convey the information. These lectures are given by residency staff, dental school professors, private practitioners, residents, and members of the Armed Forces stationed in the area. These include multiple specialties in addition to prosthodontics. The use of digital technology may be included in any or all of these presentations.

### **Fixed Prosthodontic Discussion Areas**

- 1. Diagnosis and Treatment Planning
- 2. Preparations
- 3. Soft Tissue Management
- 4. Impressions
- 5. Interim Restorations

- 6. Crown Contours, Pontics
- 7. Articulator Selection, Rehabilitation Techniques, Functionally Generated Path
- 8. Centric Position, Interocclusal Records
- 9. Mandibular Movement and Recording
- 10. Implants
- 11. Cementation, Failures
- 12. Ceramics
- 13. Temporomandibular Disorders
- 14. Endodontic Considerations, Build-ups and Posts

### **Removable Partial Denture Discussion Areas:**

- 1. Introduction
- 2. Diagnosis and Treatment Planning
- 3. Design Principles
- 4. Components and Clasping
- 5. Distal Extension RPDs
- 6. Occlusion
- 7. Fitting and Insertion
- 8. Swinglock RPDs
- 9. Rotational Path
- 10. Miscellaneous

# **Complete Denture Discussion Areas:**

- 1. Diagnosis and Treatment Planning
- 2. Impressions
- 3. Centric Relation Records
- 4. Vertical Dimension
- 5. Denture Occlusion
- 6. Anterior Tooth Selection and Esthetics
- 7. Overdentures
- 8. Immediate Dentures
- 9. Miscellaneous

### Maxillofacial Discussion Areas:

- 1. Management of the Irradiated Head and Neck and Oncologic Patient
- 2. Prosthodontic Rehabilitation of Acquired Maxillary and Mandibular Defects
- 3. Prosthodontic Rehabilitation of Congenital and Developmental Defects
- 4. Palatopharyngeal Function, Disabilities, Speech Therapy and Speech Aids

### Implants:

- 1. History
- 2. Diagnosis
- 3. Treatment Planning/Options
- 4. Materials

# Temporomandibular Dysfunction:

- 1. Anatomy
- 2. Diagnosis
- 3. Treatment

# Other related topics:

- 1. Periodontics
- 2. Endodontics
- 3. Oral and Maxillofacial Surgery
- 4. Orthodontics
- 5. Esthetics

# RESIDENT LECTURE SEMINARS

### 1. Objectives:

- a) Provide formal instruction in a variety of topic areas relative to prosthodontics and related basic sciences. This presentation will include a Power Point/Keynote presentation and a written handout.
- b) Establish an In depth/Understanding knowledge as dictated with skills necessary in lecture preparation and presentation. Emphasis is on communicative ability development and subject content.
- c) Disseminate information pertinent to the training of specialists in prosthodontics.

### 2. Guidelines:

- a) Residents will be assigned topics for presentation each academic year.
- b) Residents will lecture in rotation, one lecture during the first year, two in the second, and two or three in the final year.
- c) Each presentation will be evaluated by a member of the teaching staff.

# STAFF LECTURE SEMINARS

#### 1. Objectives:

- a) Provide formal instruction on a variety of prosthodontic subject areas.
- b) Disseminate information pertinent to the training of specialists in prosthodontics.

- a) Each mentor will select topics in their specialty for presentation to the residents.
- b) All lectures will include the latest advances in their specialty area.

# PROSTHODONTIC LECTURES: 2017 – 2018 THURSDAYS 7:30 – 9:00AM Room 9106

| 2017 |    | Title                                  | Lecturer     |
|------|----|--|--------------|
| AUG  | 3  | Ceramics                               | Dr. Masri    |
|      | 10 | American Board of Prosthodontics       | Dr. Driscoll |
|      | 17 | Trouble Shooting Casting Errors        | Dr. Khatra   |
|      | 24 | Speech As It Relates to Prosthodontics | Dr. Choe     |
|      | 31 | Implant Occlusion                      | Dr. Alshehri |
|      | •  | · · ·                                  |              |
| SEP  | 7  | Critical Reviews of the Literature     | Dr. Masri    |

| SEP | /  | Critical Reviews of the Literature | Dr. Masrı     |
|-----|----|------------------------------------|---------------|
|     | 14 | Diabetes and Dentistry             | Dr. Hack      |
|     | 21 | Immediate Loading                  | Dr. Rivera    |
|     | 28 | Posterior Composites               | Dr. Strassler |

| OCT | 5  | TBA  |              |
|-----|----|--|--------------|
|     | 12 | <b>Tissue Management in Fixed Prosthodontics</b> | Dr. Driscoll |
|     | 19 | NE Post Graduate Implant Symposium UCONN         |              |
|     | 26 | Inlays/Onlays                                    | Dr. Alshehri |

| NOV | 2  | ACP Meeting San Francisco        |             |
|-----|----|----------------------------------|-------------|
|     | 9  | Rotational Path RPD's            | Dr. Faraone |
|     | 16 | Esthetics in Periodontics (0800) | Dr. Shiau   |
|     | 23 | Thanksgiving                     |             |
|     | 30 | Optical Scanners                 | Dr. Khatra  |

| DEC | 7  | Faculty Retreat         |          |
|-----|----|-------------------------|----------|
|     | 14 | Mock Board Written Exam |          |
|     | 21 | Immediate Dentures      | Dr. Choe |

| 2018 Title Lec | urer |
|----------------|------|
|----------------|------|

|     | -  |   |              |
|-----|----|---|--------------|
| JAN | 4  | Soldering Techniques                                  | Dr. Chen     |
|     | 11 | Laser's in Dentistry                                  | Dr. Romay    |
|     | 18 | Interdisciplinary management of complex cases. Ortho- | Dr. Angelara |
|     |    | Perio- Pros connection                                |              |
|     | 25 | TBA   |              |

| FEB | 1  | Hyperbaric Oxygen Therapy | Dr. Hsu      |
|-----|----|---------------------------|--------------|
|     | 8  | Anatomy of a Smile        | Dr. Byun     |
|     | 15 | Esthetic Considerations   | Dr. Penwadee |
|     | 22 | Bisphosphonates           | Dr. Nguyen   |

| MAR | 1  | ТВА                |                |
|-----|----|--------------------|----------------|
|     | 8  | Color              | Dr. Brennan    |
|     | 15 | Acrylic Resins     | Dr. Almutairi  |
|     | 22 | ТВА                | Dr.Homogounfar |
|     | 29 | Grafting Materials | Dr. Chen       |

| APR | 5  | Implant Bar Design    | Dr. Romay |
|-----|----|-----------------------|-----------|
|     | 12 | ТВА                   |           |
|     | 19 | Point – Counter Point | Residents |
|     | 26 |                       |           |

| MAY | 3  | TBA   |         |
|-----|----|---|---------|
|     | 10 | Surgical Considerations of Implant Placement–Part 1 | Dr. Fay |
|     | 17 | Surgical Considerations of Implant Placement–Part 2 | Dr. Fay |

### **BIOMATERIAL SCIENCE**

Biomaterial subjects are emphasized throughout the didactic and clinical phases of the residency and are integral to an In depth/understanding of prosthodontics.

### 1. Objectives:

- a) To develop an In depth/understanding of biomaterial science with emphasis on the clinical application of materials utilized in restorative dentistry and prosthodontics.
- b) Provide current information pertaining to the development of new materials/techniques in prosthodontics.

- a) Formal presentations in dental materials and statistics are given by members of dental school.
- Residents are assigned material topics for presentation and discussion throughout the year as part of the Lecture Seminar and Mock Board Question Review.
- c) A wide range of materials will be utilized by the residents in the clinical practice of prosthodontics.
- d) Supplemental knowledge will be provided by literature reviews, consultants and textbook assignments.

# **BIOMEDICAL SCIENCE SEMINAR:**

### 1. Objectives:

- a) To provide the resident with sufficient knowledge of the basic sciences for appropriate application to prosthodontic principles and techniques.
- b) To prepare the resident for the written and oral portions of the American Board of Prosthodontics specialty certification exam in applied basic science.
- c) To encourage supplemental reading in scientific journals and basic science texts to provide a broader base for patient care.

- a) Residents are assigned representative questions in the basic sciences taken from past Mock American College of Prosthodontists written questions. Topic areas include: head and neck anatomy, growth and development, embryology, oral pathology, histology, biochemistry, pharmacology, microbiology, immunology, wound healing, and physiology.
- b) The questions are thoroughly researched and answered in a written format for reference by the staff and residents. The presentation will include a comprehensive discussion of the topic area as well as the specified answer to the question.
- c.) Seminar material will be supplemented by resident and staff lectures, consultants, and formal courses.
- d) Formal courses in Statistics and Research, Microbiology, Head and Neck Anatomy, Pain Mechanisms, Oral Pathology, and Oral Motor Skills are provided by their representative specialist from the dental school.

# **OCCLUSION SEMINARS**

The occlusion seminar consists of several modules, as outlined in your 2017-2018 program guide

Module 1 - Basic Principles of Occlusion
Module 2 - Theories of Occlusion
Module 3 - Articulation and Instrumentation
Module 4 - Occlusal Analysis, Equilibration:

### 1. Objectives:

- a) **Module 1** Develop an in-depth knowledge of the anatomy, physiology, and function of the masticatory system.
- b) **Module 2** Develop a thorough understanding of the different theories and philosophies of occlusion, and of past and current literature.
- c) **Module 3** Establish a thorough working knowledge of a wide range of articulator systems and associated devices. Critically evaluate articulator systems and their practical selection for specific clinical situations.
- d) **Module 4** To develop knowledge in the area of occlusal analysis equilibration

### 2. Evaluations:

Residents will be evaluated through formative exams given throughout each module. Lab exercise will be critically evaluated.

# **Module 1 Basic Principles of Occlusion**

Our Seminar will begin with lectures and hand on class activity based on Huffman and Regenos' <u>Principles of occlusion: Laboratory and Clincial Teaching</u> <u>Manual</u>

### Section I Part A Introduction to the Study of Occlusion:

Goals and Objectives:

By the end of this section, it is expected that residents will:

- 1. Understands the 3 anatomical planes
- 2. Have an introduction to the TMJ
- 3. Understand the three types of levers and how they relate the dentition
- 4. Understand Thielmann's Formula

5. Understand the relationship between incisal angle and angle of eminentia

6.Be able to define the terms: orbiting/rotating condyle; understand the difference between mediotrusive/laterotrusive

7.Be aware of the difference mandibular movements in the 3 anatomical planes 8.Be introduced to different types of occlusion

9. Understand the difference in waxing techniques: tooth to two teeth & tooth to tooth

# Anatomy, Physiology and Function:

Goals and Objectives:

By the end of this section, it is expected that residents will have an:

- 1. In depth understanding of the muscles of mastication, their origins and insertions
- 2. In depth understanding of the infrahyoid and suprahyoid muscles
- 3. In depth understanding of the ligaments associated with the TMJ

# Lab Component:

- 1. Taking proper diagnostic casts
- 2. Using different facebow systems
- 3. Introduction to Cadiax Compact
- 4. Setting semi-adjustable articulators

# Section I Part C: <u>A Study of Determinants of Occlusal Morphology</u>:

Goals and Objectives:

By the end of this section, it is expected that residents will understand the determinants of occlusal morphology to include:

- 1. Facial Position of the teeth in relation to the rotational center
- 2. Direction of Rotating condyle in the horizontal plane
- 3.Bennett Movement
- 4. Intercondylar Distance
- 5. Angle of Éminentia
- 6. Direction of Rotating condyle in the vertical plane
- 7. Overlap of maxillary teeth
- 8. Occlusal Plane VS angle of Eminentia
- 9. Curve of Spee

# Lab Component:

1. Acetate tracings based on Huffman and Regenos'

# **Module 2 Theories of Occlusion**

# Section I Part B Theories of Occlusion:

# Part B of Huffman and Regenos' will be augmented with further readings and/or seminar presentations

Goals and Objectives:

By the end of this section, it is expected that residents will:

- 1. Have an introduction to the history and broad philosophies of occlusion:
  - a. Triangular Theory Bonwill 1858
  - b.Spherical Theory-Monson 1920
  - c.Gnathology B.B.Mccollum 1926
  - d.Functionally Generated Path Myer 1934
  - e.Pankey-Mann (Schuyler) 1955
  - f. Anterior Guidance- Schuyler 1950
  - g.Transographics H. Page, 1956
  - h.Neurophysiologic/Electromyographic, R. Jankelson 1953
  - i. Mutual Protection Concept-Stuart and Stallard 1963
  - j. Modern Concepts

# Lab Component:

1. T-scan

# **Module 3 Articulation and Instrumentation**

Goals and Objectives:

By the end of this section, it is expected that residents will:

- 1. Understand the different classification of articulators;
  - a. arcon VS Non-arcon
  - b. Fully adjustable VS Semi Adjustable
- 2. Understand the limitations of each articulator and how to account of them
- 3. Be able to critically evaluate articulator systems and their practical selection for specific clinical situations
- 4. Understand how occlusal morphology *in vivo* may differ based on the limitation of each articulator
- 5. Understand the pantographic tracings and the data collected a. Using D5A articulator
- 6. Understand the importance of Fischer's angle, and what information this provides
- 7. Understand the importance of a custom incisal table.
- 8. Understand the integration of cross mounting of casts for full mouth rehabilitation
- 9. Understand the limitation of using a facebow

### Lab Component:

- 1. Residents will have the opportunity to use different face/earbows
- 2. Demonstration of the KIOS system where residents will understand its advantages and limitations

# **Module 4 Occlusal Analysis and Equilibration**

Goals and Objectives:

By the end of this section, it is expected that residents will:

- 1. Be able to critically evaluate different methods of registration CO/CR
- 2. Understand the objectives of occlusal equilibration
- 3. Understand MICP and variants (Tooth to Tooth, Tooth to two teeth)
- 4. Understand the difference between IN-OUT-IN and OUT-IN-OUT techniques of occlusal equilibration

### Lab Component:

- 1. Residents will have the opportunity to use different methods of CR registration
- 2. Residents will use their mounted casts from Module 1 and perform a mock up occlusal equilibration of themselves.

# LITERATURE REVIEW SEMINARS

1. Current Literature - Weekly

Each resident will be assigned articles for review and discussion. The articles will be from the most recent issues of the Journal of Prosthetic Dentistry (JPD), Journal of Prosthodontics (JP), International Journal of Prosthodontics (IJP), International Journal of Oral and Maxillofacial Implants (JOMI), and selected articles from other major journals.

# 2. Classic Literature - Weekly

Each resident will be assigned articles for review and discussion. The articles will be grouped by subject and arranged in notebooks so as to better understand the why of prosthodontics.

### 3. Objectives:

- a) To maintain a current level of knowledge and understanding relating to recent advances in prosthodontic techniques and materials.
- b) To develop skills to critically evaluate scientific literature.
- c) Establish an awareness of research techniques and analysis.

- a) Each resident is responsible for presenting a summary of the selected articles from the above prosthodontic journals. Supplemental articles from other journals are also reviewed throughout the year.
- b) The presentation will include a statement of purpose, materials and methods, and summary of the results. The discussion will include a review of the statistical methods and relevance to the specialty of prosthodontics.
- c) The Prosthodontic staff will provide overall guidance in review and discussion and clarify technical/theoretical areas.

# PRACTICE MANAGEMENT / ETHICS / ADMINISTRATION

# 1. **Objectives:**

- a.) Provide information on the administrative methods and requirements related to the practice of prosthodontics.
- b.) To expose residents to the process of entering private practice.
- c.) To expose residents to the process of becoming involved in an academic career.

# 2. Guidelines:

- a.) Topics will be presented to include finding the right practice situation, patient management, workload reporting, assistant and laboratory management, and supply acquisition.
- b.) Seminars will be presented by private practitioners and academicians, who will discuss the how's and why's of entering that facet of prosthodontics.

# VISITING CONSULTANTS AND GUEST LECTURERS

Residents are required to attend presentations by visiting consultants and guest lecturers. Residents will also have the opportunity to attend selected consultant presentations at the Prosthodontic Program and at Walter Reed National Dental Center at Bethesda, Bethesda, MD. Residents will be assigned specific duties to support consultant's visits.

# BASIC LIFE SUPPORT/MEDICAL EMERGENCIES

The staff and residents must remain current in basic life support techniques. Classes leading to certification and renewal are provided by the Dental School.

# RESEARCH PROJECT

Each resident will be required to engage in an investigative project and complete a manuscript for publication as a requirement for graduation. Residents will coordinate the project with the Program Director and the research advisor.

### 1. **Objectives:**

- a) To provide knowledge and understanding of scientific methodology, statistics, research design, and scientific writing.
- b) To create an atmosphere for better interpretation of scientific literature and a desire for continual study.

### 2. Guidelines:

- a) Research may take the form of a clinical or laboratory investigation. Surveys are not sufficient to meet his objective.
- b) Residents will adhere to the listed time schedule in preparation of the research paper.
- c) The completed paper must be in a format acceptable for publication by the specified journal prior to graduation from the program.

# POSTER PRESENTATIONS

Residents will develop a technique or item of interest suitable for table clinic presentation twice during the program and present at a local or national meeting.

# STANDARDS OF CARE EXAMINATION

The Standards of Care examinations are formal evaluations of clinical performance for a specific series of patient treatment situations and are conducted on all patients throughout the program. Residents are graded on reference based procedure steps acceptable, as needing improvement, or unacceptable standards of care. The standards are an outcome assessment measure designed to evaluate teaching methods and the student's clinical performance and understanding of a comprehensive treatment procedure.

The areas of evaluation include:

- a) Fixed Prosthodontics
- b) Removable Prosthodontics
- c) Implant supported Prosthodontics Prostheses
- d) Temporomandibular Disorders
- e) Maxillofacial Prosthodontics

### WRITTEN EXAMINATIONS

Written examinations, patterned after the American Board of Prosthodontics Section A exam are given two times a year. They are primarily designed to allow the resident to identify weak areas in recall and understanding of the material. As an outcome assessment measure, they also give the teaching staff important information on resident comprehension and allow for reinforcement in these selected areas. Third year residents, who successfully pass Section A of the American Board of Prosthodontics Certification Examination are exempt from this requirement.

### ORAL EXAMINATION

Two, one hour oral examinations are given twice a year and are patterned after Section B of the American Board of Prosthodontics exam. The exam is designed to assess the resident's knowledge and comprehension in the broad field of Prosthodontics and to help better prepare the resident to challenge the American Board of Prosthodontics examination. Each resident is required to take all three oral exams of Section B prior to graduation. Oral quizzes are given weekly, if not daily throughout the program.

### **RESIDENT TEACHING**

The opportunity for organized teaching experience exists throughout the program. The resident lecture presentations, demonstrations and "mentoring" of the new residents prepare them well for future teaching responsibilities. The poster presentation at a State or National level provides good exposure and experience to large audiences. The third year residents will also present to the Maryland Section of the American College of Prosthodontists and to the residents and staff of the Navy's PG Prosthodontic Residency.

# V. CLINICAL OBJECTIVES AND GUIDELINES

# FIXED PARTIAL DENTURE PROSTHODONTICS

### 1. **Objectives:**

- a) Provide an in-depth knowledge of all aspects for the practice of fixed prosthodontics.
- b) Develop Competency in clinical and laboratory practice for a wide variety of fixed prosthodontic treatment situations.
- c) Develop an in depth level of knowledge and skill in the use of instruments, equipment, and materials related to fixed prosthodontics.
- d) Develop a working knowledge of the inter-relationship of fixed prosthodontics with other clinical specialties and laboratory technicians.

- a) In-depth knowledge of fixed prosthodontics will be accomplished through formal lectures (staff, resident, visiting consultant), practical exercises/demonstrations, national and local meetings, and topic seminars. Textbook and current literature assignments will supplement the instruction.
- b) Clinical Competency will be developed through the practical application of didactic knowledge to a wide variety of patient treatment situations. Patients are assigned with increasingly more complex requirements and a practical problem solving approach is emphasized. Laboratory competency will be developed through practical exercises and demonstrations by the staff and laboratory technicians. First year residents will perform all related laboratory procedures until competency has been demonstrated to the teaching staff. A variety of articulators will be utilized.
- c) Knowledge and skill in the use of instruments, equipment and materials will be developed through practical exercises/demonstrations, topic seminars, and their use in clinical and laboratory patient treatment exercises.
- d) Interaction with other clinical specialties will be accomplished through scheduled joint treatment planning seminars, formal lectures, and the day-to-day referral of each resident's patients.

# REMOVABLE PARTIAL DENTURE PROSTHODONTICS

### 1. **Objectives:**

- a) Establish an in-depth understanding and knowledge of all aspects of Removable Partial Denture Prosthodontics.
- b) Develop advanced clinical capability in treatment planning, preparation, and placement of a wide variety of removable partial dentures.
- c) Develop an understanding and capability to analyze and design partial denture frameworks based on accepted rationales. Instruct in the transference of design criteria to the dental laboratory technician for fabrication of the prosthesis.
- d) Develop a thorough working knowledge of all laboratory procedures related to removable partial denture prosthodontics.
- e) Develop a working knowledge of the relationship between other clinical specialties and removable partial denture prosthodontics.

- a) In-depth knowledge of removable partial denture prosthodontics will be accomplished with lecture presentations (staff, resident, visiting consultants) and through practical exercises/demonstrations, national meetings, and literature reviews.
- b) Staff and laboratory personnel will coordinate practical exercises and demonstrations to develop Competency in laboratory technique. The residents will accomplish all related laboratory procedures in conjunction with patient care until satisfactory Competency is demonstrated.
- c) The accomplishment of advanced levels of clinical practice in a range of clinical situations will be emphasized, with didactic knowledge providing a foundation for rational treatment.
- d) Joint treatment planning sessions will be structured to provide interaction between clinical specialties.

# COMPLETE DENTURE PROSTHODONTICS

### 1. **Objectives:**

- a) Establish an in-depth knowledge of all aspects of complete denture prosthodontics.
- b) Develop clinical expertise in patient care at a specialty level of Competency.
- c) Develop a thorough knowledge of all aspects of patient referral to allied specialties.
- d) Become proficient in the fabrication of implant supported prostheses both fixed and removable.

- a) In-depth knowledge of complete denture prosthodontics will be established through lecture presentations (staff, resident, consultant), practical / exercise/ demonstrations, and by literature reviews.
- b) Practical exercises and demonstrations will be utilized to develop expertise in all phases of clinical and laboratory fabrication of complete dentures. First year residents will perform all related laboratory tasks until Competency is demonstrated.
- c) The clinical practice of advanced complete denture prosthodontics will include experience in overdenture fabrication, fabrication of single complete dentures, immediate dentures (including all surgical phases), and opposing complete dentures. A variety of denture occlusions will be utilized to allow for rational selection of occlusal schemes based on individual clinical situations.
- d) Interaction with other clinical specialties will be accomplished through scheduled joint treatment planning sessions related to pre-prosthetic surgery, implant surgery, maintenance, and other clinical specialties as appropriate.

# **MAXILLOFACIAL PROSTHETICS**

# 1. **Objectives:**

- a) To have an Understanding of the cancer disease process and cancer treatment modalities.
- b) To understand the importance of a multidisciplinary approach to treatment of patients with maxillofacial defects.
- c) To have experiences in the treatment of acquired maxillary and mandibular defects.

- a) Completion of a maxillofacial prosthetic course during the 2<sup>nd</sup> or 3<sup>rd</sup> year of the program.
- b) To treat a maxillofacial patient.

### MAXILLOFACIAL PROSTHODONTICS Fall 2016 Tuesday 10:00-12:00 Room 9106 (unless otherwise indicated) This course is given in the Fall of even number years

# September

| Mon<br>1500-1700 | 12 | Facial Prostheses  | Dr. Singer     |
|------------------|----|--|----------------|
| 1000 1700        | 20 | Head and Neck Radiation and<br>Dental Implications       | Dr. Bolding    |
|                  | 27 | Dental Oncology –Chemotherapy                            | Dr. Meiller    |
|                  |    |  |                |
| October          | 11 | Moulage  | Dr. Driscoll   |
|                  | 18 | Maxillectomy Patients                                    | Dr. Driscoll   |
|                  | 25 | Framework Design for Maxillectomy<br>Patients            | Dr. Driscoll   |
|                  |    |  |                |
| November         | 1  | Ocular Prostheses  | Dr. Driscoll   |
|                  | 8  | Radiation Oncology/Miscellaneous Prostheses              | Dr. Driscoll   |
|                  | 15 | Combat Related Injuries and<br>Maxillofacial Prosthetics | Dr. Wilson     |
|                  | 22 | Implants in Radiated Bone D                              | r. Abdolazadeh |
|                  | 29 | Final Exam   | Dr. Driscoll   |

### **IMPLANT PROSTHODONTICS**

#### 1. **Objectives:**

- a) Provide an in-depth knowledge of all aspects of the practice of implant prosthodontics.
- b) Develop competency in clinical and laboratory practice for a variety of implant prosthodontic treatment situations.
- c) Develop a high level of knowledge and skill in the use of instruments, equipment, and materials.
- d) Develop a working knowledge of the interrelationship of implant prosthodontics with other dental specialties.
- e) Experience implant placement as a prosthodontic procedure.

- a) In-depth knowledge of implant prosthodontics will be accomplished through formal lectures (staff, resident, visiting consultants), practical exercises/ demonstrations and topic seminars. Textbook and current literature assignments will supplement the instruction.
- b) Clinical Competency will be developed through the practical application of didactic knowledge to a variety of edentulous and partially edentulous patient treatment situations. Residents will also attend the Prosthodontic/Periodontic/OMFS Conferences. Laboratory competency will be developed through practical exercises and demonstrations by the staff and laboratory technicians. Residents will perform all related laboratory procedures until competency has been demonstrated to the teaching staff.
- c) Knowledge and skill in the use of instruments, equipment and materials will be developed through clinical and laboratory patient treatment exercises.
- d) The prosthodontic resident will design and fabricate a surgical guide for all cases. The resident will coordinate stage 1 surgery with the surgeon and provide them with the surgical guide prior to surgery. In addition, the resident will place implants on selected patients.
- e) Interaction with other clinical specialties will be accomplished through scheduled joint treatment planning seminars, formal lectures and the day-to-day referral of each resident's patients.
### IMPLANT SURGICAL PLACEMENT

### 1. **Objectives:**

- a)Develop competency to clinically assess a patient's suitability for implant therapy. To assess any physical, systemic or medical limitation that could complicate implant surgical placement.
- b)Develop a strong background in implant treatment planning in order to provide the partially edentulous and edentulous patient with the best standard of care. This will include the use of digital technology.
- c)Develop a comprehensive treatment plan. All available treatment options must be presented to the patient prior to initiating therapy. To ensure the patient is fully informed about other treatment options, indications, contraindications, advantages and disadvantages of using implant therapy.
- d)Develop competency in evaluating and interpreting radiographic imaging of the mandible and the maxilla. Determine pre-surgical anatomical and prosthodontic considerations prior to implant placement.
- e)Develop a competency level to perform implant surgery using aseptic surgical techniques including: socket preservation, raising mucoperiosteal flaps, guided bone regeneration and suture placement
- f) Develop a competency level to use appropriate implant selection, grafting materials, barriers, pharmaceutical agents and pre-operative and postoperative medications following implant surgery.
- g)Develop competency in managing possible surgical complications

### 2. Guidelines:

- a) In-depth knowledge of implant placement will be accomplished through formal lectures (staff, resident, visiting consultants), practical hands-on exercises, demonstrations, national meetings, and topic seminars. Textbook and current literature review assignments will supplement the instruction.
- b) Clinical Competency in pre-surgical and post-surgical care will be developed through the practical application of didactic knowledge to a variety of cases.
- c) Knowledge and skill in the use of instruments, equipment, implant systems, implant planning software and guided bone regeneration materials will be developed through clinical patient treatment exercises. Digital technology will be utilized to help diagnosis, plan, and fabricate surgical guides (including bone reduction guides) to better treat their patients. Residents will be expected to use the latest technology on all their patients.
- d) Interaction with other clinical specialties will be accomplished through scheduled joint treatment planning seminars with periodontics, orthodontics and OMFS and day-to-day referrals from the various dental clinics.

## TREATMENT PLANNING CONFERENCE

This treatment planning conference is held for patients with unusual, multi- disciplinary or complex treatment situations. They are presented for evaluation and review.

### 1. **Objectives:**

- a) To develop an understanding of the orderly, detailed and comprehensive evaluation of a patient and the development of an accurate diagnosis and logical treatment plan.
- b) Provide a vehicle for interaction with the major dental specialties in the treatment planning process.
- c) Develop concepts of alternative treatment and appropriate application of a variety of treatment concepts and techniques.
- d) Provide a format for formal treatment plan presentation.

### 2. Guidelines:

- a) Comprehensive treatment plans will be developed based on clinical and radiographic examination, articulated diagnostic casts, scans, and pertinent laboratory tests.
- b) Formal oral presentations will be made to the combined prosthodontic and specialty staff, as needed. The presentation will include clinical photos, history, clinical exam, articulated diagnostic casts (pre-op and diagnostic waxing), and a primary and alternative treatment plan.
- c) A consensus treatment plan will be formulated by the staff and residents. This treatment plan will be documented and presented to the patient by the resident.
- d) Follow-up care will be coordinated and monitored by the resident who formally presented the patient for evaluation.

### CONJOINT SEMINAR

### 1. **Objectives:**

- a) Develop a thorough Understanding with the clinical specialties of Periodontics, Endodontics, and Orthodontics.
- b) Establish a protocol for professional referral of patients for other therapies in conjunction with prosthodontic treatment.
- c) Maintain current awareness of techniques in other specialties as they relate to prosthodontic treatment.

### 2. Guidelines:

- a) Understanding with the other clinical specialties will be accomplished by formal lectures by the various clinical specialty staff.
- b) Interaction with the other specialties will be provided by joint conferences, treatment planning sessions, and combined dental treatment.
- c) Selected current scientific journal articles will be assigned and reviewed to maintain an awareness of techniques and trends in other specialties.

## VI. LABORATORY OBJECTIVES AND GUIDELINES

## PROSTHODONTIC LABORATORY PROCEDURES

### A. Objectives:

- 1. Develop a level of competency in analog and digital laboratory aspects of prosthodontic treatment.
- 2. Develop the ability to manage and train ancillary personnel or semi-skilled technicians in all prosthodontic laboratory procedures.
- 3. Develop a working knowledge of the administrative procedures required to run a laboratory.

### B. Guidelines:

- 1. The first year resident will complete all laboratory procedures for patients they are treating until demonstrated competency is reached.
- 2. The second and third year residents may utilize the clinic laboratory or send their cases to private laboratories, except for removable work that will be done by the resident.

## VII. STANDARDS TO ASSESS OUTCOMES

Purpose and objectives of the Prosthodontic Residency Program:

### A. Planning and Evaluation Process

The planning and evaluation process of the prosthodontic program encompasses a broad based involvement of the faculty and administration. The program director, faculty, and current and past residents have input into the planning and evaluation process. Specific guidance is obtained from the American Dental Association, Standards for Advanced Specialty Education Programs in Prosthodontics. Additionally, an semi-annual mentors conference sponsored by the American College of Prosthodontists provides for an update on a variety of applicable topics.

### B. Mentor Evaluation of Resident

- 1. The residents are evaluated by the mentors using both qualitative and quantitative criteria.
  - a. Qualitative (Pass Fail)
    - 1) Meets Program Standards
    - 2) Fails to Meet Program Standards
  - b. Quantitative (Letter grades)
    - A = Outstanding
    - B = Satisfactory
    - C = Unsatisfactory
    - I = Incomplete
- 2. Reports and test results that are done throughout the year.
  - a. **Residents Evaluation Report** A quarterly report on each resident assessing academic, clinical, and personal performance.
  - b. **Presentation Reports** Critiques will be done by the mentors after each resident presentation. Approximately 8 per year.
  - c. **Mock Boards** Comprehensive written and oral examination and patient presentation. Two times a year.
  - d. **Course grades** Results of formal didactic courses.

- e. **Periodic Quizzes** Designed to determine if students are learning and retaining new material.
- f. **Periodic Oral Challenges** Designed to help determine how well students are grasping new concepts and ideas.

## C. Assessment of Resident Clinical and Academic Achievement

1. **Knowledge Outcomes:** Understanding general facts specific to a particular field; understanding processes, theories, and methodologies.

### Methods of Assessment:

- a. Results of written exams
- b. Results of oral exams
- c. Results of oral presentation evaluations
- d. Results of Standards of Care Evaluations by mentors
- e. Results of quarterly written reports by mentors
- 2. **Skills Outcomes:** Attainment of academic, communication, leadership/interpersonal, vocational, manual, and other skills.

### Methods of Assessment:

- a. Results of Standards of Care evaluation by mentors
- b. Results of oral presentation evaluations
- c. Results of quarterly written reports by mentors
- 3. **Values and Beliefs:** Development of effective characteristics appropriate to a graduate of the program. Development of a format to assess the attitudes and satisfaction of residents in regards to their program.

### Methods of Assessment:

- a. End of year critique by residents
- b. End of year evaluation of residents by faculty
- c. End of program critique by residents
- d. One year post graduation critique by former residents
- e. Results of written consultant evaluations
- f. Results of quarterly written reports by mentors

4. **Relationships/Behavioral Measures:** Achievement of a productive and cooperative mentor/resident relationship; compatible clinician/dental assistant or laboratory technician relationship.

### Methods of Assessment:

- a. Academic probation rates
- b. Attrition/withdrawal rates
- c. Success of candidates in obtaining specialty board certification
- d. Results of one year post-graduation critique
- e. Results of five year post-graduation critique

### FIXED PROSTHODONTICS (Standards of Care)

### A. Medical-Dental History and Treatment Plan:

A thorough and complete medical and dental history is obtained from the patient and the patient's dental record to include required medical and/or dental consultations. Any medical or dental conditions are considered in the treatment plan. The plan is based on sound prosthodontic procedures. The resident is technically capable of completing the proposed plan with staff supervision. The patient is in agreement with the plan and understands the time required to complete it.

### B. Diagnostic Casts:

Are accurate, clean, bubble-free reproductions of the existing dental anatomy. Casts should be properly related on an appropriate articulator.

### C. Anesthesia:

Local anesthetic should be administered correctly, gently, and in proper amounts so that the prosthodontic procedure can be completed in a pain free environment.

### D. Preparations:

Should be completed to provide for proper retention and resistance form and to provide adequate thickness of metal and/or porcelain to develop optimal occlusion, contours, and esthetics.

### E. Retraction:

Retraction of soft tissues should be accomplished gently with a minimal of trauma to the gingival tissue. All tooth margins should be exposed and all hemorrhage controlled.

### F. Final Impressions:

Must have an accurate, non-distorted reproduction of all required dental structures with clearly defined, void-free margins of all tooth preparations.

### G. Jaw Relation Records:

Records should accurately reproduce centric relation occlusion when working casts are articulated. Records should be of an appropriate material to allow handling by laboratory personnel without distortion or fracture.

### H. Provisional Restorations:

Provisional crowns or fixed partial dentures of an acceptable material should be placed on all preparations to cover exposed dentin. Contours and contacts should promote gingival health and maintain tooth position. Occlusion should be comfortable and adequate to prevent eruption of opposing dentition or preparations. Esthetics of anterior provisional restorations should be acceptable within the limitations of the material used.

### I. Laboratory Procedures:

- 1. Working casts should be trimmed, smoothed, and free of all bubbles and voids. Land areas of working casts should be trimmed and rounded.
- 2. Dies are to be trimmed in a manner prescribed by the Fixed Prosthodontic mentor in order to expose and clearly delineate all margins. Margins are to be marked with red pencil. Die spacer in the appropriate thickness should be applied to all dies to within 1mm of the margin. Casts should be articulated prior to placing die spacer when an interocclusal record is used.
- 3. Articulating Indices: All jaw relation records should be trimmed so that cusp tips only occlude with the record and in such a way that the laboratory technician can assure that all teeth fit the record. Occlusal indices should be marked on both maxillary and mandibular casts with colored pencil or cut with a separating disk.
- 4. Prescription Forms: All laboratory prescription forms should be completed to include appropriate information. All prescription forms going to another laboratory must be countersigned by a prosthodontic mentor and logged in.

### J. Try-In:

- 1. Margins: All crown margins should be closed as is reasonably and clinically detectable by use of an explorer.
- 2. Contours: All crown contours should replicate the patient's ideal natural tooth as closely as possible. Crowns should be measured buccal-lingually and cusp to cusp to prevent overcontouring.

- 3. Contacts: Contact should not allow the easy passage of dental floss. Lack of contact (if applicable) constitutes a remake or the addition of porcelain or solder.
- 4. Occlusion: All restorations should restore the proper occlusal plane of the patient. This may include recontouring or restoration of the opposing dentition or prostheses. All prostheses should contact in centric occlusion or maximum intercuspation to hold shim stock (12mu) firmly. All non-restored teeth both ipsilateral and contralateral should also hold shim stock firmly. Restorations should be free of lateral interferences in accordance with the patient's occlusal scheme, i.e., group function, canine disclusion, etc.
- 5. Shade: Porcelain shades should be esthetically acceptable to the patient.
- 6. Porcelain Characterization: Extrinsic coloration will be added to porcelain restorations as required to more closely match the natural dentition. Porcelain restorations should be glazed without vacuum to the appropriate smoothness and finish and match the patient's dentition. Porcelain may be polished instead of glazed in small areas.
- 7. Polish: All metal surfaces are to be free of scratches and oxidation, and be smoothed and highly polished prior to cementation.

### K. Cementation:

Final restorations are to be cemented with an appropriate cement as outlined by the mentors. All excess cement must be removed prior to dismissal of the patient.

### L. Patient Management:

All patients in Prosthodontics should be treated in accordance with the highest professional standards. Derogatory comments or negative comments will not be made. Any questions concerning patient treatment should be discussed in private with the appropriate mentor.

### M. Time Management:

Residents should pre-plan all prosthodontic treatment prior to their rotation day. Residents should arrive on time, begin treatment promptly, and complete treatment in an expeditious manner. All laboratory procedures should be accomplished to allow the laboratory technicians ample time to meet the delivery date.

### N. Standards of Care:

All patients will be evaluated using the appropriate standards of care form.

## FIXED PROSTHODONTICS STANDARDS OF CARE EVALUATION FORM

| Resident's Name<br>Patient's Name   |            | -           |              |
|---|------------|-------------|--------------|
| Month   | Procedure  |             |              |
| <ol> <li>Patient's Medical &amp; Dental<br/>History &amp; Treatment Plan</li> </ol>   | Acceptable | Needs Impr. | Unacceptable |
| 2. Diagnostic Casts   |            |             |              |
| 3. Anesthesia   |            |             |              |
| 4. Preparations   |            |             |              |
| 5. Retraction   |            |             |              |
| 6. Final Impressions  |            |             |              |
| 7. Jaw Relation Records   |            |             |              |
| 8. Provisional Restorations   |            |             |              |
| <ol> <li>Laboratory Procedures         <ul> <li>Casts:</li> </ul> </li> </ol>   |            |             |              |
| <ol> <li>Bubbles, dust, voids</li> <li>Periphery trimmed</li> <li>Positional record</li> <li>Articulated casts</li> <li>Custom incisal guide</li> </ol> |            |             |              |

| b. Dies:   | Acceptable Needs Impr. Unaccepta | able |
|--|----------------------------------|------|
| <ol> <li>Axial reduction</li> <li>2) Occlusion reduction</li> <li>3) Taper of Preparation</li> <li>4) Trim of dies</li> <li>5) Margins marked</li> <li>6) Stability of dies</li> </ol> |                                  |      |
| c. Laboratory Prescription:  |                                  |      |
| <ol> <li>Patient data</li> <li>Facial margin type</li> <li>Special instructions</li> </ol>   |                                  |      |
| 10. Try-In:<br>a. Margins  |                                  |      |
| b. Contours  |                                  |      |
| c. Contacts  |                                  |      |
| d. Occlusion   |                                  |      |
| e. Shade   |                                  |      |
| f. Characterization  |                                  |      |
| g. Polish  |                                  |      |
| 11. Cementation  |                                  |      |
| 12. Patient Management   |                                  |      |
| 13. Time Management  |                                  |      |
| Treatment Assessment   | Performance Standard Assessment  |      |
| 1. Acceptable  | Resident:                        |      |
| 2. Needs Improvement   | Mentor:                          |      |
| 3. Unacceptable  | Date:                            |      |
| COMMENTS:  |                                  |      |

### **REMOVABLE PROSTHODONTICS**

(Standards of Care)

### 1. Patient History and Treatment Plan

- A. An adequate history is obtained from the patient and required medical and dental consultations have been obtained. All necessary radiographs are present and diagnostic.
- B. The patient's medical conditions and past dental history will be considered in the treatment plan and the plan based on sound prosthodontic procedures. The resident will have discussed options and possible complications. The patient should be in agreement with the plan and the time table to complete it.

### 2. Diagnostic Casts

Casts will be accurate, bubble-free reproductions of the required structures and properly articulated when required. Casts will be surveyed and a tentative removable partial denture design drawn on the lab prescription form. The final design will be approved by a mentor.

### 3. **Preparations**

Rest preparations and tooth modifications should be carried out with sound prosthodontic principles in mind, following the proposed design. The amount of tooth structure removed should provide for the desired support, retention, and stabilization of the removable partial denture or overdenture as well as proper thickness for development of occlusion and esthetics. Preparations should be checked by the mentor before final impressions.

### 4. **Final Impressions**

The final impression must include all the desired anatomical structures needed in the construction of the prosthesis and must be accurate and distortion free. Border extensions and tissue pressure should be in accordance with the impression technique used.

### 5. Final Casts

All final casts must be neat and free of bubbles and voids with land areas smoothed. The RPD master cast will be properly tripoded and borders of the desired major connectors may be marked. Prescription forms with neat, legible removable partial denture designs and instructions will be countersigned by a prosthodontic mentor prior to being sent to the laboratory.

### 6. **RPD Framework Try-In**

The completed framework should be evaluated prior to the try-in. The framework must completely seat without rocking. The fit of all components, the retention, and the occlusion must be verified in the mouth.

### 7. Centric Jaw Relation Records

Record bases must be accurate and stable. Jaw relation records must accurately record the appropriate centric position at the proper occlusal vertical dimension. An appropriate material should be used and the record must be reproducible. A facebow will be used. Acceptable anterior and posterior shades and molds should be selected and included with the design and other necessary information on the prescription form.

### 8. Wax Try-In

The correct centric relation position, occlusal vertical dimension, lip support, mid line, occlusal plane and phonetics should be verified. The size, shape, shade, and arrangement of the anterior teeth should be accepted by the patient and the doctor.

### 9. Insertion

All acrylic surfaces must be free of sharp projections or edges. Tissue bearing surfaces must be evaluated with Pressure Indicator Paste and the proper border extensions verified. The occlusion should provide uniform contacts in excursive movements and the principles of a definite occlusal scheme should be identifiable. The cameo surface of the prosthesis should be properly contoured and highly polished.

### 10. Home Care Instructions and Post Insertion Care

The patient must be given the appropriate wearing, care, and cleaning instructions. Adequate follow-up appointments must be scheduled to verify the fit, occlusion, and the patient's management of the prosthesis.

### 11. Laboratory Relines/Rebases; Corrected Casts

An accurate impression must be made at the proper occlusal vertical dimension. The framework must be completely seated.

### 12. Patient Management

All patients must be treated in accordance with the highest professional standards.

### 13. Time Management

All clinical procedures should be preplanned, discussed, and approved by the mentor. Residents should arrive on time, begin treatment promptly, and complete treatment in an expeditious manner. All laboratory procedures should be accomplished to allow the laboratory technicians ample time to meet the delivery date.

### 14. Laboratory Procedures

Impression trays should be smooth and extended in accordance with the technique being used. The record base should be free of all sharp edges and must be accurate and stable. The tooth set-up must be in accordance with the principles of the occlusal scheme being used. The processed prosthesis should be dense and have no more than 1.5 to 2mm pin opening at the lab remount. The finished prosthesis should be highly polished with no sharp edges, blebs, or flash.

### 15. Standards of Care

All patients will be evaluated using the appropriate standards of care form.

## REMOVABLE PARTIAL DENTURES

### STANDARDS OF CARE EVALUATION FORM

| Resident                                 | edure      |             |              |
|--|------------|-------------|--------------|
| Patient's Name                           |            |             |              |
| Month                                    |            |             |              |
| 1. Patient's History &<br>Treatment Plan | Acceptable | Needs Impr. | Unacceptable |
| 2. Diagnostic Casts                      |            |             |              |
| 3. RPD Design                            |            |             |              |
| 4. Rest Preparations                     |            |             |              |
| 5. Final Impressions                     |            |             |              |
| 6. Master Casts                          |            |             |              |
| 7. Framework Try-In                      |            |             |              |
| 8. Corrected Cast                        |            |             |              |
| 9. CJR                                   |            |             |              |
| 10. Tooth Selection                      |            |             |              |
| 11. Wax Try-In                           |            |             |              |
| 12. Insertion                            |            |             |              |
| 13. Post Operative Tx                    |            |             |              |
| 14. Patient Management                   |            |             |              |
| 15. Resident Time Management             |            |             |              |
| 16. Laboratory Reline, RPD               |            |             |              |
| 17. Lab Procedures                       |            |             |              |
| a. Impression Trays                      |            |             |              |
| b. Record Base                           |            |             |              |
| c. Tooth Set-up Anatomic                 |            |             |              |
| d. Tooth Set-up Zero Degrees             |            |             |              |
| e. Processed Prosthesis                  |            |             |              |
| f. Finished Prosthesis                   |            |             |              |

# REMOVABLE PROSTHODONTICS (Cont'd)

|                      | Acceptable    | Needs Impr.     | Unacceptable |
|----------------------|---------------|-----------------|--------------|
| Monthly Assessment   | Performance S | tandard Assessr | nent         |
| 1. Acceptable        | Reviewed:     |                 |              |
| 2. Needs Improvement | Resident:     |                 |              |
| 3. Unacceptable      | Mentor:       |                 |              |
|                      | Date:         |                 |              |
| COMMENTS:            |               |                 |              |

## COMPLETE DENTURES

## STANDARDS OF CARE EVALUATION FORM

| Resident Procedure                       |            |             |              |
|--|------------|-------------|--------------|
| Patient's Name                           |            |             |              |
| Month                                    |            |             |              |
| 1. Patient's History &<br>Treatment Plan | Acceptable | Needs Impr. | Unacceptable |
| 2. Preliminary Impressions               |            |             |              |
| 3. Border molding                        |            |             |              |
| 4. Final Impressions                     |            |             |              |
| 5. Master Casts                          |            |             |              |
| 6. Location of vibrating line            |            |             |              |
| 7. CJR                                   |            |             |              |
| 8. Tooth Selection                       |            |             |              |
| 9. Wax Try-In                            |            |             |              |
| 10. Insertion                            |            |             |              |
| 11. Clinical Remount                     |            |             |              |
| 11. Post Operative Tx                    |            |             |              |
| 14. Patient Management                   |            |             |              |
| 15. Resident Time Management             |            |             |              |
| 16. Lab Procedures                       |            |             |              |
| a. Impression Trays                      |            |             |              |

| Acceptable | Needs Impr. | Unacceptable           |
|------------|-------------|------------------------|
|            |             |                        |
|            |             |                        |
|            |             |                        |
|            |             |                        |
|            |             |                        |
|            | Acceptable  | Acceptable Needs Impr. |

| Monthly Assessment   | Performance Standard Assessment |
|----------------------|---------------------------------|
| 1. Acceptable        | Reviewed:                       |
| 2. Needs Improvement | Resident:                       |
| 3. Unacceptable      | Mentor:                         |
|                      | Date:                           |
| COMMENTS:            |                                 |

### **TEMPOROMANDIBULAR DISORDERS**

(Standards of Care)

### 1. Medical-Dental History and Treatment Plan

A thorough and complete medical and dental history is obtained from the patient and the patient's dental record to include required medical and/or dental consultation. Any medical or dental conditions are considered in the treatment plan. The prosthodontic resident should be technically capable of diagnosing and completing the conservative treatment plan with staff supervision. The patient is in agreement with the plan and understands the time required to complete it.

#### 2. **Diagnostic Casts**

Are accurate, clean, bubble-free reproductions of the existing dental anatomy. Casts should be properly articulated on an appropriate articulator when indicated.

#### 3. Jaw Relation Records

The resident is capable of performing proper patient jaw manipulations in order to capture appropriate centric relation/occlusion positions. Records should accurately reproduce centric relation/occlusion when working casts are articulated. Records should be of an appropriate material to allow handling by laboratory personnel without severe distortion or fracture.

### 4. Laboratory Procedures

Working casts should be trimmed, smoothed, and free of all bubbles and voids. Land areas of working casts should be trimmed and rounded. The resident should be capable of fabricating stabilizing (flat plane) occlusal splints, soft splints, and anterior jigs.

#### 5. **Prescription Forms**

All laboratory prescription forms should be completed. All prescription forms going to the lab must be countersigned by a Prosthodontic mentor. Prescriptions for medications will be monitored by the staff.

#### 6. Occlusion

All devices should restore the proper occlusal plane of the patient to restore VDO, protect the TMJ, or reduce myofacial pain. This may include recontouring of opposing dentition or splints. All devices should contact in centric relation occlusion or maximum intercuspation to hold shim stock (8mm) firmly. Devices should be free of lateral interferences in accordance with the patient's occlusal scheme, i.e., canine disclusion, group function, etc.

### 7. Delivery

All devices should be smoothed and polished to be irritation free. Devices should be retentive with no movement during functional and para-functional excursions. Residents should provide the patient with instructions as to nature, usage, and care of all devices.

### 8. Follow-up

Residents should provide timely post-insertion visits for patients under splint therapy. All devices should be thoroughly inspected and evaluated as to their effectiveness and any needed adjustments made at this time.

#### 9. Patient Management

All patients should be treated in accordance with the highest professional standards. Derogatory comments or negative comments will not be made. Any questions concerning patient treatment should be discussed in private with the appropriate mentor.

#### 10. Time Management

Residents should preplan all conservative TMD treatment. Residents should arrive on time, begin treatment promptly, and complete treatment in an expeditious manner. All laboratory procedures should be accomplished to allow the laboratory technicians ample time to meet the delivery date.

#### 11. Standards of Care

All patients will be evaluated utilizing the appropriate standard of care form.

### TEMPOROMANDIBULAR DISORDERS STANDARDS OF CARE EVALUATION FORM

| Res                 | ident                      | 's Name   |             |                 |              |  |
|---------------------|----------------------------|---|-------------|-----------------|--------------|--|
| Pati                | ent's                      | Name  |             |                 |              |  |
| Mor                 | nth                        |   | Procedure   |                 |              |  |
| 1.                  |                            | ient's Medical & Dental<br>story & Treatment Plan   | Acceptable  | Needs Impr.     | Unacceptable |  |
| 2. Diagnostic Casts |                            | gnostic Casts   |             |                 |              |  |
| 3.                  | Jaw                        | Relation Records  |             |                 |              |  |
| 4.                  | Lab                        | oratory Procedures  |             |                 |              |  |
|                     | a.                         | Casts:  |             |                 |              |  |
|                     |                            | <ol> <li>Bubbles, dust, voids</li> <li>Periphery trimmed</li> <li>Centric</li> <li>Casts articulated</li> </ol> |             |                 |              |  |
|                     | b.                         | Laboratory Prescription:  |             |                 |              |  |
|                     |                            | 1) Patient data<br>2) Materials   |             |                 |              |  |
|                     |                            | 3) Special instructions   |             |                 |              |  |
| 5.                  | Occlusion                  |   |             |                 |              |  |
|                     | a.<br>b.<br>c.<br>d.<br>e. | Occlusal Plane<br>Contours<br>Contacts<br>Occlusal Scheme<br>Polish   |             |                 |              |  |
| 6.                  | Del                        | ivery   |             |                 |              |  |
| 7.                  | Foll                       | ow-up   |             |                 |              |  |
| 8.                  | Pat                        | ient Management   |             |                 |              |  |
| 9.                  | Tim                        | e Management  |             |                 |              |  |
| Trea                | atme                       | nt Assessment   | Performance | Standard Assess | ment         |  |
| 1.                  | Acc                        | eptable   | Resident    |                 |              |  |
| 2.                  | Nee                        | eds Improvement   | Mentor      |                 |              |  |
| 3.                  | Una                        | acceptable  | Date        |                 |              |  |
| COI                 | име                        | NTS:  |             |                 |              |  |

### MAXILLOFACIAL PROSTHODONTICS

(Standards of Care)

### 1. Medical-Dental History and Treatment Plan

A thorough and complete medical and dental history is obtained from the patient to include the pathology report and radiation/oncology report where indicated. Any medical or dental conditions such as radiation or chemotherapy are then considered in the treatment plan. The prosthodontic resident should be technically capable of completing the treatment plan with staff supervision. The patient is in agreement with the plan and understands the time required to complete it.

### 2. Diagnostic Casts

Are accurate, clean, bubble free reproductions of the existing dental and/or facial anatomy. Casts should be properly articulated on an appropriate articulator when indicated.

### 3. Jaw Relations Records

The resident is capable of performing proper patient jaw manipulations in order to reflect correct relations. Records should be of an appropriate material to allow handling by laboratory personnel without severe distortion.

### 4. Laboratory Procedures

Working casts should be trimmed, smoothed, and free of all bubbles and voids. Land areas of working casts should be trimmed and rounded.

### 5. **Prescription Forms**

All laboratory prescription forms should be completed. All prescription forms going to the lab must be countersigned by the maxillofacial prosthodontist.

### 6. Devices

All devices should restore the proper function and esthetics of the patient. This may include proper velopharyngeal function, mastication, swallowing, speech, or obturation.

### 7. Delivery

All prostheses should be smoothed and polished to be irritation free. Prostheses should be retentive with no movement during function, if possible. Residents should provide the patient with instruction as to the nature, usage, and care of all prostheses.

### 8. Follow-Up

Residents should provide timely post-insertion visits for patients under therapy. All prostheses should be thoroughly inspected and evaluated as to their effectiveness and any needed adjustments made at this time.

### 9. Patient Management

All patients should be treated in accordance with the highest professional standards.

### 10. Time Management

Residents should preplan all maxillofacial treatment. Residents should arrive on time, begin treatment promptly, and complete treatment in an expeditious manner. All laboratory procedures should be accomplished to allow the laboratory technicians ample time to meet the delivery date.

### 11. Standards of Care

All patients will be evaluated utilizing the standard of care forms.

### MAXILLOFACIAL PROSTHODONTICS

## STANDARDS OF CARE EVALUATION FORM

| Res  | ident   | 's Name   |             |                 |              |
|------|---|---|-------------|-----------------|--------------|
| Pati | ent's   | Name  |             |                 |              |
| Mor  | th  |   | Procedure   |                 |              |
| 1.   | <ol> <li>Patient's Medical &amp; Dental<br/>History &amp; Treatment Plan</li> </ol> |   | Acceptable  | Needs Impr.     | Unacceptable |
| 2.   | Dia   | gnostic Casts   |             |                 |              |
| 3.   | Fina  | I Impressions   |             |                 |              |
| 4.   | Jaw   | Relation Records  |             |                 |              |
| 5.   | Lab   | oratory Procedures  |             |                 |              |
|      | a.  | Casts:  |             |                 |              |
|      |   | <ol> <li>Bubbles, dust, voids</li> <li>Periphery trimmed</li> <li>Centric</li> <li>Casts articulated</li> </ol> |             |                 |              |
|      | b.  | Laboratory Prescription:  |             |                 |              |
|      |   | 1) Patient data<br>2) Materials<br>3) Special instructions  |             |                 |              |
| 6.   | Occ   | lusion  |             |                 |              |
|      | a.<br>b.<br>c.<br>d.<br>e.  | Occlusal Plane<br>Contours<br>Contacts<br>Occlusal Scheme<br>Polish   |             |                 |              |
| 7.   | Deli  | very  |             |                 |              |
| 8.   | Foll  | ow-up   |             |                 |              |
| 9.   | Pati  | ent Management  |             |                 |              |
| 10.  | Tim   | e Management  | <u> </u>    |                 |              |
| Trea | atme  | nt Assessment   | Performance | Standard Assess | ment         |
| 1.   | Acc   | eptable   | Resident    |                 |              |
| 2.   | Nee   | eds Improvement   | Mentor      |                 |              |
| 3.   | Una   | acceptable  | Date        |                 |              |
| COI  | име   | NTS:  |             |                 |              |

#### IMPLANT SURGICAL PLACEMENT (Standards of Care)

### 1. Review patient's Medical & Dental History and medication Interaction

A thorough medical and dental history is obtained from the patient's dental record to include required medical and/or dental consultations with Periodontics, Endodontics, Oral Surgery, Oral Medicine, Orthodontics. Review of medical conditions that could make a patient unsuitable for implant treatment or could complicate surgery

Resident should be able to determinate patient's medication interactions and need for medical consultation.

#### 2. Diagnostic Articulated Casts

Accurate, clean, bubble-free reproductions of the existing dental anatomy and surrounded soft tissue should be fabricated.

Two sets of diagnostic casts, one set as pre-treatment record and a second set for diagnostic wax-up should be accurately articulated at the proposed vertical dimension of occlusion to reveal available mesial-distal, buccal-lingual, and interocclusal space for implant placement.

#### 3. Diagnostic Waxing and Radiographic/surgical Guide

Guides should indicate the desired location and inclination of implants during placement. Radiographic guides will be fabricated for every patient. For overdenture or hybrid prostheses, dentures will be fabricated to the wax stage to determine proper location of implants, type of abutments for stage 2, and ultimately the type of retention mechanism, i.e.: precision attachments, locator, ERA, etc. A surgical guide will be made based on this information. For partially edentulous prostheses, a complete waxing will be completed to determine contours of the final prosthesis, type of prosthesis to be fabricated, i.e.: cemented vs. screw retained, type of abutment for stage 2, etc.: Final position of implants will be based on these decisions. A surgical guide will be fabricated based on this information using conventional guide methods or Nobel Biocare guided surgery methods as needed. Digital technology is to be used when applicable and advantageous to the patient.

#### 4. Diagnostic imaging

Distortion-free intraoral radiographs should be taken. Appropriate imaging of the mandible and the maxilla, and interpret the findings to inform treatment. Use of cone beam CT is required and should be read with a help of planning software.

Evaluate surgical anatomy and/or pathological process of the maxilla, the mandible and the surrounding tissues.

Accurately identify location of vital structures: i.e. maxillary sinus, mandibular inferior alveolar canal, mental foramen, incisive canal.

Evaluate quality, quantity and morphology of the bone in possible implant

sites.

### 5. Treatment Plan & Implant selection

Upon presentation of photographs, articulated cast, diagnosis waxing and cone beam CT, a plan based on sound surgical and prosthodontic procedures will be formulated.

Prior to initiating therapy, a comprehensive treatment plan, including caries removal, disease control, periodontics, endodontics, etc. must be formulated. All available treatment options must have been presented to the patient prior to beginning therapy.

Know the principles and process of obtaining patient consent form prior to implant treatment: other treatment options, indications and contraindication, advantages and disadvantages.

At this point selection of surgical sites are made and surgical materials are ordered with 15 working days of anticipation. Please see Dental Implant Prosthetic Order Form and submit form to Mail Box Location-Rm.4453 to Rose Morgan at least 15 working days prior to scheduling the surgical procedure.

### 6. Surgical Procedure

Perform surgery following effective control of infection and principles of aseptic techniques, proper wear of surgical gowns, mask and sterilized non-latex gloves.

Proper medical management of patient, Blood Pressure must be taken at the beginning of each visit.

Practice appropriate record keeping, treatment plan consent, patient consent on day of treatment, axium notes on day of treatment.

Manage appropriate pharmaceutical agents and know interaction with existing medication/s. Understand prescription of pre-operative and post-operative medications- antibiotics, analgesics, anti-inflammatory, antihistamines/decongestants and anti-microbials, ie. Chlorhexadine gluconate oral rinse.

### 7. Post-Surgical Period

Understand the healing processes that normally occur following implant surgery- stage 1 vs. stage 2 procedures.

Identify early and late complications and do follow-up treatment as needed: i.e. 1 day after immediate placement, immediate loading, extraction and immediate delivery of prosthesis, 7 days after conventional implant placement. Cover fixtures or healing abutments should be placed accordingly and if not visible clinically a final radiograph confirming seating of the abutment is needed.

### 8. Phase 2 – Surgery

Understand need for stage 1 or stage 2 surgical procedures. Transmucosal abutments will be placed at the appropriate time. Understand selection of mucoperiosteal flap, apical reposition flap or tissue punch for stage 2 procedures. Complete seating of the abutments to underlying fixtures must be verified radiographically, if not visible clinically.

### 9. Home Care Instructions

Instruct patient of surgical care, Coe-pack placement, use of reusable insulated cold pack, chlorhexidine rinse. A demonstration of the proper cleaning and care of the interim prosthesis must be given to the patient at the time of insertion. The patient should be given a follow-up appointment to evaluate and reinforce surgical care.

### 10. Post-Surgical Care

Following insertion of the implant placement, the patient must be seen in 1 day, 7 days or a 2 -week period depending on the type of surgery performed.

### 11. Standards of Care

All patients will be evaluated utilizing the appropriate standards of care forms.

### IMPLANT PROSTHODONTICS

(Standards of Care)

### 1. Medical-Dental History

A thorough medical and dental history is obtained from the patient's dental record to include required medical and/or dental consultations. Any medical or dental conditions are considered in the treatment plan.

### 2. Diagnostic Articulated Casts and Radiographs

Accurate, clean, bubble-free reproductions of the existing dental anatomy should be fabricated. Casts should be accurately articulated at the proposed vertical dimension of occlusion to reveal available mesial-distal, buccal-lingual, and interocclusal space for implant placement. Appropriate radiographs will be available. Measuring guides will be used and potential distortions understood.

#### 3. Treatment Plan

A plan based on sound surgical and prosthodontic procedures will be formulated. Upon approval of the mentors, a treatment plan that the resident is technically capable of completing under staff supervision can be initiated.

### 4. Diagnostic Waxing and Surgical Guide

Guides should indicate the desired location and inclination of implants during Phase I placement. Surgical guides will be fabricated for every patient. For overdenture or hybrid prostheses, dentures will be fabricated to the wax stage to determine proper location of implants, type of abutments for stage 2, and ultimately the type of retention mechanism, i.e.: clips, locator, ERA, etc. A surgical guide will be made based on this information. For partially edentulous prostheses, a complete waxing will be completed to determine contours of the final prosthesis, type of prosthesis to be fabricated, i.e.: cemented vs. screw retained, type of abutment for stage 2, etc.: Final position of implants will be based on these decisions. A surgical guide will be fabricated based on this information.

### 5. Phase I - Post Surgical Period

Existing removable partial dentures or complete dentures should be relieved, adjusted, and relined with a soft liner to accommodate tissue changes within the surgical area. Functional forces to the implants should be eliminated or minimized during the initial phase of osseointegration.

### 6. Phase 2 - Surgery/Preliminary Impressions

- a. Transmucosal abutments will be placed at the appropriate time. Complete seating of the abutments to underlying fixtures must be verified radiographically, if not visible clinically.
- b. Accurate, clean, bubble free impressions with appropriate transfer analogs should be made after abutment connection is verified.

### 7. Final Impression

The final impression must be an accurate representation of the implant abutments or fixtures and surrounding tissues. A verification jig will be made at the impression appointment or from the master cast to verify the accuracy of the impression on prostheses of more than one tooth.

### 8. Record Bases

Base plates should be stable and accurate. When completely seated, they should have intimate contact to implant analogs, with no movement. Occlusion rims must be contoured to provide proper support to lips and surrounding tissues.

#### 9. Jaw Relation Records

Jaw relation records should be made in centric relation at the established vertical dimension. For the hybrid prosthesis, there must be at least 12mm between the maxillary incisal/occlusal plane and mandibular edentulous ridge to allow adequate space for artificial tooth placement. A facebow will be used when indicated. Acceptable shades and molds should be selected.

### 10. Wax Try-In

The correct centric relation position, occlusal vertical dimension, lip support, midline, occlusal plane and phonetics should be verified. The size, shape, shade, and anterior arrangement should be accepted by the patient and doctor. For a hybrid type prosthesis, the mandibular anterior teeth should be above the transmucosal abutment and gold coping connections. The extension of the posterior occlusion beyond the center of the distal abutments should be in accordance with the number, size, location/configuration of the implants.

#### 11. Framework

The casting for the super-structure must be evaluated to verify proper cantilever length and contours. The casting should seat completely, while passive, to all abutments. If not, the framework should be separated and soldered or remade. In the case of the partially edentulous the framework should be designed as best as possible to duplicate contours of normal anatomy. Adequate metal substructure for proper porcelain application on axial and occlusal surfaces must be present.

#### 12. Insertion

The completed prosthesis must possess a passive, accurate fit to each abutment cylinder. A clinical remount procedure should be accomplished to eliminate occlusal interferences. All resin and metal surfaces should be highly polished without sharp projections. Access openings should be blocked out with suitable resin or composite material following final seating of the prosthesis.

#### 13. Home Care Instructions

A demonstration of the proper cleaning and care of the implant prosthesis must be given to the patient at the time of insertion. The patient should be given a follow-up appointment to evaluate and reinforce home care.

#### 14. **Post-Insertion Care**

Following insertion of the implant prosthesis, the patient must be seen every three (3) months for the first year and semi-annually thereafter for prophylaxis and recall.

#### 15. Standards of Care

All patients will be evaluated utilizing the appropriate standards of care forms.

# IMPLANT PROSTHODONTICS STANDARDS OF CARE EVALUATION FORM

| Res  | ident's Name   |            |             |              |
|------|--|------------|-------------|--------------|
| Pati | ent's Name   |            |             |              |
|      | th   |            |             |              |
| 1.   | Patient's Medical & Dental<br>History  | Acceptable | Needs Impr. | Unacceptable |
| 2.   | Diagnostic Casts   |            |             |              |
| 3.   | Treatment Plan   |            |             |              |
| 4.   | Diagnostic Waxing/Surgical Guide   |            |             |              |
| 5.   | Phase I  |            |             |              |
|      | Post Surgical Adjustments  |            |             |              |
| 6.   | Phase II   |            |             |              |
|      | a. Abutment Placement<br>b. Preliminary Impressions  |            |             |              |
| 7.   | Final Impressions  |            |             |              |
| 8.   | Record Bases   |            |             |              |
| 9.   | Jaw Relation Records   |            |             |              |
| 10.  | Wax Try-In   |            |             |              |
|      | <ul> <li>a. Vertical Dimension</li> <li>b. Centric Relation</li> <li>c. Shade and Mold</li> <li>d. Anterior Arrangement</li> <li>e. Cantilever length</li> </ul> |            |             |              |
| 11.  | Superstructure Try-In  |            |             |              |
| 12.  | Insertion/Home Care Instr.   |            |             |              |
| 13.  | Post Insertion/POT Protocol  |            |             |              |
| 14.  | Laboratory Procedures  |            |             |              |
|      | a. Casts<br>b. Record Bases<br>c. Tooth Set-up<br>d. Processed Prosthesis<br>e. Finished Prosthesis  |            |             |              |

## IMPLANT PROSTHODONTICS (Cont'd)

|                      | f.   | Laboratory Prescription   | Acceptable                      | Needs Impr. | Unacceptable |  |
|----------------------|------|---|---------------------------------|-------------|--------------|--|
|                      |      | <ol> <li>Patient data</li> <li>Materials</li> <li>Special instructions</li> </ol> |                                 |             |              |  |
| 15.                  | Pati | ent Management  |                                 |             |              |  |
| 16.                  | Tim  | e Management  |                                 |             |              |  |
| Treatment Assessment |      | nt Assessment   | Performance Standard Assessment |             |              |  |
| 1.                   | Acc  | eptable   | Resident                        |             |              |  |
| 2.                   | Nee  | eds Improvement   | Mentor                          |             |              |  |
| 3.                   | Una  | cceptable   | Date                            |             | _            |  |
| 00                   | ИМЕМ |   |                                 |             |              |  |

#### IMPLANT PLACEMENT STANDARDS OF CARE EVALUATION FORM

Resident's Name Patient's Name Month :\_\_\_\_\_

Procedure:\_\_\_\_\_

Sites : \_\_\_\_\_

Implant system : \_\_\_\_\_

Type of surgical guide \_\_\_\_\_

Incomplete/ Not Acceptable Need Impr performed Unacceptable

#### Pre- surgical Procedure

- 1 Review patient's medical, dental history and medication Interaction
- 2 Diagnostic casts, diagnostic wax up and radiographic guide
- 3 Case presentation & treatment plan
- 4 Ordering implant / parts in advance
- 5 Surgical guide

#### Surgical Procedure

- 6 Anesthesia
- 7 Flapping
- 8 Osteotomy
- 9 Implant placement
- 10 Suture

#### Post surgical procedure

- 11 Follow up
- 12 Suture removal

Comments :\_\_\_\_\_

## ADVANCED SPECIALTY EDUCATIONAL PROGRAM IN PROSTHODONTICS

## CONSULTANT EVALUATION

| Consultant:<br>Subject:   |  |                    | Date:<br>Hours of I | nstructions:        |             |                |  |  |
|---|--|--------------------|---------------------|---------------------|-------------|----------------|--|--|
|   | Please evaluate the consultant, his presentation and the subject matter according to the ollowing scale.   |                    |                     |                     |             |                |  |  |
|   |  | Outstanding        | Excellent           | Satisfactory        | Marginal    | Unsatisfactory |  |  |
| Scor  | e:   | 1                  | 2                   | 3                   | 4           | 5              |  |  |
| Con   | sultar   | nt:                |                     |                     |             |                |  |  |
| <ol> <li>The consultant's objectives for the lecture were clearly<br/>stated.</li> <li>The consultant was well prepared.</li> <li>The consultant summarized and/or emphasized the major<br/>points of the presentation.</li> <li>The consultant made good use of examples and/or<br/>illustrations to help clarify the material</li> <li>The consultant raised challenging questions to<br/>encourage individual thinking.</li> <li>The consultant answered questions clearly and concisely.</li> </ol> |  |                    |                     |                     |             |                |  |  |
| Pres  | sentat   | ion:               |                     |                     |             |                |  |  |
| 1.<br>2.<br>3.  | and sequential fashion.<br>2. The slides and/or demonstrations were effective.   |                    |                     |                     |             |                |  |  |
| Sub<br>1.<br>2.<br>3.<br>4.   | <ul> <li>Prosthodontic Residency.</li> <li>2. The material presented was based on up-to-date professional information.</li> <li>3. The subject matter presented related directly to the lecture objectives.</li> </ul> |                    |                     |                     |             |                |  |  |
| Ove   | rall Ev  | valuation:         |                     |                     |             |                |  |  |
| The   | overa  | Il value of the co | onsultation, pres   | sentation and subje | ect matter. |                |  |  |

#### Additional Comments:

### ADVANCED SPECIALTY EDUCATIONAL PROGRAM IN PROSTHODONTICS

### **RESIDENT EVALUATION - ORAL PRESENTATION**

| Resident:     | Date:      |
|---------------|------------|
| Presentation: | Evaluator: |

During the resident's presentation please rate the following points and return to the Director, Prosthodontic Residency. Your rating will be used in evaluating the performance of the resident in his/her oral presentation and in identifying areas in which he/she excels or needs improvement. Please rate according to the following scale. Keep in mind that the average resident is satisfactory, a score of 3.

|     | Outstanding  | Excellent     | Satisfactory       | Marginal  | Unsatisfactory |  |  |
|-----|--|---------------|--------------------|-----------|----------------|--|--|
| Sco | re: 1  | 2             | 3                  | 4         | 5              |  |  |
| 1.  | 1. Appearance: Proper dress, in good condition. Well groomed.  |               |                    |           |                |  |  |
| 2.  | Speaking Presence: Good posture. No distracting head or<br>body movements. Eye contact with the audience. Personality<br>forceful and authoritative, yet pleasant. Did not read<br>presentation.       |               |                    |           |                |  |  |
| 3.  |  |               |                    |           |                |  |  |
| 4.  | Organization: Material well organized and presented in<br>logical sequence. One subject led smoothly into the next.<br>Compatible with allotted time.  |               |                    |           |                |  |  |
| 5.  | Audio-Visual Aids: All equipment used was checked and functioning properly. Visual aids were clear, well thought out, easy to visualize and understand, not distracting and added to the presentation. |               |                    |           |                |  |  |
| 6.  | Subject Matter: Speaker projects a thorough knowledge of the subject, beyond the actual presentation.  |               |                    |           |                |  |  |
| 7.  | Audience Reception: Held attention. Related to audience.<br>Material well received, accepted as factual, interesting<br>and of value.  |               |                    |           |                |  |  |
| 8.  | Question Period:<br>clear and concise.   | Answers wer   | e factual, well o  | rganized, |                |  |  |
| 9.  | <b>Potential:</b> The rest and teaching.   | idents potent | ial for public spe | eaking    |                |  |  |
|     |  |               |                    |           |                |  |  |

### Comments:

## ADVANCED SPECIALTY EDUCATIONAL PROGRAM IN PROSTHODONTICS

### END OF YEAR PROGRAM CRITIQUE

Please evaluate the following aspects of the residency program. General comments on other aspects of the program are also appropriate, use back of page if necessary.

1. Supplies:

2. Equipment:

3. Facilities:

4. Assistants:

5. Lab Technicians:

6. Mentors:

7. Resident Orientation Courses:
- 8. Curriculum: Scope, Time Didactic vs. Clinical/Laboratory, etc.
- 9. Evaluations: Resident, Written and Oral, Standard of Care, etc. (Frequency, evaluation criteria, forms used for, etc.)
- 10. Conferences: Occlusion, Topic Seminar, Literature Review, Treatment Planning, etc.
- 11. Consultants: Number, variety, quality.
- 12. Research Paper:
- 13. Resident Oral Presentations:
- 14. What change, if any, would you make in the overall structure of the program?
- 15. Additional comments on any aspect of the program.

# ADVANCED SPECIALTY EDUCATIONAL PROGRAM IN PROSTHODONTICS END-OF-PROGRAM CRITIQUE

Use back of page for additional comments.

- 1. Did the University of Maryland fulfill your expectations for a Prosthodontic Residency?
- 2. Did the University of Maryland Residency accomplish the stated objectives by producing:

|    |  | YES | NO |
|----|--|-----|----|
| a. | Knowledgeable and skilled clinicians   |     |    |
| b. | Prosthodontists able to serve as mentors?  |     |    |
| d. | Prosthodontists qualified and able to be certified by the American Board of Prosthodontics |     |    |

- 3. What changes, if any, would you make in the overall structure of the residency?
- 4. Were the facilities (clinical, laboratory, lecture) adequate? If not, how could they be improved?
- 5. Were there sufficient, competent auxiliary personnel? If not, what changes should be made?

- 6. Were necessary materials, supplies and equipment adequate? If not, what changes should be made?
- 7. Was there a proper ratio of didactic experience to clinical experience, including laboratory? If not, what changes should be made?
- 8. What were the residency's strongest areas and why?
- 9. What were the residency's weakest areas and why?
- 10. Please comment on any of the following areas.
  - a. Research Paper:
  - b. Treatment Planning Conferences:
  - c. Literature Reviews:
  - d. Joint Seminars:
  - e. Basic Science Courses:

- f. Resident Lectures:
- g. Visiting Consultants:
- h. Practice Management/Administration:
- i. Library:
- j. Resident Evaluations:
- k. Teaching Staff:
- I. Director of Residency:
- m. Additional comments on any aspect of the residency:

# ADVANCED SPECIALTY EDUCATIONAL PROGRAM IN PROSTHODONTICS

#### **POST-GRADUATION CRITIQUE**

Use back of page for additional comments.

- 1. Current Position:
  - a. Title:
  - b. Are you teaching or a mentor?
  - c. Other positions?
- 2. Clinic Information:
  - a. Solo or group practice:
  - b. Owner or associate:
  - c. Number of chairs you use:
  - d. Number of hours per week that you practice:
- 3. Clinical Practice:
  - a. Approximate percentage of time in:
    - 1) Fixed Prosthodontics
    - 2) Complete Denture Prosthodontics
    - 3) Removable Partial Prosthodontics
    - 4) Maxillofacial Prosthetics
    - 5) Implant Prosthodontics
    - 6) Craniomandibular Disorders
    - 7) Other Clinical
  - b. Training in your Residency for your present clinical situation was, in your opinion: (Rank the following on a scale of 1 = excessive to 5 = inadequate)
    - 1) Fixed Prosthodontics
    - 2) Removable Prosthodontics
    - 3) Maxillofacial Prosthetics
    - 4) Craniomandibular Dysfunction
    - 5) Implant Prosthodontics

c. Looking back on your Prosthodontics Residency, how would you modify the following:

|     |                                  | Maintain Increase Decrease |
|-----|----------------------------------|----------------------------|
| 1)  | Fixed Prosthodontics             |                            |
| 2)  | Removable Partial Prosthodontics |                            |
| 3)  | Complete Denture Prosthodontics  |                            |
| 4)  | Maxillofacial Prosthodontics     |                            |
| 5)  | Craniomandibular Disorders       |                            |
| 6)  | Implant Prosthodontics           |                            |
| 7)  | Administration                   |                            |
| 8)  | Visiting Consultants             |                            |
| 9)  | Research Paper                   |                            |
| 10) | Resident Lectures                |                            |
| 11) | Literature Reviews               |                            |
| 12) | Treatment Planning Conference    |                            |
| 13) | Topic Seminars                   |                            |
| 14) | Occlusion Seminars               |                            |
| 15) | Digital Technology               |                            |
|     |                                  |                            |

- d. Would you delete or eliminate any of the above listed activities? If, yes list the activity and briefly explain why?
- 5. American Board of Prosthodontics:
  - a. Have you passed the Phase I written exam?
  - b. Have you completed any of the other phases?
  - c. Do you plan to complete the Board Examination?

- 6. Research Paper:
  - a. Did you pursue the publication of your paper?
  - b. Were you successful in having it published?
  - c. Which journal?
  - d. Did you have to make many changes in the final draft?
  - e. What journal did you send it to and what were their comments? Journal:

Comments:

7. Comments

:

Please comment on any of the areas listed below. We are sincerely interested in how we did/did not prepare you for your present assignment. We would appreciate any suggestions directed toward improving the Advanced Educational Program in Prosthodontics at the University of Maryland. Use the back of sheet for additional comments.

- a. Fixed Prosthodontics:
- b. Complete Denture Prosthodontics:
- c. Removable Partial Denture Prosthodontics:
- d. Maxillofacial Prosthetics:

- e. Implant Prosthodontics:
- f. Craniomandibular Disorders:
- g. Consultants:
- h. Basic Science Courses:

- I. Interaction with other disciplines: (Endo, Perio, etc.)
- j. Literature Reviews:
- k. Other:

## DENTAL RESIDENT EVALUATION REPORT

Name: Date:

Prosthodontic Resident - year, University of Maryland

RATING PERIOD:

Rating: 1 - Outstanding

- 2 Good
- 3 Satisfactory

#### 1. ACADEMIC PERFORMANCE

- a. Oral Communication.....
- b. Written Communication....

- c. Participation..... d. Professional Knowledge... e. Logic/Reasoning.....
- 3. PERSONAL & PROFESSIONAL ATTRIBUTES
  - a. Attitude.....
  - b. Initiative/Motivation.....
  - c. Sound Judgment.....
  - d. Interpersonal Relations....
  - e. Patient-Dentist Relations..
  - f. Responsibility.....

4. OVERALL PERFORMANCE RATING.... (Comments required for rating of 1 of 5)

COMMENTS:

I HAVE BEEN COUNSELED REGARDING THIS EVALUATION:

Resident's Signature

Carl F. Driscoll, DMD, Program Director

- 4 Marginal 5 Unsatisfa
  - 5 Unsatisfactory
  - 2. CLINICAL PERFORMANCE
    - a. Examination/Diagnosis.....
    - b. Treatment Planning.....
    - c. Treatment Skills....
    - d. Records Management.....
    - e. Time Management.....

Date

#### APPENDIX A

#### UNIVERSITY OF MARYLAND SCHOOL OF DENTISTRY ADVANCED SPECIALTY EDUCATION PROGRAM IN PROSTHODONTICS BALTIMORE, MARYLAND

#### THIRD YEAR RESIDENTS (2015-2018)

Dr. Malek Alshehri (King Saud, Saudi Arabia '13)

Dr. Robert Choe (University of Pennsylvania '15)

Dr. Navpreet Khatra (New York University'15)

#### SECOND YEAR RESIDENTS (2016-2019)

Dr. David Chen (University of British Columbia '14)

Dr. Leah Romay (University of Maryland '16)

#### FIRST YEAR RESIDENTS (2017-2020)

Dr. Shane Byun (A.T. Still '17)

Dr. Michael Hsu (University of Maryland '17)

Dr. Jennifer Nguyen (University of Maryland '17)

# CLINICAL FACULTY

- Carl F. Driscoll, DMD, Director, Prosthodontic Residency Program John Davliakos, DMD
- Guadalupe Garcia, DDS
- Peterson Huang, DDS, MS
- Sarit Kaplan, DMD, MS
- Penwadee Limkangwalmongkol DDS, MS
- Radi M. Masri, BDS, MS, PhD
- Youssef Obeid, DDS
- Flavio H. Rasetto, BDS, MS
- Elias Rivera, DDS, MS
- Michael T. Singer, DMD
- Garima Talwar, DDS, MS
- Jenin Yahya, BDS, MS
- Diplomate of the American Board of Prosthodontics

# APPENDIX B

# **RESIDENT ORIENTATION**

The first year prosthodontic residents will participate in an orientation program that will introduce them to the residency goals, objectives, administrative procedures, and assignments as well as provide an overview of the clinical and laboratory skills required of the specialty. The new resident kit of supplies and equipment will also be issued. During this orientation period, the following topics are addressed:

- a) General Orientation, Issue Course Materials/Kit
- b) Oral Photography Seminar
- c) Fixed Prosthodontic Exercise
- d) Removable Prosthodontic Exercise
- e) CPR recertification
- f) Implant Introduction
- g) Occlusion

# CLINICAL PHOTOGRAPHY

#### 1. Objective:

- a) To establish and in-depth knowledge of clinical photography.
- b) To become proficient in taking intra and extra oral photographs.
- c) To develop an in-depth knowledge of what views are required for the American Board of Prosthodontics Examination.

#### 2. Guidelines:

- a) This block of instruction/practical exercise will include topics on equipment selection, oral photographic procedures and principles, mirror positioning, and the clinical photo series.
- b) Residents will use their own digital camera and participate in a practical exercise on mirror positioning and taking the clinical photo series. One-on-one instruction will insure confidence in their equipment.

# FIXED PROSTHODONTIC ORIENTATION

#### 1. **Objective:**

To acquaint the resident with fixed prosthodontic principles, clinical, and laboratory procedures.

#### 2. Guidelines:

- a) A hands-on series is given as a review of Fixed Prosthodontics to all incoming residents.
- b) The resident will be guided through the clinical and laboratory steps of diagnostic impression making through insertion of a gold crown and a PFM crown.
- c) The fabrication of a complete metal and ceramic crown to include custom tray fabrication, elastomeric impression procedure, and master cast fabrication. Waxing, casting, porcelain application and finishing procedures will also be performed.

#### REMOVABLE PROSTHODONTIC ORIENTATION

#### 1. **Objective:**

Acquaint the residents with complete denture prosthodontic principles, clinical and laboratory procedures.

#### 2. Guidelines:

a) In addition to selected lectures, the residents will receive one-on-one demonstrations on clinical procedures for the impression, jaw relation records, wax try-in, and insertion appointments. Also, they will fabricate a set of dentures on a patient and perform the following lab procedures: 1) custom trays, 2) record bases, wax rims, and articulation, 3) complete monoplane and fully balanced set-ups, 4) fully wax-up both sets of trial dentures, 5) flask, pack, and process one set of dentures, 6) deflask and complete a lab remount to check pin opening, 7) deflask, finish, and polish dentures, and 8) deliver dentures to patient.

# DIGITAL DENTISTRY ORIENTATION

#### 1. Objective:

Acquaint the residents with clinical applications of digital prosthodontics.

#### 2. Guidelines:

- a) A series of lectures (6 lectures, 1 hour each) on topics that include: Digital impressions, digital manufacturing, digital restorations, digital implant surgery, digital fixed prosthodontics and digital removable prosthodontics.
- b) In addition to the lectures, the residents will receive demonstrations on digital impressions, digital restoration design, and digital manufacturing of conventional and implant restorations.

# APPENDIX C

## SPECIAL DUTIES

# **RESIDENTS ARE ASSIGNED DUTIES AS FOLLOWS:**

1. Dr. Chen

Literature review assignments (current, classic).

2 Dr. Khatra

Coordinate tx planning schedule and board review questions

2. Dr. Romay

Plan social events, such as the end of year roast.

3. Dr. Choe

Lab Officer

4. Dr. Alshehri

Birthday cake coordinator

5. Resident of the month duties (rotates amongst all residents):

Responsible for setting up lecture rooms, including supplies, maintenance, equipment, cleaning, and refreshments for consultant lectures.

6. Dr. Alshehri

Caretaker of residents' library. Book coordinator

# APPENDIX D University of Maryland PROSTHODONTICS SCHEDULE/FACULTY COVERAGE

| MONDAY TUE  | SDAY WEDNESDAY T   | HURSDAY FRIDAY   |   |   |
|---|--|--|---|---|
| 8:00am - Patient Tx/ MS<br>courses<br>Dr. Singer<br>Dr. Talwar (2x/month)<br>Dr. Yahya (2x/month) | 7:30 am – Lit. Review<br>10:00am- Patient Tx<br>10:00-12:00 MXF Course or<br>Digital Dentistry Course<br>Drs. Penwadee /Driscoll | 8:00am - Patient Tx/<br>MSOB courses<br>Dr. Garcia<br>Dr. Masri (2x/month) | 8:00am - Resident<br>Lecture<br>9:30am - Tx Planning<br>Conference<br>10:45am - Board<br>Questions<br>Drs. Masri/Driscoll | 8:00am - Patient Tx<br>Dr. Masri<br>Dr. Kaplan (2X/month)<br>Dr. Rasetto (2x/month) |
| 12:00 - 1:00 pm<br>LUNCH  | 12:00 - 1:00 pm<br>LUNCH   | 12:00 - 1:00 pm<br>LUNCH   | 12:30 - 1:00 pm<br>LUNCH  | 12:00 - 1:00 pm<br>LUNCH  |
| 1:00-5:00 - Patient Tx/ MS<br>courses<br>Drs. Singer/Davliakos/<br>Driscoll                       | 1:00-5:00 - Patient Tx<br>Drs. Penwadee / Garcia   | 1:00-7:00pm - Patient Tx<br>Drs. Obeid/Penwadee/<br>Rivera/Huang           | 1:00-5:00 Patient X/Conjoint<br>Seminar<br>Drs. Driscoll/Masri<br>Dr. Huang (2X/month)                                    | 1:00-5:00pm - Research  |

#### APPENDIX E MONTHLY REPORT - PROSTHODONTIC RESIDENT

MONTH/YEAR / NAME\_\_\_\_\_ **Clinical Procedures** Diagnostic a. Treatment Plans signed Pantographic Tracing or Cadiax b. **Fixed Prosthodontics** Single Fixed Units (all Types including posts and cores) Fixed Partial Denture Units (retainers only not pontics) Complete Arch Restorations (ONLY the number of arches) **Removable Prosthodontics** c. Complete Dentures, Both Arches Single Complete Dentures Removable Partial Dentures (including interim RPD's) d. **Combined Fixed/Removable Partial Prosthodontics** Arches Restored with a combination of fixed and Removable prostheses **Implant Supported Restorations** e. Removable complete denture, both arches Removable single complete denture Removable partial denture Single fixed restoration (all types) Total Number of Fixed partial denture retainers (retainers only) Complete arch fixed restorations (list only number of arches) f. Implant placement Single tooth implant placed Implants placed to support removable prosthesis Implants placed for fixed complete prosthesis Site augmentation/preservation (all types)-- as part of implant placement Immediate implant placement Total number of CBCT studies Maxillofacial Prosthesis (all types) g.

#### Laboratory Procedures

**Total Hours** 

## APPENDIX F

#### MENTOR CHECKLIST BOARD CERTIFICATION EXAMINATION PATIENT PREPARATION

Each Resident will complete a patient's treatment which will qualify for presentation for Part 2, 3 or 4 of the American Board of Prosthodontics Examination. Each step of this patient care will be approved by the Prosthodontic mentors. All steps must be signed by each mentor unless one of the mentors chooses to sign for other mentors.

| PART 2-FPD AND RPD  | Driscoll | Masri | Singer |
|---|----------|-------|--------|
| a. Patient Selection  |          |       |        |
| b. Diagnostic Casts   |          |       |        |
| c. Pantograph tracings  |          |       |        |
| d. Preliminary photographs  |          |       |        |
| e. Preliminary dental radiographs   |          |       |        |
| f. Preliminary treatment plan   |          |       |        |
| g. Diagnostic wax-up<br>(treatment plan)  |          |       |        |
| h. Diagnostic tooth prep on<br>diagnostic casts   |          |       |        |
| I. Preliminary tooth prep<br>(alginate impression for cast<br>evaluation by mentors<br>before final impression) |          |       |        |
| j. Final tooth<br>preparation/Photos  |          |       |        |
| k. Wax patterns for crowns and fixed partial denture(s)   |          |       |        |
| <ol> <li>Casting try-in (including<br/>dental radiographs).</li> </ol>  |          |       |        |
| m. Casts of crowns-pre- cem   |          |       |        |
| n. Final cast(s) for removable partial denture(s)   |          |       |        |
| o. Patient's treatment<br>completed   |          |       |        |
| p. Mock Board Presentation  |          |       |        |

| PART 3-FIXED  | Driscoll | Masri | Singer |
|---|----------|-------|--------|
| a. Patient Selection  |          |       |        |
| b. Diagnostic Casts   |          |       |        |
| c. Pantograph tracings  |          |       |        |
| d. Preliminary photographs  |          |       |        |
| e. Preliminary dental radiographs   |          |       |        |
| f. Preliminary treatment plan   |          |       |        |
| g. Diagnostic wax-up<br>(treatment plan)  |          |       |        |
| h. Diagnostic tooth prep on<br>diagnostic casts   |          |       |        |
| I. Preliminary tooth prep<br>(alginate impression for cast<br>evaluation by mentors<br>before final impression) |          |       |        |
| j. Final tooth preparations   |          |       |        |
| k. Wax patterns for crowns<br>and fixed partial denture(s)  |          |       |        |
| I. Casting try-in (including dental radiographs).   |          |       |        |
| m. Casts of restorations pre-<br>cementation  |          |       |        |
| n. Patient's treatment completed  |          |       |        |
| o. SIMULATED BOARD<br>PRESENTATION  |          |       |        |

| PART 4-REMOVABLE                              | Driscoll | Masri | Singer |
|---|----------|-------|--------|
| a. Patient Selection                          |          |       |        |
| b. Diagnostic Casts                           |          |       |        |
| c. Preliminary photographs                    |          |       |        |
| d. Preliminary dental radiographs             |          |       |        |
| e. Preliminary treatment<br>plan/exam form    |          |       |        |
| f. Final impressions                          |          |       |        |
| g. Maxillo-mandibular<br>relationship records |          |       |        |
| h. Wax trial dentures<br>(articulator)        |          |       |        |
| I. Final try in                               |          |       |        |
| j. Prescription form                          |          |       |        |
| k. Remount relationship                       |          |       |        |
| I. Delivery                                   |          |       |        |
| m. Patient's treatment completed              |          |       |        |
| n. SIMULATED BOARD                            |          |       |        |
| PRESENTATION                                  |          |       |        |

#### APPENDIX G ADVANCED SPECIALTY EDUCATION PROGRAM IN PROSTHODONTICS

# SENIOR RESIDENT CHECKOUT

Graduating residents <u>must</u> obtain initials of a program director prior to final clearing of the University of Maryland Prosthodontic Residency.

| 1.  | Clinical Requirements   |  |
|-----|---|--|
| 2.  | Academic Requirements   |  |
| 3.  | Laboratory Requirements   |  |
| 4.  | Research Paper  |  |
| 5.  | Board Case  |  |
| 6.  | Office  |  |
| 7.  | Library Books   |  |
| 8.  | Equipment Clean-up and Turn-In  |  |
| 9.  | Case Transfer Information   |  |
| 10. | Patient Treatment Information<br>(Ms. Angela Dudley/ Ms. Michelle Keener) |  |
| 11. | Course Critique   |  |
|     |   |  |

Resident: \_\_\_\_\_ Date: \_\_\_\_\_